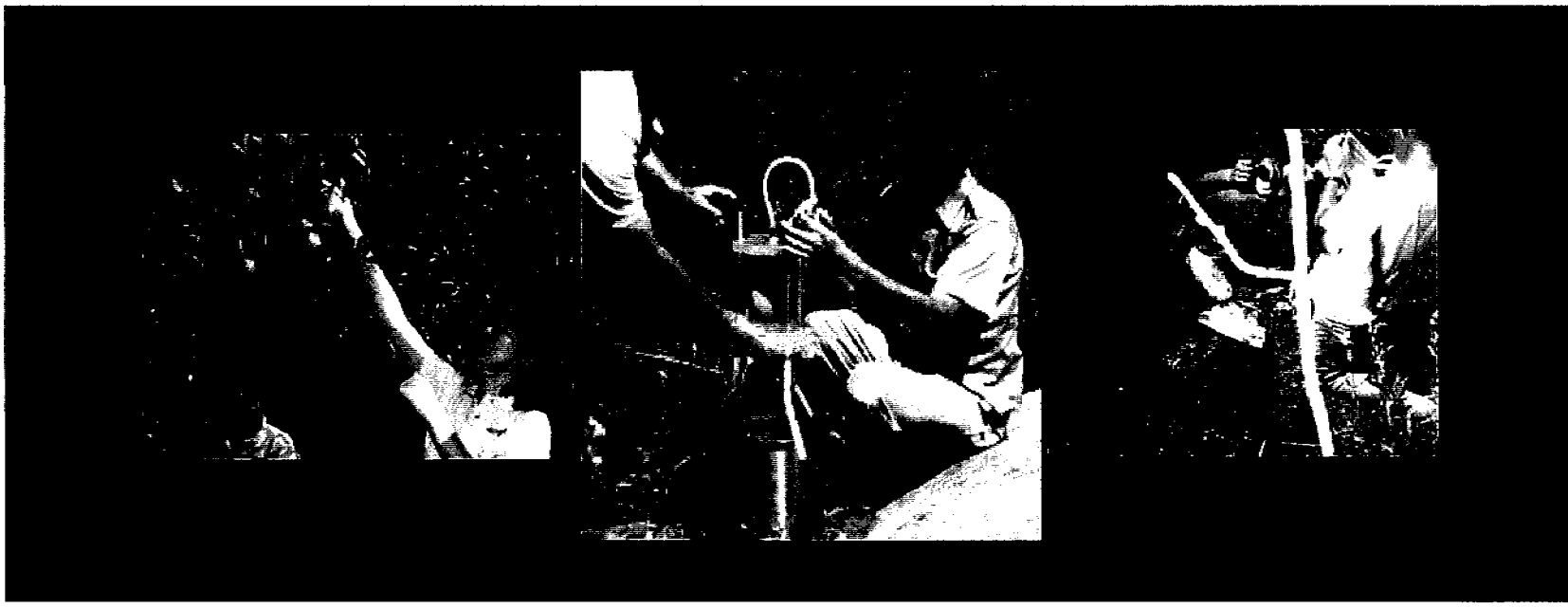
Multi-Media Sampling Report for the Brandeis-Bardin Institute and the Santa Monica Mountains Conservancy

Santa Monica Mountains Conservancy Analytical Data



March 10, 1993

Prepared by:

McLaren/Hart

ENVIRONMENTAL ENGINEERING CORPORATION

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VOLATILE ORGANIC COMPOUNDS

VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-54

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB01001SE
Sample Number: 90267

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/25/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 54

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	103	70 - 121
Toluene-D8	108	81 - 117
4-Bromofluorobenzene	92	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-57

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB01027SE
Sample Number: 90273

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/25/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 57

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	102	70 - 121
Toluene-D8	105	81 - 117
4-Bromofluorobenzene	93	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-60

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB01038SE
Sample Number: 90279

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/25/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 60

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	102	70 - 121
Toluene-D8	109	81 - 117
4-Bromofluorobenzene	97	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-51

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB01041SE
Sample Number: 90261

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/25/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 51

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	103	70 - 121
Toluene-D8	110	81 - 117
4-Bromofluorobenzene	91	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-48

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB01056SE
Sample Number: 90290

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/25/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 48

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	104	70 - 121
Toluene-D8	107	81 - 117
4-Bromofluorobenzene	95	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANIC COMPOUNDS

SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-53

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB01001SD
Sample Number: 90266

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/30/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-53

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-53

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	81	25 - 121
Phenol-d5.....	74	24 - 113
Nitrobenzene-d5.....	78	23 - 120
2-Fluorobiphenyl.....	88	30 - 115
2,4,6-Tribromophenol.....	101	19 - 122
Terphenyl-d14.....	103	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/07/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-56

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB01027SD
Sample Number: 90272

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/31/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-56

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-56

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	76	25 - 121
Phenol-d5.....	81	24 - 113
Nitrobenzene-d5.....	83	23 - 120
2-Fluorobiphenyl.....	80	30 - 115
2,4,6-Tribromophenol.....	99	19 - 122
Terphenyl-d14.....	102	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/07/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-59

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB01038SD
Sample Number: 90278

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/30/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-59

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-59

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	79	25 - 121
Phenol-d5.....	74	24 - 113
Nitrobenzene-d5.....	80	23 - 120
2-Fluorobiphenyl.....	91	30 - 115
2,4,6-Tribromophenol.....	104	19 - 122
Terphenyl-d14.....	105	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-50

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB01041SD
Sample Number: 90260

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/30/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-50

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-50

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	71	25 - 121
Phenol-d5.....	68	24 - 113
Nitrobenzene-d5.....	71	23 - 120
2-Fluorobiphenyl.....	86	30 - 115
2,4,6-Tribromophenol.....	112	19 - 122
Terphenyl-d14.....	102	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-47

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB01056SD
Sample Number: 90254

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/30/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-47

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-47

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	73	25 - 121
Phenol-d5.....	68	24 - 113
Nitrobenzene-d5.....	71	23 - 120
2-Fluorobiphenyl.....	83	30 - 115
2,4,6-Tribromophenol.....	99	19 - 122
Terphenyl-d14.....	93	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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METALS

PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-55

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB01001SF
Sample Number: 90268

Matrix: Soil

Date Sampled: 3/18/92
Date Digested: 3/20/92 {b}

Date Received: 3/19/92
Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	7.1	5	2.5	3/24/92
Beryllium (Be)/6010.....	.78	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	19.	1	1.0	3/21/92
Copper (Cu)/6010.....	18.	1	1.0	3/21/92
Lead (Pb)/6010.....	16.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	17.	1	1.0	3/21/92
Selenium (Se)/7740.....	.75	1	.25	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	64.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-58

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB01027SF
Sample Number: 90274

Matrix: Soil

Date Sampled: 3/18/92
Date Digested: 3/20/92 {b}

Date Received: 3/19/92
Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	2.2	5	2.5	3/24/92
Beryllium (Be)/6010.....	.39	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	10.	1	1.0	3/21/92
Copper (Cu)/6010.....	9.6	1	1.0	3/21/92
Lead (Pb)/6010.....	26.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	5.9	1	1.0	3/21/92
Selenium (Se)/7740.....	1.6	1	.25	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	52.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} A high background reading was observed for Arsenic. A matrix interferent is present creating a false positive observation. A 5 fold dilution yielded an estimated result of 2.2.

Approved by: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-61

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB01038SF
Sample Number: 90280

Matrix: Soil

Date Sampled: 3/18/92
Date Digested: 3/20/92 {b}

Date Received: 3/19/92
Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	3.6	5	2.5	3/24/92
Beryllium (Be)/6010.....	.56	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	11.	1	1.0	3/21/92
Copper (Cu)/6010.....	14.	1	1.0	3/21/92
Lead (Pb)/6010.....	12.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	7.9	1	1.0	3/21/92
Selenium (Se)/7740.....	1.9	1	.25	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	42.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-52

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB01041SF
Sample Number: 90262

Matrix: Soil

Date Sampled: 3/18/92
Date Digested: 3/20/92 {b}

Date Received: 3/19/92
Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	4.0	5	2.5	3/24/92
Beryllium (Be)/6010.....	.56	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	12.	1	1.0	3/21/92
Copper (Cu)/6010.....	19.	1	1.0	3/21/92
Lead (Pb)/6010.....	14.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	9.5	1	1.0	3/21/92
Selenium (Se)/7740.....	4.9	1	.25	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	52.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-49

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB01056SF
Sample Number: 90256

Matrix: Soil

Date Sampled: 3/18/92
Date Digested: 3/20/92 {b}

Date Received: 3/19/92
Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	13.	5	2.5	3/24/92
Beryllium (Be)/6010.....	.89	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	24.	1	1.0	3/21/92
Copper (Cu)/6010.....	28.	1	1.0	3/21/92
Lead (Pb)/6010.....	18.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	18.	1	1.0	3/21/92
Selenium (Se)/7740.....		1	.25	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	74.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/07/92

The cover letter and attachments are integral parts of this report.

McLaren Hart™

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RADIONUCLIDES

Table: Results of the analyses for iodine-129 and strontium-90 in thirty-five (35) soil samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Conc. pci/gwet I-129	Date Analyzed	Conc. pci/gdry Sr-90	Date Analyzed
90140	M4SA	03/17/92	SPS-1908	<0.2	05/20	0.06±0.01	06/03
88901	BB13024SA	03/17/92	1909	<0.2	05/20	0.01±0.01	05/14
88907	BB13037SA	03/17/92	1910	<0.2	05/21	0.01±0.01	05/14
88913	BB13039SA	03/17/92	1911	<0.2	05/21	0.01±0.01	05/15
88919	BB13011SA	03/17/92	1912	<0.2	05/22	0.01±0.01	06/03
88925	BB13010SA	03/17/92	1913	<0.2	05/22	<0.01	06/09
89151	BB06017SA	03/17/92	1914	<0.2	05/22	0.01±0.01	05/14
89157	BB06007SA	03/17/92	1915	<0.3	06/09	<0.01	05/14
89163	BB06092SA	03/17/92	1916	<0.2	05/26	<0.01	05/14
89169	BB06066SA	03/17/92	1917	<0.2	05/27	<0.01	05/14
89175	BB06013SA	03/17/92	1918	<0.2	05/28	0.01±0.01	05/14
90101	BB03025SA	03/17/92	1919	<0.2	06/01	0.09±0.01	06/09
90107	BB03092SA	03/17/92	1920	<0.2	06/01	0.04±0.01	05/14
90113	BB03079SA	03/17/92	1921	<0.2	06/01	0.03±0.01	06/09
90119	BB03017SA	03/17/92	1922	<0.3	06/09	0.05±0.01	06/09
90125	BB03005SA	03/17/92	1923	<0.2	06/02	0.06±0.01	05/15
90001	BB05003SA	03/18/92	1924	<0.2	06/02	0.02±0.01	06/09
90007	BB05089SA	03/18/92	1925	<0.2	06/02	0.02±0.01	05/22
90013	BB05006SA	03/18/92	1926	<0.2	06/03	0.02±0.01	05/22
90019	BB05057SA	03/18/92	1927	<0.2	06/04	0.03±0.01	05/22
90025	BB05077SA	03/18/92	1928	<0.2	06/04	0.06±0.01	05/22
90051	BB12006SA	03/18/92	1929	<0.2	06/05	0.03±0.01	05/22
90057	BB12019SA	03/18/92	1930	<0.2	06/05	0.04±0.01	05/22
90063	BB12023SA	03/18/92	1931	<0.3	06/05	0.02±0.01	05/22
90069	BB12020SA	03/18/92	1932	<0.2	06/08	0.03±0.01	05/22
90075	BB12003SA	03/18/92	1933	<0.2	06/08	0.01±0.01	05/22
90251	BB01056SA	03/18/92	1934	<0.3	06/08	0.04±0.01	06/03
90263	BB01001SA	03/18/92	1935	<0.3	06/10	<0.01	06/03
90269	BB01027SA	03/18/92	1936	<0.3	06/10	<0.01	06/09
90275	BB01038SA	03/18/92	1937	<0.2	06/10	0.02±0.01	06/03
90282	BB00004SA	03/18/92	1938	<0.3	06/10	0.01±0.01	06/03
89251	BB11018SA	03/18/92	1939	<0.3	06/10	0.02±0.01	06/03
89257	BB11061SA	03/18/92	1940	<0.3	06/11	<0.01	06/03
89263	BB11057SA	03/18/92	1941	<0.2	06/11	0.02±0.01	06/09
89269	BB11032SA	03/18/92	1942	<0.3	04/14	0.02±0.01	06/09

The error given is the probable counting error at 95% confidence level. Less than (<) values are based on 3 sigma counting error for background sample.

Report No. 8054-5

Table: Results of the analyses for iodine-129 and strontium-90 in fourteen (14) soil samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Conc. pci/gwet I-129	Date Analyzed	Conc. pci/gdry Sr-90	Date Analyzed
89601	BG06096SA	03/12/92	SPS-1991	<0.3	06/19	0.02±0.01	06/12
89607	BG06089SA	03/12/92	1992	<0.3	06/19	0.03±0.01	06/12
89613	BG06033SA	03/12/92	1993	<0.4	06/19	0.03±0.01	06/12
89620	BG00002SA	03/12/92	1994	<0.3	06/20	0.04±0.01	06/13
89622	M2SA	03/12/92	1995	<0.3	06/20	0.01±0.01	06/13
89628	BG03001SA	03/12/92	1996	<0.3	06/20	<0.01	06/13
89634	BG03019SA	03/12/92	1997	<0.3	06/20	0.02±0.01	06/13
89640	BG03059SA	03/12/92	1998	<0.3	06/20	0.01±0.01	06/13
88551	SM01008SA	03/23/92	2000	<0.3	06/20	0.04±0.01	06/13
88557	SM01021SA	03/23/92	2001	<0.3	06/22	0.02±0.01	06/13
88563	SM01020SA	03/23/92	2002	<0.3	06/22	0.01±0.01	06/13
88569	SM01004SA	03/23/92	2003	<0.3	06/22	0.02±0.01	07/11
88575	SM01007SA	03/23/92	2004	<0.3	06/22	0.02±0.01	07/11
90257	BB01040SA	03/18/92	2034	<0.3	06/22	0.02±0.01	07/11

The error given is the probable counting error at 95% confidence level. Less than (<) values are based on 3 sigma counting error for background sample.

APPROVED BY L.G. Huebner

L.G. Huebner
General Manager

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/16/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0628	04-0029403-012	03/24/92	04/26/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70883	90264 BB01001SB		03/18	1315			PU-238	L.T. 1. E-01		04/21			6
							PU-239	L.T. 7. E-02		04/21			6
70884	90265 BB01001SC		03/18	1315			BE-7	L.T. 6. E-01		05/13			4
							K-40	1.85+-0.18E 01		05/13			4
							MN-54	L.T. 4. E-02		05/13			4
							CO-58	L.T. 5. E-02		05/13			4
							FE-59	L.T. 2. E-01		05/13			4
							CO-60	L.T. 4. E-02		05/13			4
							ZN-65	L.T. 1. E-01		05/13			4
							ZR-95	L.T. 8. E-02		05/13			4
							RU-103	L.T. 8. E-02		05/13			4
							RU-106	L.T. 3. E-01		05/13			4
							I-131	L.T. 4. E 00		05/13			4
							CS-134	L.T. 5. E-02		05/13			4
							CS-137	6.04+-2.69E-02		05/13			4
							BA-140	L.T. 9. E-01		05/13			4
							CE-141	L.T. 2. E-01		05/13			4
							CE-144	L.T. 3. E-01		05/13			4
							RA-226	1.60+-0.55E 00		05/13			4
							TH-228	1.29+-0.13E 00		05/13			4
							H-3	L.T. 2. E-02		06/07			5
70885	90270 BB01027SB		03/18	1330			PU-238	L.T. 3. E-02		04/21			6
							PU-239	L.T. 8. E-03		04/21			6
70886	90271 BB01027SC		03/18	1330			BE-7	L.T. 5. E-01		05/13			4
							K-40	2.28+-0.23E 01		05/13			4
							MN-54	L.T. 3. E-02		05/13			4
							CO-58	L.T. 4. E-02		05/13			4
							FE-59	L.T. 1. E-01		05/13			4
							CO-60	L.T. 3. E-02		05/13			4
							ZN-65	L.T. 8. E-02		05/13			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/16/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0628	04-0029403-012	03/24/92	04/26/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70886	90271 BB01027SC		03/18	1330			ZR-95	L.T. 5. E-02		05/13			4
							RU-103	L.T. 7. E-02		05/13			4
							RU-106	L.T. 3. E-01		05/13			4
							I-131	L.T. 3. E 00		05/13			4
							CS-134	L.T. 4. E-02		05/13			4
							CS-137	L.T. 3. E-02		05/13			4
							BA-140	L.T. 7. E-01		05/13			4
							CE-141	L.T. 1. E-01		05/13			4
							CE-144	L.T. 2. E-01		05/13			4
							RA-226	1.45+-0.40E 00		05/13			4
							TH-228	1.30+-0.13E 00		05/13			4
							H-3	L.T. 8. E-03		06/10			5
70887	90276 BB01038SB		03/18	1445			PU-238	L.T. 2. E-02		04/21			6
							PU-239	L.T. 7. E-03		04/21			6
70888	90277 BB01038SC		03/18	1445			BE-7	L.T. 6. E-01		05/13			4
							K-40	1.99+-0.20E 01		05/13			4
							MN-54	L.T. 4. E-02		05/13			4
							CO-58	L.T. 5. E-02		05/13			4
							FE-59	L.T. 2. E-01		05/13			4
							CO-60	L.T. 4. E-02		05/13			4
							ZN-65	L.T. 1. E-01		05/13			4
							ZR-95	L.T. 7. E-02		05/13			4
							RU-103	L.T. 8. E-02		05/13			4
							RU-106	L.T. 3. E-01		05/13			4
							I-131	L.T. 4. E 00		05/13			4
							CS-134	L.T. 4. E-02		05/13			4
							CS-137	8.51+-3.30E-02		05/13			4
							BA-140	L.T. 6. E-01		05/13			4
							CE-141	L.T. 2. E-01		05/13			4
							CE-144	L.T. 3. E-01		05/13			4
							RA-226	1.63+-0.52E 00		05/13			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/16/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE
3-0628	04-0029403-012	03/24/92	04/26/92	5

FRIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70888	90277 BB01038SC		03/18	1445			TH-228	1.02+-0.10E 00		05/13			4
							H-3	L.T. 8. E-03		06/07			5
70889	90281 BB00004SC		03/18	1300			BE-7	L.T. 6. E-01		05/13			4
							K-40	1.77+-0.18E 01		05/13			4
							MN-54	L.T. 4. E-02		05/13			4
							CO-58	L.T. 5. E-02		05/13			4
							FE-59	L.T. 2. E-01		05/13			4
							CO-60	L.T. 4. E-02		05/13			4
							ZN-65	L.T. 1. E-01		05/13			4
							ZR-95	L.T. 7. E-02		05/13			4
							RU-103	L.T. 8. E-02		05/13			4
							RU-106	L.T. 3. E-01		05/13			4
							I-131	L.T. 4. E 00		05/13			4
							CS-134	L.T. 4. E-02		05/13			4
							CS-137	L.T. 4. E-02		05/13			4
							BA-140	L.T. 8. E-01		05/13			4
							CE-141	L.T. 2. E-01		05/13			4
							CE-144	L.T. 3. E-01		05/13			4
							RA-226	1.38+-0.60E 00		05/13			4
							TH-228	1.16+-0.12E 00		05/13			4
							H-3	L.T. 1. E-02		06/10			5
70890	89252 BB11018SB		03/18	1530			PU-238	L.T. 7. E-02		04/21			6
							PU-239	L.T. 5. E-02		04/21			6
70891	89253 BB11018SC		03/18	1530			BE-7	L.T. 4. E-01		05/13			4
							K-40	2.35+-0.23E 01		05/13			4
							MN-54	L.T. 3. E-02		05/13			4
							CO-58	L.T. 4. E-02		05/13			4
							FE-59	L.T. 1. E-01		05/13			4
							CO-60	L.T. 2. E-02		05/13			4
							ZN-65	L.T. 7. E-02		05/13			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/16/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
3-0628	04-0029403-012	03/24/92	04/26/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70878	90077 BB12003SC		03/18	1130			BE-7	L.T. 6. E-01		05/13			4
							K-40	2.15+-0.21E 01		05/13			4
							MN-54	L.T. 4. E-02		05/13			4
							CO-58	L.T. 6. E-02		05/13			4
							FE-59	L.T. 2. E-01		05/13			4
							CO-60	L.T. 4. E-02		05/13			4
							ZN-65	L.T. 1. E-01		05/13			4
							ZR-95	L.T. 7. E-02		05/13			4
							RU-103	L.T. 8. E-02		05/13			4
							RU-106	L.T. 3. E-01		05/13			4
							I-131	L.T. 4. E 00		05/13			4
							CS-134	L.T. 4. E-02		05/13			4
							CS-137	L.T. 4. E-02		05/13			4
							BA-140	L.T. 7. E-01		05/13			4
							CE-141	L.T. 1. E-01		05/13			4
							CE-144	L.T. 2. E-01		05/13			4
							RA-226	1.76+-0.53E 00		05/13			4
							TH-228	1.12+-0.11E 00		05/13			4
							H-3	L.T. 1. E-02		06/05			5
70879	90252 BB01056SB		03/18	1300			PU-238	L.T. 1. E-01		04/21			6
							PU-239	L.T. 4. E-02		04/21			6
70880	90253 BB01056SC		03/18	1300			BE-7	L.T. 5. E-01		05/13			4
							K-40	1.91+-0.19E 01		05/13			4
							MN-54	L.T. 3. E-02		05/13			4
							CO-58	L.T. 5. E-02		05/13			4
							FE-59	L.T. 1. E-01		05/13			4
							CO-60	L.T. 3. E-02		05/13			4
							ZN-65	L.T. 1. E-01		05/13			4
							ZR-95	L.T. 6. E-02		05/13			4
							RU-103	L.T. 7. E-02		05/13			4
							RU-106	L.T. 3. E-01		05/13			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/16/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0628	04-0029403-012	03/24/92	04/26/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70880	90253 BB01056SC		03/18	1300			I-131	L.T. 3. E 00		05/13			4
							CS-134	L.T. 4. E-02		05/13			4
							CS-137	L.T. 4. E-02		05/13			4
							BA-140	L.T. 5. E-01		05/13			4
							CE-141	L.T. 1. E-01		05/13			4
							CE-144	L.T. 2. E-01		05/13			4
							RA-226	2.06+-0.44E 00		05/13			4
							TH-228	1.25+-0.12E 00		05/13			4
							H-3	2.2 +-0.8 E-02		06/07			5
70881	90258 BB01041SB		03/18	1305			PU-238	L.T. 6. E-02		04/20			6
							PU-239	L.T. 2. E-02		04/20			6
70882	90259 BB01041S~~B~~		03/18	1305			BE-7	L.T. 5. E-01		05/13			4
							K-40	2.19+-0.22E 01		05/13			4
							MN-54	L.T. 4. E-02		05/13			4
							CO-58	L.T. 5. E-02		05/13			4
							FE-59	L.T. 2. E-01		05/13			4
							CO-60	L.T. 4. E-02		05/13			4
							ZN-65	L.T. 9. E-02		05/13			4
							ZR-95	L.T. 6. E-02		05/13			4
							RU-103	L.T. 8. E-02		05/13			4
							RU-106	L.T. 3. E-01		05/13			4
							I-131	L.T. 4. E 00		05/13			4
							CS-134	L.T. 4. E-02		05/13			4
							CS-137	1.03+-0.24E-01		05/13			4
							BA-140	L.T. 7. E-01		05/13			4
							CE-141	L.T. 1. E-01		05/13			4
							CE-144	L.T. 2. E-01		05/13			4
							RA-226	2.61+-0.49E 00		05/13			4
							TH-228	1.00+-0.10E 00		05/13			4
							H-3	L.T. 2. E-02		06/07			5

BB-02

VOLATILE ORGANIC COMPOUNDS

VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-24

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB02045SE
Sample Number: 89811

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/24/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 24

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	102	70 - 121
Toluene-D8	101	81 - 117
4-Bromofluorobenzene	91	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-27

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB02060SE
Sample Number: 89817

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/24/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 27

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	102	70 - 121
Toluene-D8	96	81 - 117
4-Bromofluorobenzene	97	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-21

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB02071SE
Sample Number: 89805

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/24/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 21

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	99	70 - 121
Toluene-D8	106	81 - 117
4-Bromofluorobenzene	83	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-30

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB02075SE
Sample Number: 89823

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/24/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 30

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	99	70 - 121
Toluene-D8	101	81 - 117
4-Bromofluorobenzene	89	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-33

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB02078SE
Sample Number: 89829

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/24/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 33

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	102	70 - 121
Toluene-D8	94	81 - 117
4-Bromofluorobenzene	87	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANIC COMPOUNDS

SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-23

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB02045SD
Sample Number: 89810

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 3/31/92

Batch Number: 920323-2601

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-23

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-23

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	88	25 - 121
Phenol-d5.....	90	24 - 113
Nitrobenzene-d5.....	81	23 - 120
2-Fluorobiphenyl.....	89	30 - 115
2,4,6-Tribromophenol.....	112	19 - 122
Terphenyl-d14.....	88	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-26

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB02060SD
Sample Number: 89816

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 3/31/92

Batch Number: 920323-2601

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol	670	330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid	140	1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-26

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-26

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	66	25 - 121
Phenol-d5.....	75	24 - 113
Nitrobenzene-d5.....	62	23 - 120
2-Fluorobiphenyl.....	78	30 - 115
2,4,6-Tribromophenol.....	106	19 - 122
Terphenyl-d14.....	98	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.
{d} The result for Benzoic acid is reported as an estimated concentration below the established reporting limit.

Approved By: Nancy McDonald for CM Date: 4/08/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-20

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB02071SD
Sample Number: 89804

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 3/31/92

Batch Number: 920323-2601

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-20

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-20

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	86	25 - 121
Phenol-d5.....	86	24 - 113
Nitrobenzene-d5.....	74	23 - 120
2-Fluorobiphenyl.....	80	30 - 115
2,4,6-Tribromophenol.....	103	19 - 122
Terphenyl-d14.....	80	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-29

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB02075SD
Sample Number: 89822

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 3/31/92

Batch Number: 920323-2601

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-29

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene	35	330
Heptachlor Epoxide		330
Pyrene	44	330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene	64	330
Benzo(k)fluoranthene	90	330
Benzo(a)pyrene	92	330
Indeno(1,2,3-c,d)pyrene	55	330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene	52	330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-29

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	98	25 - 121
Phenol-d5.....	98	24 - 113
Nitrobenzene-d5.....	82	23 - 120
2-Fluorobiphenyl.....	94	30 - 115
2,4,6-Tribromophenol.....	119	19 - 122
Terphenyl-d14.....	104	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.
{d} The results for Fluoranthene, Pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, and Benzo(g,h,i)perylene are reported as estimated concentrations below the established reporting limits.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-32

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB02078SD
Sample Number: 89828

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 3/31/92

Batch Number: 920323-2601

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-32

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-32

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	60	25 - 121
Phenol-d5.....	70	24 - 113
Nitrobenzene-d5.....	64	23 - 120
2-Fluorobiphenyl.....	72	30 - 115
2,4,6-Tribromophenol.....	84	19 - 122
Terphenyl-d14.....	93	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/08/92
Cheryl Matterson, Associate Chemist

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METALS

PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-25

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB02045SF
Sample Number: 89812

Matrix: Soil

Date Sampled: 3/19/92
Date Digested: 3/23/92 {b}

Date Received: 3/20/92
Batch Number: 920323-1101 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	4.8	1	.50	3/25/92
Beryllium (Be)/6010.....	.27	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	6.7	1	1.0	3/26/92
Copper (Cu)/6010.....	7.2	1	1.0	3/26/92
Lead (Pb)/6010.....	5.1	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	4.2	1	1.0	3/26/92
Selenium (Se)/7740.....	1.8	1	.25	3/25/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/30/92
Zinc (Zn)/6010.....	27.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1102; and Hg was digested on 3/23/92, Batch # 920323-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/09/92

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-28

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB02060SF
Sample Number: 89818

Matrix: Soil

Date Sampled: 3/19/92
Date Digested: 3/23/92 {b}

Date Received: 3/20/92
Batch Number: 920323-1101 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	4.8	1	.50	3/25/92
Beryllium (Be)/6010.....	.42	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	8.2	1	1.0	3/26/92
Copper (Cu)/6010.....	9.1	1	1.0	3/26/92
Lead (Pb)/6010.....	8.1	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	4.9	1	1.0	3/26/92
Selenium (Se)/7740.....	2.0	1	.25	3/25/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/30/92
Zinc (Zn)/6010.....	34.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1102; and Hg was digested on 3/23/92, Batch # 920323-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-22

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB02071SF
Sample Number: 89806 Matrix: Soil

Date Sampled: 3/19/92 Date Received: 3/20/92
Date Digested: 3/23/92 {b} Batch Number: 920323-1101 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	3.7	1	.50	3/25/92
Beryllium (Be)/6010.....	.28	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	6.7	1	1.0	3/26/92
Copper (Cu)/6010.....	11.	1	1.0	3/26/92
Lead (Pb)/6010.....	6.4	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	5.0	1	1.0	3/26/92
Selenium (Se)/7740.....	1.1	1	.25	3/25/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/30/92
Zinc (Zn)/6010.....	30.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1102; and Hg was digested on 3/23/92, Batch # 920323-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-31

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB02075SF
Sample Number: 89824 Matrix: Soil

Date Sampled: 3/19/92 Date Received: 3/20/92
Date Digested: 3/23/92 {b} Batch Number: 920323-1101 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	6.6	4	2.0	3/25/92
Beryllium (Be)/6010.....	.44	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	10.	1	1.0	3/26/92
Copper (Cu)/6010.....	8.5	1	1.0	3/26/92
Lead (Pb)/6010.....	11.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	6.6	1	1.0	3/26/92
Selenium (Se)/7740.....	2.6	4	1.0	3/25/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/30/92
Zinc (Zn)/6010.....	39.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1102; and Hg was digested on 3/23/92, Batch # 920323-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The samples for Arsenic and Selenium were diluted 4 fold to bring target analytes within linear working range.

Approved by: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-34

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB02078SF
Sample Number: 89830

Matrix: Soil

Date Sampled: 3/19/92
Date Digested: 3/23/92 {b}

Date Received: 3/20/92
Batch Number: 920323-1101 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....		1	.50	3/25/92
Beryllium (Be)/6010.....	.44	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	10.	1	1.0	3/26/92
Copper (Cu)/6010.....	13.	1	1.0	3/26/92
Lead (Pb)/6010.....	11.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	6.8	1	1.0	3/26/92
Selenium (Se)/7740.....		1	.25	3/25/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/30/92
Zinc (Zn)/6010.....	48.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1102; and Hg was digested on 3/23/92, Batch # 920323-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/09/92

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RADIONUCLIDES

Table1. Results of the analyses for iodine-129 and strontium-90 in thirty (30) soil samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Conc. pCi/g wet I-129	Date Analyzed	Conc. pCi/g dry Sr-90	Date Analyzed
89275	BB11006SA	03/18/92	SPS-1943	<0.3	06/11	0.02±0.01	06/09
88963	BB07058SA	03/19/92	1944	<0.2	06/12	0.01±0.01	06/10
88969	BB07012SA	03/19/92	1945	<0.3	06/11	0.01±0.01	06/10
88975	BB07038SA	03/19/92	1946	<0.2	06/12	0.02±0.01	06/10
88981	M 7 SA	03/19/92	1947	<0.3	06/12	0.04±0.01	06/10
89651	BB10067SA	03/19/92	1948	<0.3	06/12	0.06±0.01	06/10
89657	BB10078SA	03/19/92	1949	<0.3	06/15	0.05±0.01	06/10
89663	BB10081SA	03/19/92	1950	<0.3	06/16	0.02±0.01	06/10
89669	BB10023SA	03/19/92	1951	<0.3	06/15	0.02±0.01	06/10
89675	BB10029SA	03/19/92	1952	<0.3	06/15	0.02±0.01	07/15
89825	BB02078SA	03/19/92	1953	<0.3	06/16	0.02±0.01	06/10
88801	BB03070SA	03/19/92	1954	<0.2	06/16	0.01±0.01	06/12
88807	BB03032SA	03/19/92	1955	<0.3	06/16	0.02±0.01	06/12
88813	BB03031SA	03/19/92	1956	<0.3	06/16	0.02±0.01	06/20
88819	BB03051SA	03/19/92	1957	<0.3	06/17	0.02±0.01	06/20
88825	BB09100SA	03/19/92	1958	<0.3	06/17	0.02±0.01	06/12
88833	BB00005SA	03/19/92	1959	<0.3	06/17	0.02±0.01	06/12
88834	M 6 SA	03/19/92	1960	<0.3	06/17	0.05±0.01	06/12
88951	BB07035SA	03/19/92	1961	<0.3	06/17	0.02±0.01	06/11
88957	BB07036SA	03/19/92	1962	<0.4	06/17	0.02±0.01	06/11
89351	BB08034SA	03/19/92	1963	<0.3	06/17	<0.01	07/15
89357	BB08035SA	03/19/92	1964	<0.3	06/17	<0.01	06/11
89363	BB08003SA	03/19/92	1965	<0.3	06/18	0.02±0.01	06/11
89369	BB08027SA	03/19/92	1966	<0.3	06/17	0.01±0.01	07/15
89375	BB08038SA	03/19/92	1967	<0.3	06/18	0.02±0.01	06/11
89382	M 5 SA	03/19/92	1968	<0.2	06/18	0.20±0.08	06/11
89801	BB02071SA	03/19/92	1969	<0.3	06/18	0.01±0.01	06/11
89807	BB02045SA	03/19/92	1970	<0.2	06/19	<0.01	06/11
89813	BB02060SA	03/19/92	1971	<0.2	06/19	0.01±0.01	06/11
89819	BB02075SA	03/19/92	1972	<0.3	06/19	0.01±0.01	06/11

The error given is the probable counting error at 95% confidence level. Less than (<) values are based on 3 sigma counting error for background sample.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

REVISED 07/27/92
RUN DATE 06/19/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 5
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ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70916	89384 M5SC	MS	03/19	0820			I-131	L.T. 7. E 01		06/12			4
							CS-134	L.T. 6. E-02		06/12			4
							CS-137	1.13+-0.11E 00		06/12			4
							BA-140	L.T. 4. E 00		06/12			4
							CE-141	L.T. 4. E-01		06/12			4
							CE-144	L.T. 3. E-01		06/12			4
							RA-226	1.62+-0.67E 00		06/12			4
							TH-228	1.35+-0.14E 00		06/12			4
							H-3	6.5 +-0.3 E-01		06/15			5
70917	89802 BB02071SB		03/19	1000			PU-238	L.T. 1. E-02		04/26			6
							PU-239	L.T. 3. E-03		04/26			6
70918	89803 BB02071SC		03/19	1000			BE-7	L.T. 5. E-01		04/27			4
							K-40	2.37+-0.24E 01		04/27			4
							MN-54	L.T. 4. E-02		04/27			4
							CO-58	L.T. 5. E-02		04/27			4
							FE-59	L.T. 2. E-01		04/27			4
							CO-60	L.T. 4. E-02		04/27			4
							ZN-65	L.T. 1. E-01		04/27			4
							ZR-95	L.T. 6. E-02		04/27			4
							RU-103	L.T. 7. E-02		04/27			4
							RU-106	L.T. 3. E-01		04/27			4
							I-131	L.T. 1. E 00		04/27			4
							CS-134	L.T. 4. E-02		04/27			4
							CS-137	5.82+-3.16E-02		04/27			4
							BA-140	L.T. 2. E-01		04/27			4
							CE-141	L.T. 1. E-01		04/27			4
							CE-144	L.T. 3. E-01		04/27			4
							RA-226	1.26+-0.54E 00		04/27			4
							TH-228	1.08+-0.11E 00		04/27			4

TI #70916 was prepared with 0.881 pCi/g of Cs-137. An unspiked aliquot had 0.338 pCi/g of Cs-137.
TI #70916 was also prepared with 0.68 pCi/g of H-3.

The H-3 for TI#70916 has been revised, based on an incorrect calculation of the original result. The H-3 activity of sample prior to preparing the spike was 5.9 ± 1.6 E-02 pCi/g.

J.O. Martin 7-27-92

The H-3 result for TI#'s 70918 and 70920 has been withdrawn. The H-3 results of several samples analyzed by the same analytical method were not

TELEDYNE ISOTOPES

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ERIC SMITH
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S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70919	89808 BB02045SB		03/19	1000			PU-238	L.T. 1. E-02		04/26			6
							PU-239	L.T. 4. E-03		04/26			6
70920	89809 BB02045SC		03/19	1000			BE-7	L.T. 5. E-01		04/27			4
							K-40	2.46+-0.25E 01		04/27			4
							MN-54	L.T. 4. E-02		04/27			4
							CO-58	L.T. 5. E-02		04/27			4
							FE-59	L.T. 1. E-01		04/27			4
							CO-60	L.T. 4. E-02		04/27			4
							ZN-65	L.T. 1. E-01		04/27			4
							ZR-95	L.T. 6. E-02		04/27			4
							RU-103	L.T. 7. E-02		04/27			4
							RU-106	L.T. 4. E-01		04/27			4
							I-131	L.T. 1. E 00		04/27			4
							CS-134	L.T. 5. E-02		04/27			4
							CS-137	L.T. 5. E-02		04/27			4
							BA-140	L.T. 3. E-01		04/27			4
							CE-141	L.T. 1. E-01		04/27			4
							CE-144	L.T. 3. E-01		04/27			4
							RA-226	1.07+-0.57E 00		04/27			4
							TH-228	1.01+-0.10E 00		04/27			4
70921	89814 BB02060SB		03/19	1015			PU-238	L.T. 2. E-02		04/26			6
							PU-239	L.T. 6. E-03		04/26			6
70922	89815 BB02060SC		03/19	1015			BE-7	L.T. 9. E-01		06/18			4
							K-40	2.34+-0.23E 01		06/18			4
							MN-54	L.T. 5. E-02		06/18			4
							CO-58	L.T. 8. E-02		06/18			4
							FE-59	L.T. 3. E-01		06/18			4
							CO-60	L.T. 4. E-02		06/18			4
							ZN-65	L.T. 1. E-01		06/18			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

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ERIC SMITH
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S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70922	89815 BB02060SC		03/19	1015			ZR-95	L.T. 1. E-01		06/18			4
							RU-103	L.T. 2. E-01		06/18			4
							RU-106	L.T. 4. E-01		06/18			4
							I-131	L.T. 8. E 01		06/18			4
							CS-134	L.T. 5. E-02		06/18			4
							CS-137	L.T. 5. E-02		06/18			4
							BA-140	L.T. 5. E 00		06/18			4
							CE-141	L.T. 4. E-01		06/18			4
							CE-144	L.T. 3. E-01		06/18			4
							RA-226	1.22+-0.57E 00		06/18			4
							TH-228	1.23+-0.12E 00		06/18			4
							H-3	L.T. 1. E-02		06/14			5
70923	89820 BB02075SB		03/19	1015			PU-238	L.T. 3. E-02		05/01			6
							PU-239	L.T. 7. E-03		05/01			6
70924	89821 BB02075SC		03/19	1015			BE-7	L.T. 8. E-01		06/18			4
							K-40	2.51+-0.25E 01		06/18			4
							MN-54	L.T. 4. E-02		06/18			4
							CO-58	L.T. 6. E-02		06/18			4
							FE-59	L.T. 3. E-01		06/18			4
							CO-60	L.T. 3. E-02		06/18			4
							ZN-65	L.T. 1. E-01		06/18			4
							ZR-95	L.T. 9. E-02		06/18			4
							RU-103	L.T. 1. E-01		06/18			4
							RU-106	L.T. 3. E-01		06/18			4
							I-131	L.T. 7. E 01		06/18			4
							CS-134	L.T. 4. E-02		06/18			4
							CS-137	4.82+-2.47E-02		06/18			4
							BA-140	L.T. 5. E 00		06/18			4
							CE-141	L.T. 3. E-01		06/18			4
							CE-144	L.T. 2. E-01		06/18			4
							RA-226	1.55+-0.42E 00		06/18			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/19/92

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ERIC SMITH
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S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70924	89821 BB02075SC		03/19	1015			TH-228	9.20+-0.92E-01		06/18			4
							H-3	L.T. 1. E-02		06/14			5
70925	89352 BB08034SB DUP		03/19	0815			PU-238	L.T. 2. E-01		04/26			6
							PU-239	L.T. 1. E-01		04/26			6

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

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WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
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ERIC SMITH
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S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70927	89826 BB02078SB		03/19	1015			PU-238	L.T. 5. E-02		04/26			6
							PU-239	L.T. 2. E-02		04/26			6
70928	89827 BB02078SC		03/19	1015			BE-7	L.T. 8. E-01		05/18			4
							K-40	2.13+-0.21E 01		05/18			4
							MN-54	L.T. 6. E-02		05/18			4
							CO-58	L.T. 8. E-02		05/18			4
							FE-59	L.T. 2. E-01		05/18			4
							CO-60	L.T. 5. E-02		05/18			4
							ZN-65	L.T. 1. E-01		05/18			4
							ZR-95	L.T. 1. E-01		05/18			4
							RU-103	L.T. 1. E-01		05/18			4
							RU-106	L.T. 5. E-01		05/18			4
							I-131	L.T. 8. E 00		05/18			4
							CS-134	L.T. 6. E-02		05/18			4
							CS-137	1.01+-0.37E-01		05/18			4
							BA-140	L.T. 2. E 00		05/18			4
							CE-141	L.T. 3. E-01		05/18			4
							CE-144	L.T. 4. E-01		05/18			4
							RA-226	2.21+-0.80E 00		05/18			4
							TH-228	1.52+-0.15E 00		05/18			4
							H-3	L.T. 3. E-02		06/14			5
70929	89832 BB00005SC		03/19	1015			BE-7	L.T. 6. E-01		05/16			4
							K-40	2.35+-0.24E 01		05/16			4
							MN-54	L.T. 4. E-02		05/16			4
							CO-58	L.T. 6. E-02		05/16			4
							FE-59	L.T. 2. E-01		05/16			4
							CO-60	L.T. 4. E-02		05/16			4
							ZN-65	L.T. 1. E-01		05/16			4
							ZR-95	L.T. 7. E-02		05/16			4
							RU-103	L.T. 9. E-02		05/16			4
							RU-106	L.T. 4. E-01		05/16			4

CAMPSITE AREA 1
BB-03

VOLATILE ORGANIC COMPOUNDS

VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-74

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB03005SE
Sample Number: 90129

Matrix: Soil

Date Sampled: 3/17/92
Date Analyzed: 3/24/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 74

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	104	70 - 121
Toluene-D8	110	81 - 117
4-Bromofluorobenzene	91	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy M Donald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

The cover letter and the attachments are integral parts of this report.

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-71

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB03017SE
Sample Number: 90123

Matrix: Soil

Date Sampled: 3/17/92
Date Analyzed: 3/23/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 71

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	99	70 - 121
Toluene-D8	111	81 - 117
4-Bromofluorobenzene	100	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy M McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

The cover letter and the attachments are integral parts of this report.

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-59

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB03025SE
Sample Number: 90105

Matrix: Soil

Date Sampled: 3/17/92
Date Analyzed: 3/23/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 59

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	99	70 - 121
Toluene-D8	113	81 - 117
4-Bromofluorobenzene	91	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-68

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB03079SE
Sample Number: 90117

Matrix: Soil

Date Sampled: 3/17/92
Date Analyzed: 3/24/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 68

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	104	70 - 121
Toluene-D8	106	81 - 117
4-Bromofluorobenzene	94	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-62

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB03092SE
Sample Number: 90111

Matrix: Soil

Date Sampled: 3/17/92
Date Analyzed: 3/23/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 62

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	100	70 - 121
Toluene-D8	116	81 - 117
4-Bromofluorobenzene	88	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANIC COMPOUNDS

SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-73

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB03005SD
Sample Number: 90128

Matrix: Soil

Date Sampled: 3/17/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/27/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-73

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-73

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	54	25 - 121
Phenol-d5.....	62	24 - 113
Nitrobenzene-d5.....	57	23 - 120
2-Fluorobiphenyl.....	64	30 - 115
2,4,6-Tribromophenol.....	92	19 - 122
Terphenyl-d14.....	74	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-70

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB03017SD
Sample Number: 90122

Matrix: Soil

Date Sampled: 3/17/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/27/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-70

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-70

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	107	25 - 121
Phenol-d5.....	105	24 - 113
Nitrobenzene-d5.....	93	23 - 120
2-Fluorobiphenyl.....	98	30 - 115
2,4,6-Tribromophenol.....	101	19 - 122
Terphenyl-d14.....	110	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-58

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB03025SD*
Sample Number: 90104

Matrix: Soil

Date Sampled: 3/17/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/26/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-58

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-58

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	105	25 - 121
Phenol-d5.....	100	24 - 113
Nitrobenzene-d5.....	96	23 - 120
2-Fluorobiphenyl.....	100	30 - 115
2,4,6-Tribromophenol.....	101	19 - 122
Terphenyl-d14.....	102	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-67

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB03079SD
Sample Number: 90116

Matrix: Soil

Date Sampled: 3/17/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/26/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-67

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-67

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	109	25 - 121
Phenol-d5.....	106	24 - 113
Nitrobenzene-d5.....	95	23 - 120
2-Fluorobiphenyl.....	96	30 - 115
2,4,6-Tribromophenol.....	105	19 - 122
Terphenyl-d14.....	111	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

The cover letter and attachments are integral parts of this report.

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-61

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB03092SD
Sample Number: 90110

Matrix: Soil

Date Sampled: 3/17/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/26/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-61

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-61

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	110	25 - 121
Phenol-d5.....	110	24 - 113
Nitrobenzene-d5.....	100	23 - 120
2-Fluorobiphenyl.....	105	30 - 115
2,4,6-Tribromophenol.....	110	19 - 122
Terphenyl-d14.....	113	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

The cover letter and attachments are integral parts of this report.

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METALS

PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-75

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB03005SF
Sample Number: 90130 Matrix: Soil

Date Sampled: 3/17/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1107 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	1.9	5	2.5	3/24/92
Beryllium (Be)/6010.....	.60	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	13.	1	1.0	3/20/92
Copper (Cu)/6010.....	11.	1	1.0	3/20/92
Lead (Pb)/6010.....	14.	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	11.	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	46.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1105; and Hg was digested on 3/19/92, Batch # 920319-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} A high background reading was obtained for Arsenic. A matrix interferent is present creating a false positive. A 5 fold dilution yielded a result equal to or above the established reporting limit.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-72

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB03017SF
Sample Number: 90124 Matrix: Soil

Date Sampled: 3/17/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1107 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	1.5	1	.50	3/24/92
Beryllium (Be)/6010.....	.50	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	10.	1	1.0	3/20/92
Copper (Cu)/6010.....	10.	1	1.0	3/20/92
Lead (Pb)/6010.....	8.8	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	8.5	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	37.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1105; and Hg was digested on 3/19/92, Batch # 920319-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-60

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB03025SF
Sample Number: 90106 Matrix: Soil

Date Sampled: 3/17/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1106 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	1.0	1	.50	3/24/92
Beryllium (Be)/6010.....	.52	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	12.	1	1.0	3/20/92
Copper (Cu)/6010.....	10.	1	1.0	3/20/92
Lead (Pb)/6010.....	12.	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	10.	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	44.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1104; and Hg was digested on 3/19/92, Batch # 920319-1102 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-69

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB03079SF
Sample Number: 90118 Matrix: Soil

Date Sampled: 3/17/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1107 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	2.6	1	.50	3/24/92
Beryllium (Be)/6010.....	.65	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	13.	1	1.0	3/20/92
Copper (Cu)/6010.....	10.	1	1.0	3/20/92
Lead (Pb)/6010.....	9.8	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	9.1	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	47.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1105; and Hg was digested on 3/19/92, Batch # 920319-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-63

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB03092SF
Sample Number: 90112 Matrix: Soil

Date Sampled: 3/17/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1107 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	2.9	1	.50	3/24/92
Beryllium (Be)/6010.....	.67	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	17.	1	1.0	3/20/92
Copper (Cu)/6010.....	9.6	1	1.0	3/20/92
Lead (Pb)/6010.....	12.	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	14.	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	46.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1105; and Hg was digested on 3/19/92, Batch # 920319-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

The cover letter and attachments are integral parts of this report.

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RADIONUCLIDES

Table: Results of the analyses for iodine-129 and strontium-90 in thirty-five (35) soil samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Conc. pci/gwet I-129	Date Analyzed	Conc. pci/gdry Sr-90	Date Analyzed
90140	M4SA	03/17/92	SPS-1908	<0.2	05/20	0.06±0.01	06/03
88901	BB13024SA	03/17/92	1909	<0.2	05/20	0.01±0.01	05/14
88907	BB13037SA	03/17/92	1910	<0.2	05/21	0.01±0.01	05/14
88913	BB13039SA	03/17/92	1911	<0.2	05/21	0.01±0.01	05/15
88919	BB13011SA	03/17/92	1912	<0.2	05/22	0.01±0.01	06/03
88925	BB13010SA	03/17/92	1913	<0.2	05/22	<0.01	06/09
89151	BB06017SA	03/17/92	1914	<0.2	05/22	0.01±0.01	05/14
89157	BB06007SA	03/17/92	1915	<0.3	06/09	<0.01	05/14
89163	BB06092SA	03/17/92	1916	<0.2	05/26	<0.01	05/14
89169	BB06066SA	03/17/92	1917	<0.2	05/27	<0.01	05/14
89175	BB06013SA	03/17/92	1918	<0.2	05/28	0.01±0.01	05/14
90101	BB03025SA	03/17/92	1919	<0.2	06/01	0.09±0.01	06/09
90107	BB03092SA	03/17/92	1920	<0.2	06/01	0.04±0.01	05/14
90113	BB03079SA	03/17/92	1921	<0.2	06/01	0.03±0.01	06/09
90119	BB03017SA	03/17/92	1922	<0.3	06/09	0.05±0.01	06/09
90125	BB03005SA	03/17/92	1923	<0.2	06/02	0.06±0.01	05/15
90001	BB05003SA	03/18/92	1924	<0.2	06/02	0.02±0.01	06/09
90007	BB05089SA	03/18/92	1925	<0.2	06/02	0.02±0.01	05/22
90013	BB05006SA	03/18/92	1926	<0.2	06/03	0.02±0.01	05/22
90019	BB05057SA	03/18/92	1927	<0.2	06/04	0.03±0.01	05/22
90025	BB05077SA	03/18/92	1928	<0.2	06/04	0.06±0.01	05/22
90051	BB12006SA	03/18/92	1929	<0.2	06/05	0.03±0.01	05/22
90057	BB12019SA	03/18/92	1930	<0.2	06/05	0.04±0.01	05/22
90063	BB12023SA	03/18/92	1931	<0.3	06/05	0.02±0.01	05/22
90069	BB12020SA	03/18/92	1932	<0.2	06/08	0.03±0.01	05/22
90075	BB12003SA	03/18/92	1933	<0.2	06/08	0.01±0.01	05/22
90251	BB01056SA	03/18/92	1934	<0.3	06/08	0.04±0.01	06/03
90263	BB01001SA	03/18/92	1935	<0.3	06/10	<0.01	06/03
90269	BB01027SA	03/18/92	1936	<0.3	06/10	<0.01	06/09
90275	BB01038SA	03/18/92	1937	<0.2	06/10	0.02±0.01	06/03
90282	BB00004SA	03/18/92	1938	<0.3	06/10	0.01±0.01	06/03
89251	BB11018SA	03/18/92	1939	<0.3	06/10	0.02±0.01	06/03
89257	BB11061SA	03/18/92	1940	<0.3	06/11	<0.01	06/03
89263	BB11057SA	03/18/92	1941	<0.2	06/11	0.02±0.01	06/09
89269	BB11032SA	03/18/92	1942	<0.3	04/14	0.02±0.01	06/09

The error given is the probable counting error at 95% confidence level. Less than (<) values are based on 3 sigma counting error for background sample.

JUN 0 9

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/08/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
3-0623	04-0029403-012	03/25/92	04/27/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70809	90102 BB03025SB		03/17	1040			PU-238	L.T. 2. E-01		05/13			6
							PU-239	L.T. 5. E-02		05/13			6
70810	90103 BB03025SC		03/17	1040			BE-7	L.T. 6. E-01		04/25			4
							K-40	2.10+-0.21E 01		04/25			4
							MN-54	L.T. 5. E-02		04/25			4
							CO-58	L.T. 5. E-02		04/25			4
							FE-59	L.T. 2. E-01		04/25			4
							CO-60	L.T. 5. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4
							ZR-95	L.T. 7. E-02		04/25			4
							RU-103	L.T. 7. E-02		04/25			4
							RU-106	L.T. 4. E-01		04/25			4
							I-131	L.T. 1. E 00		04/25			4
							CS-134	L.T. 5. E-02		04/25			4
							CS-137	2.04+-0.45E-01		04/25			4
							BA-140	L.T. 3. E-01		04/25			4
							CE-141	L.T. 1. E-01		04/25			4
							CE-144	L.T. 3. E-01		04/25			4
							RA-226	1.73+-0.59E 00		04/25			4
							TH-228	1.43+-0.14E 00		04/25			4
							H-3	2.8 +-1.0 E-02		05/29			5
70811	90108 BB03092SB		03/17	1100			PU-238	L.T. 1. E-01		05/13			6
							PU-239	L.T. 4. E-02		05/13			6
70812	90109 BB03092SC		03/17	1100			BE-7	L.T. 6. E-01		04/25			4
							K-40	2.17+-0.22E 01		04/25			4
							MN-54	L.T. 5. E-02		04/25			4
							CO-58	L.T. 5. E-02		04/25			4
							FE-59	L.T. 2. E-01		04/25			4
							CO-60	L.T. 5. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

REVISED 09/30/92
RUN DATE 06/08/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0623	04-0029403-012	03/25/92	04/27/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70812	90109 BB03092SC		03/17	1100			ZR-95	L.T. 8. E-02		04/25			4
							RU-103	L.T. 8. E-02		04/25			4
							RU-106	L.T. 4. E-01		04/25			4
							I-131	L.T. 1. E 00		04/25			4
							CS-134	L.T. 6. E-02		04/25			4
							CS-137	3.75+-0.56E-01		04/25			4
							BA-140	L.T. 4. E-01		04/25			4
							CE-141	L.T. 2. E-01		04/25			4
							CE-144	L.T. 3. E-01		04/25			4
							RA-226	2.00+-0.74E 00		04/25			4
							TH-228	1.32+-0.13E 00		04/25			4
							H-3	L.T. 3. E-02		09/14			5
70813	90114 BB03079SB		03/17	1120			PU-238	L.T. 1. E-02		05/09			6
							PU-239	L.T. 1. E-02		05/09			6
70814	90115 BB03079SC		03/17	1120			BE-7	L.T. 4. E-01		04/25			4
							K-40	2.50+-0.25E 01		04/25			4
							MN-54	L.T. 4. E-02		04/25			4
							CO-58	L.T. 5. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 4. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4
							ZR-95	L.T. 6. E-02		04/25			4
							RU-103	L.T. 6. E-02		04/25			4
							RU-106	L.T. 3. E-01		04/25			4
							I-131	L.T. 9. E-01		04/25			4
							CS-134	L.T. 4. E-02		04/25			4
							CS-137	L.T. 4. E-02		04/25			4
							BA-140	L.T. 2. E-01		04/25			4
							CE-141	L.T. 1. E-01		04/25			4
							CE-144	L.T. 2. E-01		04/25			4
							RA-226	2.17+-0.52E 00		04/25			4

The H-3 results for TI#70812, 70814 and 70816 have been revised based upon reanalysis of the samples using an analytical method considered to be more reliable for soil samples. In units of pCI/l the results are L.T. 3. E 02, L.T. 2. E 02, and L.T. 3. E 02, respectively.

JM Martin 9-30-92

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

REVISED 09/30/92
RUN DATE 06/08/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 3
3-0623	04-0029403-012	03/25/92	04/27/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70814	90115 BB03079SC		03/17	1120			TH-228	1.32+-0.13E 00		04/25			4
							H-3	L.T. 4. E-02		09/14			5
70815	90120 BB03017SB		03/17	1130			PU-238	L.T. 7. E-03		05/09			6
							PU-239	L.T. 7. E-03		05/09			6
70816	90121 BB03017SC		03/17	1130			BE-7	L.T. 6. E-01		04/25			4
							K-40	2.26+-0.23E 01		04/25			4
							MN-54	L.T. 5. E-02		04/25			4
							CO-58	L.T. 5. E-02		04/25			4
							FE-59	L.T. 2. E-01		04/25			4
							CO-60	L.T. 5. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4
							ZR-95	L.T. 7. E-02		04/25			4
							RU-103	L.T. 8. E-02		04/25			4
							RU-106	L.T. 4. E-01		04/25			4
							I-131	L.T. 1. E 00		04/25			4
							CS-134	L.T. 5. E-02		04/25			4
							CS-137	8.50+-3.83E-02		04/25			4
							BA-140	L.T. 4. E-01		04/25			4
							CE-141	L.T. 1. E-01		04/25			4
							CE-144	L.T. 3. E-01		04/25			4
							RA-226	2.70+-0.60E 00		04/25			4
							TH-228	4.58+-0.70E-01		04/25			4
							H-3	L.T. 3. E-02		09/14			5
70817	90126 BB03005SB		03/17	1200			PU-238	L.T. 8. E-02		05/05			6
							PU-239	L.T. 2. E-02		05/05			6

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

REVISED 11/02/92
RUN DATE 06/08/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 4
3-0623	04-0029403-012	03/25/92	04/27/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70818	90127 BB03005SC		03/17	1200			BE-7	L.T. 5. E-01		04/25			4
							K-40	2.13+-0.21E 01		04/25			4
							MN-54	L.T. 4. E-02		04/25			4
							CO-58	L.T. 5. E-02		04/25			4
							FE-59	L.T. 2. E-01		04/25			4
							CO-60	L.T. 4. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4
							ZR-95	L.T. 7. E-02		04/25			4
							RU-103	L.T. 7. E-02		04/25			4
							RU-106	L.T. 4. E-01		04/25			4
							I-131	L.T. 1. E 00		04/25			4
							CS-134	L.T. 5. E-02		04/25			4
							CS-137	2.02+-0.41E-01		04/25			4
							BA-140	L.T. 3. E-01		04/25			4
							CE-141	L.T. 1. E-01		04/25			4
							CE-144	L.T. 3. E-01		04/25			4
							RA-226	1.64+-0.55E 00		04/25			4
							TH-228	1.26+-0.13E 00		04/25			4
							H-3	L.T. 3. E-02		09/24			5
70819	90131 BB00003SC		03/17	1130			BE-7	L.T. 5. E-01		04/25			4
							K-40	2.15+-0.22E 01		04/25			4
							MN-54	L.T. 4. E-02		04/25			4
							CO-58	L.T. 4. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 3. E-02		04/25			4
							ZN-65	L.T. 9. E-02		04/25			4
							ZR-95	L.T. 6. E-02		04/25			4
							RU-103	L.T. 6. E-02		04/25			4
							RU-106	L.T. 3. E-01		04/25			4
							I-131	L.T. 9. E-01		04/25			4
							CS-134	L.T. 4. E-02		04/25			4
							CS-137	5.73+-2.79E-02		04/25			4

The H-3 result for TI#70818 has been revised based upon reanalysis of the sample using an analytical method considered to be more reliable for soil samples. In units of pCi/l the result was L.T. 2. E 02.

[illegible] 11-2-92

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 10/07/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 2
3-3796	04-0029403-012	09/17/92	10/20/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
89797	SM03015SA	88307	03/11				H-3	L.T. 8. E-02		09/30			5
89798	BB03025SA	90101	03/17	1040			H-3	5.1 +-2.5 E-02		09/30			5
89799	BB16001BSA	89851	04/22	0915			H-3	3.6 +-2.0 E-02		09/30			5
89800	BR04097SA	88262	03/16	1115			H-3	NOT ANALYZED					5
89801	BB13039SA	88913	03/17	1540			H-3	2.5 +-1.2 E-02		10/02			5
89802	BB15001SA	89551	04/22	1230			H-3	NOT ANALYZED	*				5
89803	BR04023SA	88256	03/16	1100			H-3	2.2 +-0.8 E-02		10/02			5
89804	BB02071SA	89801	03/19	1000			H-3	NOT ANALYZED	*				5

LAST PAGE OF REPORT

APPROVED BY J. GUENTHER 10/07/92

SEND 1 COPIES TO MC4805 ERIC SMITH

2 - GAS LAB. 3 - RADIO CHEMISTRY LAB. 4 - GE(LI) GAMMA SPEC LAB. 5 - TRITIUM GAS/L.S. LAB. 6 - ALPHA SPEC LAB.

	TI#	H-3 (pCi/l)	Water (ml)
13024	89782	120±70	11.2
15003	89784	380±140	8.5
04025	89785	160±70	17.5
05024	89786	200±70	12.6
02007	89787	170±90	17.1
12020	89790	L.T. 200	8.6
03005	89791	L.T. 200	13.2
16001	89792	955±100	13.4
04029	89793	240±70	20.5
11006	89795	160±80	16.1
SM03015	89797	L.T. 200	9.8
03025	89798	240±120	18.4
16001B	89799	220±120	25.3
13039	89801	170±80	15.2
04023	89803	230±90	11.6

The samples listed as not analyzed were samples for which insufficient water was extracted from the soil.

WATER

VOLATILE ORGANICS

Analytical Method: EPA 8240 - Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-86

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB03001WH
Sample Number: 197179

Matrix: Water

Date Sampled: 3/17/92
Date Analyzed: 3/20/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/L (ppb)	REPORTING LIMIT ug/L (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

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Analytical Method: EPA 8240 - Modified
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-86

COMPOUND	ANALYTE CONCENTRATION {c} ug/L (ppb)	REPORTING LIMIT ug/L (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	102	76 - 114
Toluene-D8	99	88 - 110
4-Bromofluorobenzene	96	86 - 115

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

The cover letter and the attachments are integral parts of this report.

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POLYNUCLEAR AROMATICS
Analytical Method: EPA 610
Preparation Method: EPA 3510

.ab Project-Sample ID: 5745-87
Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BBU3001SF
Sample Number: 197183
Date Sampled: 3/17/92
Date Extracted: 3/30/92
Batch Number: 920330-2001

Matrix: Water
Date Received: 3/18/92
Date Analyzed: 3/30/92
Dilution Factor: 1

	ANALYTE CONCENTRATION {a} ug/L (ppb)	REPORTING LIMIT ug/L (ppb)
Naphthalene		10
Acenaphthylene		10
Acenaphthene		10
Fluorene		10
Phenanthrene		10
Anthracene		10
Fluoranthene		10
Pyrene		10
Benzo(a)anthracene		20
Chrysene		20
Benzo(b)fluoranthene		20
'enzo(k)fluoranthene		20
Jenzo(a)pyrene		20
Indeno(1,2,3-c,d)pyrene		50
Dibenz(a,h)anthracene		50
Benzo(g,h,i)perylene		50

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorobiphenyl	108	43 - 116

COMMENTS:

{a} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

he cover letter and attachments are integral parts of this report.

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3010 {a}

Lab Project-Sample ID: 5752-8

Project Name: Rocketdyne SSFL
Project Number: 03.0029403.012

Sample Description: NS BB03001WG
Sample Number: 197190 Matrix: Water

Date Sampled: 3/17/92 Date Received: 3/19/92
Date Digested: 3/21/92 {b} Batch Number: 920321-0502 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} ug/L (ppb)	DILUTION FACTOR	REPORTING LIMIT ug/L (ppb)	DATE ANALYZED
Antimony (Sb)/6010.....		1	50	3/24/92
Arsenic (As)/7060.....		1	10	3/24/92
Beryllium (Be)/6010.....		1	5	3/24/92
Cadmium (Cd)/6010.....		1	10	3/24/92
Chromium (Cr)/6010.....		1	10	3/24/92
Copper (Cu)/6010.....		1	20	3/24/92
Lead (Pb)/7421.....		1	3	3/26/92
Mercury (Hg)/7470.....		1	.5	3/23/92
Nickel (Ni)/6010.....		1	20	3/24/92
Selenium (Se)/7740.....		1	5	3/25/92
Silver (Ag)/6010.....		1	10	3/24/92
Thallium (Tl)/7841.....		1	10	3/25/92
Zinc (Zn)/6010.....	21	1	20	3/24/92

COMMENTS:

{a} Applies to all metals except As, Pb, Se, Tl and Hg. EPA Method 3020 used for As, Se and Tl digestion. EPA Method 7470 used for Hg digestion.
{b} Applies to all metals except As, Pb, Se, Tl and Hg. As, Pb, Se and Tl were digested on 3/21/92, Batch # 920321-0503 ; and Hg was digested on 3/21/92, Batch # 920321-0504 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/02/92
Cheryl Matterson, Association Chemist

The cover letter and attachments are integral parts of this report.

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Table: Results of the analyses for iodine-129 in four (4) and strontium-90 in four (4) water samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Concentration pCi/L			
				I-129	Date Analyzed	Sr-90	Date Analyzed
208732	BB04097RA	03/16/92	SPW-1890	ND		<0.3	04/03
208733	BB04097RA	03/16/92	1891	ND		<0.3	04/03
208735	BB04026RC	03/16/92	1892	<0.9	03/30	ND	
208736	BB04026RC	03/16/92	1893	<0.7	04/16	ND	
197188	BB03001WA	03/17/92	1894	ND		<0.5	04/03
197189	BB03001WC	03/16/92	1895	<0.7	04/28	ND	
170682	BB04001WA	03/16/92	1899	ND		<0.4	04/22
170683	BB04001WC	03/16/92	1900	<0.8	04/03	ND	

Less than (<) values are based on 3 sigma counting error for background sample.

ND - no data, analysis not required.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 04/28/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
3-0600	04-0029403-012	03/18/92	04/20/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

WATER - SURFACE

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/LITER)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70158	197184	[redacted]	03/17	1205			BE-7	L.T. 4. E 01		04/07			4
							K-40	L.T. 6. E 01		04/07			4
							MN-54	L.T. 3. E 00		04/07			4
							CO-58	L.T. 4. E 00		04/07			4
							FE-59	L.T. 9. E 00		04/07			4
							CO-60	L.T. 4. E 00		04/07			4
							ZN-65	L.T. 8. E 00		04/07			4
							ZR-95	L.T. 4. E 00		04/07			4
							RU-103	L.T. 5. E 00		04/07			4
							RU-106	L.T. 3. E 01		04/07			4
							I-131	L.T. 2. E 01		04/07			4
							CS-134	L.T. 3. E 00		04/07			4
							CS-137	L.T. 4. E 00		04/07			4
							BA-140	L.T. 1. E 01		04/07			4
							CE-141	L.T. 9. E 00		04/07			4
							CE-144	L.T. 2. E 01		04/07			4
							RA-226	L.T. 7. E 01		04/07			4
							TH-228	L.T. 7. E 00		04/07			4
70159	197185	BB03001WT	03/17	1350			GR-A	L.T. 3. E 00		04/01			3
							GR-B	7.8 +-3.3 E 00		04/01			3
70160	197187	BB03001WB	03/17	1445			PU-238	L.T. 2. E-01		04/19			6
							PU-239	L.T. 7. E-02		04/19			6

LAST PAGE OF REPORT

APPROVED BY J. GUENTHER 04/28/92

SEND 1 COPIES TO MC480S ERIC SMITH

2 - GAS LAB. 3 - RADIO CHEMISTRY LAB. 4 - GE(LI) GAMMA SPEC LAB. 5 - TRITIUM GAS/L.S. LAB. 6 - ALPHA SPEC LAB.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/24/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
3-0942	04-0029403-012	04/08/92	05/11/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

W A T E R

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/LITER)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
73053 197186	BB-03-001-WE		03/17	1205			H-3	L.T. 1.	E 02	06/20			5

LAST PAGE OF REPORT

APPROVED BY J. GUENTHER 06/24/92

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2 - GAS LAB. 3 - RADIO CHEMISTRY LAB. 4 - GE(LI) GAMMA SPEC LAB. 5 - TRITIUM GAS/L.S. LAB. 6 - ALPHA SPEC LAB.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/09/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 2
3-1681	04-0029403-012	05/20/92	06/22/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

W A T E R

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/LITER)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
73053	197186 B803001WE		03/11	1205			I-129	L.T. 6. E 00		06/03			3

VOLATILE ORGANIC COMPOUNDS

VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-11

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB04021SE
Sample Number: 88255

Matrix: Soil

Date Sampled: 3/16/92
Date Analyzed: 3/20/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 11

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	101	70 - 121
Toluene-D8	95	81 - 117
4-Bromofluorobenzene	96	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-13

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB04023SE
Sample Number: 88260

Matrix: Soil

Date Sampled: 3/16/92
Date Analyzed: 3/20/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 13

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	107	70 - 121
Toluene-D8	105	81 - 117
4-Bromofluorobenzene	92	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-22

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB04026SE
Sample Number: 88278

Matrix: Soil

Date Sampled: 3/16/92
Date Analyzed: 3/21/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 22

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	104	70 - 121
Toluene-D8	104	81 - 117
4-Bromofluorobenzene	90	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-19

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB04082SE
Sample Number: 88272

Matrix: Soil

Date Sampled: 3/16/92
Date Analyzed: 3/21/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 19

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	100	70 - 121
Toluene-D8	101	81 - 117
4-Bromofluorobenzene	88	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-16

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB04097SE
Sample Number: 88266

Matrix: Soil

Date Sampled: 3/16/92
Date Analyzed: 3/21/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 16

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	101	70 - 121
Toluene-D8	104	81 - 117
4-Bromofluorobenzene	84	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANIC COMPOUNDS

SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-10

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB04021SD
Sample Number: 88254

Matrix: Soil

Date Sampled: 3/16/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/25/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-10

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-10

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	88	25 - 121
Phenol-d5.....	83	24 - 113
Nitrobenzene-d5.....	78	23 - 120
2-Fluorobiphenyl.....	91	30 - 115
2,4,6-Tribromophenol.....	138	19 - 122
Terphenyl-d14.....	87	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.
{d} Surrogate recovery for 2,4,6-Tribromophenol is beyond quality control limits. Sample meets all QC acceptance criteria specified in SW846 and EPA SOW 2/88.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/01/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-12

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB04023SD
Sample Number: 88259

Matrix: Soil

Date Sampled: 3/16/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/26/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: .EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-12

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-12

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	93	25 - 121
Phenol-d5.....	92	24 - 113
Nitrobenzene-d5.....	88	23 - 120
2-Fluorobiphenyl.....	105	30 - 115
2,4,6-Tribromophenol.....	151	19 - 122
Terphenyl-d14.....	98	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.
{d} Surrogate recovery for 2,4,6-Tribromophenol is beyond quality control limits. Sample meets all QC acceptance criteria specified in SW846 and EPA SOW 2/88.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/01/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-21

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB04026SD
Sample Number: 88277

Matrix: Soil

Date Sampled: 3/16/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/26/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-21

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-21

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	68	25 - 121
Phenol-d5.....	65	24 - 113
Nitrobenzene-d5.....	56	23 - 120
2-Fluorobiphenyl.....	64	30 - 115
2,4,6-Tribromophenol.....	81	19 - 122
Terphenyl-d14.....	67	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-18

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB04082SD
Sample Number: 88271

Matrix: Soil

Date Sampled: 3/16/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/26/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-18

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-18

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	96	25 - 121
Phenol-d5.....	104	24 - 113
Nitrobenzene-d5.....	95	23 - 120
2-Fluorobiphenyl.....	97	30 - 115
2,4,6-Tribromophenol.....	117	19 - 122
Terphenyl-d14.....	115	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/01/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-15

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB04097SD
Sample Number: 88265

Matrix: Soil

Date Sampled: 3/16/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/27/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-15

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-15

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	59	25 - 121
Phenol-d5.....	56	24 - 113
Nitrobenzene-d5.....	88	23 - 120
2-Fluorobiphenyl.....	89	30 - 115
2,4,6-Tribromophenol.....	127	19 - 122
Terphenyl-d14.....	99	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.
{d} Surrogate recovery for 2,4,6-Tribromophenol is beyond quality control limits. Sample meets all QC acceptance criteria specified in SW846 and EPA SOW 2/88.

Regenerated 03/29/93.

Approved By: Nancy M. Donald for CM
Cheryl Matterson, Associate Chemist

Date: 3/29/93

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METALS

PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-81

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB04021SF
Sample Number: 88280

Matrix: Soil

Date Sampled: 3/16/92
Date Digested: 3/19/92 {b}

Date Received: 3/18/92
Batch Number: 920319-1106 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	2.4	1	.50	3/24/92
Beryllium (Be)/6010.....	.59	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	9.0	1	1.0	3/20/92
Copper (Cu)/6010.....	9.1	1	1.0	3/20/92
Lead (Pb)/6010.....	6.6	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	5.1	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	45.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1104; and Hg was digested on 3/19/92, Batch # 920319-1102 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/01/92

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-14

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB04023SF
Sample Number: 88261 Matrix: Soil

Date Sampled: 3/16/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1106 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	2.3	1	.50	3/24/92
Beryllium (Be)/6010.....	.36	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	9.7	1	1.0	3/20/92
Copper (Cu)/6010.....	10.	1	1.0	3/20/92
Lead (Pb)/6010.....	7.4	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	6.0	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	41.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1104; and Hg was digested on 3/19/92, Batch # 920319-1102 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-23

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB04026SF
Sample Number: 88279 Matrix: Soil

Date Sampled: 3/16/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1106 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	3.0	1	.50	3/24/92
Beryllium (Be)/6010.....	.46	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	9.7	1	1.0	3/20/92
Copper (Cu)/6010.....	8.2	1	1.0	3/20/92
Lead (Pb)/6010.....	7.6	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	5.4	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	45.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1104; and Hg was digested on 3/19/92, Batch # 920319-1102 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-20

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB04082SF
Sample Number: 88273 Matrix: Soil

Date Sampled: 3/16/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1106 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	1.9	1	.50	3/24/92
Beryllium (Be)/6010.....	.39	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	8.6	1	1.0	3/20/92
Copper (Cu)/6010.....	7.0	1	1.0	3/20/92
Lead (Pb)/6010.....	5.0	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	4.8	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	39.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1104; and Hg was digested on 3/19/92, Batch # 920319-1102 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-17

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB04097SF
Sample Number: 88267 Matrix: Soil

Date Sampled: 3/16/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1106 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	2.3	1	.50	3/24/92
Beryllium (Be)/6010.....	.38	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	7.8	1	1.0	3/20/92
Copper (Cu)/6010.....	5.9	1	1.0	3/20/92
Lead (Pb)/6010.....	8.8	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	4.4	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	40.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1104; and Hg was digested on 3/19/92, Batch # 920319-1102 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

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RADIONUCLIDES

Table: Results of the analyses for iodine-129 and strontium-90 in nineteen (19) soil samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Conc. pci/gwet I-129	Date Analyzed	Conc. pci/gdry Sr-90	Date Analyzed
88201	BG04025SA	03/13/92	SPS-1872	<0.3	05/05	0.02±0.01	05/02
88207	BG04090SA	03/13/92	1873	<0.3	05/05	0.05±0.01	05/02
88213	BG04029SA	03/13/92	1874	<0.2	05/07	0.02±0.01	05/02
88219	BG05074SA	03/13/92	1875	<0.3	05/07	0.05±0.01	05/13
88225	BG05026SA	03/13/92	1876	<0.2	05/07	0.08±0.02	05/13
88231	BG05016SA	03/13/92	1877	<0.2	05/08	0.05±0.01	05/13
88244	M35A	03/13/92	1878	<0.2	05/11	0.05±0.02	05/15
88251	BB04021SA	03/16/92	1879	<0.2	05/11	0.03±0.01	06/03
88256	BB04023SA	03/16/92	1880	<0.3	05/12	0.02±0.01	06/03
88262	BB04097SA	03/16/92	1881	<0.3	05/12	0.01±0.01	06/09
88265	BB04082SA	03/16/92	1882	<0.3	05/13	0.01±0.01	05/13
88274	BB04026SA	03/16/92	1883	<0.2	05/13	0.03±0.01	05/13
88401	BB14037SA	03/16/92	1884	<0.2	05/14	0.02±0.01	05/15
88407	BB14041SA	03/16/92	1885	<0.2	05/14	0.06±0.01	05/13
88413	BB14079SA	03/16/92	1886	<0.3	05/14	0.03±0.01	05/13
88419	BB14094SA	03/16/92	1887	<0.2	05/14	0.02±0.01	05/13
88425	BB14004SA	03/16/92	1888	<0.3	05/15	0.05±0.01	05/13
88293	BB00003SA	03/16/92	1889	<0.3	05/15	0.04±0.01	05/13
88433	BB00003SA	03/16/92	1898	<0.2	05/19	0.06±0.01	06/03

The error given is the probable counting error at 95% confidence level. Less than (<) values are based on 3 sigma counting error for background sample.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 05/15/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 4
3-0599	04-0029403-012	03/18/92	04/20/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION		STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70169	88246	MS	M3SC	03/13	1605			ZR-95	L.T. 5. E-02		04/01			4
								RU-103	L.T. 4. E-02		04/01			4
								RU-106	L.T. 3. E-01		04/01			4
								I-131	L.T. 2. E-01		04/01			4
								CS-134	L.T. 4. E-02		04/01			4
								CS-137	1.18+-0.34E-01		04/01			4
								BA-140	L.T. 8. E-02		04/01			4
								CE-141	L.T. 7. E-02		04/01			4
								CE-144	L.T. 2. E-01		04/01			4
								RA-226	2.14+-0.50E 00		04/01			4
								TH-228	7.71+-0.77E-01		04/01			4
								H-3	4.2 +-1.6 E-02		05/10			5
70170	88252		BB04021SB	03/16	1030			PU-238	L.T. 2. E-02		04/09			6
								PU-239	L.T. 7. E-03		04/09			6
70171	88253		BB04021SC	03/16	1030			BE-7	L.T. 4. E-01		04/02			4
								K-40	2.23+-0.22E 01		04/02			4
								MN-54	L.T. 4. E-02		04/02			4
								CO-58	L.T. 4. E-02		04/02			4
								FE-59	L.T. 1. E-01		04/02			4
								CO-60	L.T. 4. E-02		04/02			4
								ZN-65	L.T. 1. E-01		04/02			4
								ZR-95	L.T. 5. E-02		04/02			4
								RU-103	L.T. 5. E-02		04/02			4
								RU-106	L.T. 3. E-01		04/02			4
								I-131	L.T. 2. E-01		04/02			4
								CS-134	L.T. 5. E-02		04/02			4
								CS-137	L.T. 5. E-02		04/02			4
								BA-140	L.T. 1. E-01		04/02			4
								CE-141	L.T. 8. E-02		04/02			4
								CE-144	L.T. 3. E-01		04/02			4
								RA-226	1.94+-0.66E 00		04/02			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 05/15/92

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ERIC SMITH
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IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70171	88253 BB04021SC		03/16	1030			TH-228	1.42+-0.14E 00		04/02			4
							H-3	3.2 +-1.6 E-02		05/10			5
70172	88257 BB04023SB		03/16	1100			PU-238	L.T. 1. E-02		04/09			6
							PU-239	L.T. 6. E-03		04/09			6
70173	88258 BB04023SC		03/16	1100			BE-7	L.T. 4. E-01		04/02			4
							K-40	2.21+-0.22E 01		04/02			4
							MN-54	L.T. 5. E-02		04/02			4
							CO-58	L.T. 4. E-02		04/02			4
							FE-59	L.T. 1. E-01		04/02			4
							CO-60	L.T. 4. E-02		04/02			4
							ZN-65	L.T. 1. E-01		04/02			4
							ZR-95	L.T. 6. E-02		04/02			4
							RU-103	L.T. 5. E-02		04/02			4
							RU-106	L.T. 4. E-01		04/02			4
							I-131	L.T. 2. E-01		04/02			4
							CS-134	L.T. 6. E-02		04/02			4
							CS-137	9.90+-4.01E-02		04/02			4
							BA-140	L.T. 1. E-01		04/02			4
							CE-141	L.T. 1. E-01		04/02			4
							CE-144	L.T. 4. E-01		04/02			4
							RA-226	1.49+-0.77E 00		04/02			4
							TH-228	1.11+-0.11E 00		04/02			4
							H-3	2.1 +-1.1 E-02		05/10			5
70174	88263 BB04097SB		03/16	1115			PU-238	L.T. 2. E-02		04/09			6
							PU-239	L.T. 5. E-03		04/09			6

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

ADDITIONAL DATA 07/01/92
RUN DATE 05/15/93

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 6
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ERIC SMITH
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16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER		CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70175	88264	BB04097SC		03/16	1115			BE-7	L.T. 3. E-01		04/06			4
								K-40	2.02+-0.20E 01		04/06			4
								MN-54	L.T. 3. E-02		04/06			4
								CO-58	L.T. 3. E-02		04/06			4
								FE-59	L.T. 9. E-02		04/06			4
								CO-60	L.T. 3. E-02		04/06			4
								ZN-65	L.T. 8. E-02		04/06			4
								ZR-95	L.T. 4. E-02		04/06			4
								RU-103	L.T. 4. E-02		04/06			4
								RU-106	L.T. 2. E-01		04/06			4
								I-131	L.T. 2. E-01		04/06			4
								CS-134	L.T. 3. E-02		04/06			4
								CS-137	L.T. 3. E-02		04/06			4
								BA-140	L.T. 8. E-02		04/06			4
								CE-141	L.T. 6. E-02		04/06			4
								CE-144	L.T. 2. E-01		04/06			4
								RA-226	1.82+-0.43E 00		04/06			4
								TH-228	1.07+-0.11E 00		04/06			4
								H-3	NOT ANALYZED					5
70176	88269	BB04082SB		03/16	1130			PU-238	L.T. 2. E-02		04/09			6
								PU-239	L.T. 7. E-03		04/09			6
70177	88270	BB04082SC		03/16	1130			BE-7	L.T. 3. E-01		04/06			4
								K-40	2.30+-0.23E 01		04/06			4
								MN-54	L.T. 3. E-02		04/06			4
								CO-58	L.T. 3. E-02		04/06			4
								FE-59	L.T. 8. E-02		04/06			4
								CO-60	L.T. 3. E-02		04/06			4
								ZN-65	L.T. 7. E-02		04/06			4
								ZR-95	L.T. 4. E-02		04/06			4
								RU-103	L.T. 4. E-02		04/06			4
								RU-106	L.T. 2. E-01		04/06			4

We were not able to extract water from TI#70175.

An aliquot of BB04097SA from our midwest laboratory was analyzed as a replacement for TI#70175. The H-3 result was L.T. 3. E-02 pCi/g (L.T. 2. E 02 pCi/l). C. Slaus 7/1/93

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 05/15/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 7
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ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70177	88270	8804082SC	03/16	1130			I-131	L.T. 2. E-01		04/06			4
							CS-134	L.T. 4. E-02		04/06			4
							CS-137	L.T. 3. E-02		04/06			4
							BA-140	L.T. 9. E-02		04/06			4
							CE-141	L.T. 6. E-02		04/06			4
							CE-144	L.T. 2. E-01		04/06			4
							RA-226	1.71+-0.45E 00		04/06			4
							TH-228	1.24+-0.12E 00		04/06			4
							H-3	3.4 +-1.2 E-02		5/10			5
70178	88275	8804026SB	03/16	1240			PU-238	L.T. 9. E-03		04/09			6
							PU-239	L.T. 6. E-03		04/09			6
70179	88276	8804026SC	03/16	1240			BE-7	L.T. 3. E-01		04/06			4
							K-40	2.17+-0.22E 01		04/06			4
							MN-54	L.T. 4. E-02		04/06			4
							CO-58	L.T. 3. E-02		04/06			4
							FE-59	L.T. 9. E-02		04/06			4
							CO-60	L.T. 3. E-02		04/06			4
							ZN-65	L.T. 8. E-02		04/06			4
							ZR-95	L.T. 4. E-02		04/06			4
							RU-103	L.T. 4. E-02		04/06			4
							RU-106	L.T. 3. E-01		04/06			4
							I-131	L.T. 2. E-01		04/06			4
							CS-134	L.T. 4. E-02		04/06			4
							CS-137	1.46+-0.31E-01		04/06			4
							BA-140	L.T. 8. E-02		04/06			4
							CE-141	L.T. 7. E-02		04/06			4
							CE-144	L.T. 2. E-01		04/06			4
							RA-226	1.51+-0.47E 00		04/06			4
							TH-228	1.27+-0.13E 00		04/06			4
							H-3	2.8 +-0.9 E-02		05/13			5

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 10/07/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 2
3-3796	04-0029403-012	09/17/92	10/20/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
89797	SM03015SA	88307	03/11				H-3	L.T. 8. E-02		09/30			5
89798	BB03025SA	90101	03/17	1040			H-3	5.1 +-2.5 E-02		09/30			5
89799	BB16001BSA	89851	04/22	0915			H-3	3.6 +-2.0 E-02		09/30			5
89800	BB04097SA	88262	03/16	1115			H-3	NOT ANALYZED					5
89801	BB13039SA	88913	03/17	1540			H-3	7.5 +-1.2 E-02		10/02			5
89802	BB15001SA	89551	04/22	1230			H-3	NOT ANALYZED	*				5
89803	BB04023SA	88256	03/16	1100			H-3	2.3 +-0.8 E-02		10/02			5
89804	BB02071SA	89801	03/19	1000			H-3	NOT ANALYZED	*				5

LAST PAGE OF REPORT

APPROVED BY J. GUENTHER 10/07/92

SEND 1 COPIES TO MC480S ERIC SMITH

2 - GAS LAB. 3 - RADIO CHEMISTRY LAB. 4 - GE(LI) GAMMA SPEC LAB. 5 - TRITIUM GAS/L.S. LAB. 6 - ALPHA SPEC LAB.

	TI#	H-3 (pCi/l)	Water (ml)
13024	89782	120±70	11.2
15023	89784	380±140	8.5
04025	89785	160±70	17.5
05026	89786	200±70	12.6
02007	89787	170±90	17.1
12020	89790	L.T. 200	8.6
03005	89791	L.T. 200	13.2
16001B	89792	955±100	13.4
04027	89793	240±70	20.5
11006	89795	160±80	16.1
SM03015	89797	L.T. 200	9.8
03025	89798	240±120	18.4
16001B	89799	220±120	25.3
13039	89801	170±80	15.2
04023	89803	230±90	11.6

The samples listed as not analyzed were samples for which insufficient water was extracted from the soil.

WATER

VOLATILE ORGANICS

Analytical Method: EPA 8240 - Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-78

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB-04-001WH
Sample Number: 170673

Matrix: Water

Date Sampled: 3/16/92
Date Analyzed: 3/20/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/L (ppb)	REPORTING LIMIT ug/L (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Modified
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-78

COMPOUND	ANALYTE CONCENTRATION {c} ug/L (ppb)	REPORTING LIMIT ug/L (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	103	76 - 114
Toluene-D8	96	88 - 110
4-Bromofluorobenzene	96	86 - 115

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

The cover letter and the attachments are integral parts of this report.

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3510

Lab Project-Sample ID: 5745-79

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB-04-001WF
Sample Number: 170677

Matrix: Water

Date Sampled: 3/16/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/24/92

Batch Number: 920320-2002

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/L (ppb)	REPORTING LIMIT ug/L (ppb)
Phenol		10
Bis(2-chloroethyl)ether		10
2-Chlorophenol		10
1,3-Dichlorobenzene		10
1,4-Dichlorobenzene		10
Benzyl alcohol		10
2-Methylphenol		10
1,2-Dichlorobenzene		10
Bis(2-Chloroisopropyl)ether		10
4-Methylphenol		10
N-Nitroso-di-n-propylamine		10
Hexachloroethane		10
Nitrobenzene		10
Isophorone		10
2,4-Dimethylphenol		10
1,2,4-Trichlorobenzene		10
2-Nitrophenol		10
Benzoic acid		50
Bis(2-Chloroethoxy)methane		10
2,4-Dichlorophenol		10
Naphthalene		10
4-Chloroaniline		10
Hexachlorobutadiene		10
4-Chloro-3-methylphenol		10
2-Methylnaphthalene		10
Hexachlorocyclopentadiene		10
2,4,6-Trichlorophenol		10
2,4,5-Trichlorophenol		10
2-Chloronaphthalene		10
3-Nitroaniline		50
Dimethylphthalate		10
2,6-Dinitrotoluene		10
Acenaphthylene		10
2-Nitroaniline		50

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3510

Lab Project-Sample ID: 5745-79

COMPOUND	ANALYTE CONCENTRATION {c} ug/L (ppb)	REPORTING LIMIT ug/L (ppb)
Acenaphthene		10
2,4-Dinitrophenol		50
4-Nitrophenol		50
2,4-Dinitrotoluene		10
Dibenzofuran		10
Diethylphthalate		10
alpha-BHC {b}		10
4-Chlorophenyl phenyl ether		10
Fluorene		10
4-Nitroaniline		50
4,6-Dinitro-2-methylphenol		50
N-Nitrosodiphenylamine		10
4-Bromophenyl phenyl ether		10
beta-BHC {b}		10
Lindane {b}		10
Hexachlorobenzene		10
Pentachlorophenol		50
Phenanthrene		10
Anthracene		10
Delta-BHC {b}		10
Heptachlor {b}		10
Aldrin {b}		10
Endrin {b}		10
Butyl benzyl phthalate		10
Fluoranthene		10
Heptachlor Epoxide		10
Pyrene		10
Dieldrin {b}		10
4,4'-DDE {b}		10
Endosulfan sulfate		10
4,4'-DDT {b}		10
4,4'-DDD {b}		10
Di-n-butylphthalate		10
3,3'-Dichlorobenzidine		20
Benzo(a)anthracene		10
Bis(2-Ethylhexyl)phthalate		10
Chrysene		10
Di-n-octylphthalate		10
Benzo(b)fluoranthene		10
Benzo(k)fluoranthene		10
Benzo(a)pyrene		10
Indeno(1,2,3-c,d)pyrene		10
Dibenzo(a,h)anthracene		10
Benzo(g,h,i)perylene		10

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3510

Lab Project-Sample ID: 5745-79

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	49	21 - 100
Phenol-d5.....	32	10 - 94
Nitrobenzene-d5.....	94	35 - 114
2-Fluorobiphenyl.....	94	43 - 116
2,4,6-Tribromophenol.....	116	10 - 123
Terphenyl-d14.....	94	33 - 141

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/01/92

The cover letter and attachments are integral parts of this report.

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3010 {a}

Lab Project-Sample ID: 5745-80

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB-04-001WG
Sample Number: 170684

Matrix: Water

Date Sampled: 3/16/92
Date Digested: 3/21/92 {b}

Date Received: 3/18/92
Batch Number: 920321-0502 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} ug/L (ppb)	DILUTION FACTOR	REPORTING LIMIT ug/L (ppb)	DATE ANALYZED
Antimony (Sb)/6010.....		1	50	3/24/92
Arsenic (As)/7060.....		1	10	3/24/92
Beryllium (Be)/6010.....		1	5	3/24/92
Cadmium (Cd)/6010.....		1	10	3/24/92
Chromium (Cr)/6010.....		1	10	3/24/92
Copper (Cu)/6010.....		1	20	3/24/92
Lead (Pb)/7421.....		1	3	3/26/92
Mercury (Hg)/7470.....		1	.5	3/23/92
Nickel (Ni)/6010.....		1	20	3/24/92
Selenium (Se)/7740.....		1	5	3/25/92
Silver (Ag)/6010.....		1	10	3/24/92
Thallium (Tl)/7841.....		1	10	3/25/92
Zinc (Zn)/6010.....		1	20	3/24/92

COMMENTS:

{a} Applies to all metals except As, Pb, Se, Tl and Hg. EPA Method 3020 used for As, Se and Tl digestion. EPA Method 7470 used for Hg digestion.
{b} Applies to all metals except As, Pb, Se, Tl and Hg. As, Pb, Se and Tl were digested on 3/21/92, Batch # 920321-0503; and Hg was digested on 3/21/92, Batch # 920321-0504.
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/01/92

The cover letter and attachments are integral parts of this report.

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Table: Results of the analyses for iodine-129 in four (4) and strontium-90 in four (4) water samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Concentration pCi/L			
				I-129	Date Analyzed	Sr-90	Date Analyzed
208732	BB04097RA	03/16/92	SPW-1890	ND		<0.3	04/03
208733	BB04097RA	03/16/92	1891	ND		<0.3	04/03
208735	BB04026RC	03/16/92	1892	<0.9	03/30	ND	
208736	BB04026RC	03/16/92	1893	<0.7	04/16	ND	
197188	BB03001WA	03/17/92	1894	ND		<0.5	04/03
197189	BB03001WC	03/16/92	1895	<0.7	04/28	ND	
170682	BB04001WA	03/16/92	1899	ND		<0.4	04/22
170683	BB04001WC	03/16/92	1900	<0.8	04/03	ND	

Less than (<) values are based on 3 sigma counting error for background sample.

ND - no data, analysis not required.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 05/28/92

PAGE 1

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0741	04-0029403-012	03/24/92	04/26/92

WATER - SURFACE

TELEDYNE SAMPLE NUMBER		CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	TIME	STOP DATE	TIME	NUCLIDE	ACTIVITY (PCI/LITER)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70447	170680	BB04001WE		03/16	1405			H-3	L.T. 1. E 02		05/24			5
								PU-239	L.T. 2. E-01		05/01			6
70448	170681	BB04001WB		03/16	1405			PU-238	L.T. 2. E-01		05/01			6
70449	170678	BB04001WD		03/16	1200			BE-7	L.T. 5. E 01		05/04			4
								K-40	L.T. 6. E 01		05/04			4
								MN-54	L.T. 3. E 00		05/04			4
								CO-58	L.T. 5. E 00		05/04			4
								FE-59	L.T. 1. E 01		05/04			4
								CO-60	L.T. 3. E 00		05/04			4
								ZN-65	L.T. 8. E 00		05/04			4
								ZR-95	L.T. 6. E 00		05/04			4
								RU-103	L.T. 8. E 00		05/04			4
								RU-106	L.T. 3. E 01		05/04			4
								I-131	L.T. 3. E 02		05/04			4
								CS-134	L.T. 4. E 00		05/04			4
								CS-137	L.T. 4. E 00		05/04			4
								BA-140	L.T. 5. E 01		05/04			4
								CE-141	L.T. 2. E 01		05/04			4
								CE-144	L.T. 3. E 01		05/04			4
								RA-226	L.T. 8. E 01		05/04			4
								TH-228	L.T. 7. E 00		05/04			4
70450	170679	BB04001WI		03/16	1205			GR-A	L.T. 3. E 00		04/13			3
								GR-B	L.T. 4. E 00		04/13			3
70451	208730	BB14044RE		03/16	1450			H-3	L.T. 1. E 02		05/24			5

LAST PAGE OF REPORT

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APPROVED BY J. GUENTHER 05/28/92

2 - GAS LAB. 3 - RADIO CHEMISTRY LAB. 4 - GE(LI) GAMMA SPEC LAB. 5 - TRITIUM GAS/L.S. LAB. 6 - ALPHA SPEC LAB.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/09/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-1681	04-0029403-012	05/20/92	06/22/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

WATER - SURFACE

TELEDYNE SAMPLE NUMBER		CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/LITER)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
69556	197158	BG01002WE		03/12	1530			I-129	L.T. 7. E 00		06/02			3
70345	171858	SM08001WE		11/25				I-129	L.T. 6. E 00		06/02			3
70447	170680	BB04001WE		03/16	1405			I-129	L.T. 7. E 00		06/03			3
74347	197118	BB18003WE		04/21	1320			I-129	L.T. 7. E 00		06/03			3
74348	197119	BB00001WE		04/23	0830			I-129	L.T. 6. E 00		06/03			3
74403	197872	BB19003WE		04/23	0830			I-129	L.T. 7. E 00		06/03			3
74407	197308	BB16001WE		04/23	0950			I-129	L.T. 6. E 00		06/03			3

LAST PAGE OF REPORT

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2 - GAS LAB. 3 - RADIO CHEMISTRY LAB. 4 - GE(LI) GAMMA SPEC LAB. 5 - TRITIUM GAS/L.S. LAB. 6 - ALPHA SPEC LAB.

VOLATILE ORGANIC COMPOUNDS

VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-16

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB05003SE
Sample Number: 90005

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/24/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 16

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	105	70 - 121
Toluene-D8	111	81 - 117
4-Bromofluorobenzene	94	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-22

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB05006SE
Sample Number: 90017

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/24/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 22

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	106	70 - 121
Toluene-D8	114	81 - 117
4-Bromofluorobenzene	85	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-25

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB05057SE
Sample Number: 90023

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/24/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 25

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	110	70 - 121
Toluene-D8	108	81 - 117
4-Bromofluorobenzene	89	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-28

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB05077SE
Sample Number: 90029

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/24/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 28

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	109	70 - 121
Toluene-D8	103	81 - 117
4-Bromofluorobenzene	99	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-19

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB05089SE
Sample Number: 90011

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/24/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 19

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	107	70 - 121
Toluene-D8	106	81 - 117
4-Bromofluorobenzene	88	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANIC COMPOUNDS

SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-15

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB05003SD
Sample Number: 90004

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/31/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-15

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-15

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	87	25 - 121
Phenol-d5.....	95	24 - 113
Nitrobenzene-d5.....	89	23 - 120
2-Fluorobiphenyl.....	94	30 - 115
2,4,6-Tribromophenol.....	103	19 - 122
Terphenyl-d14.....	107	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/07/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-21

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB05006SD
Sample Number: 90016

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/31/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-21

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-21

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	82	25 - 121
Phenol-d5.....	83	24 - 113
Nitrobenzene-d5.....	91	23 - 120
2-Fluorobiphenyl.....	91	30 - 115
2,4,6-Tribromophenol.....	91	19 - 122
Terphenyl-d14.....	99	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-24

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB05057SD
Sample Number: 90022

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/30/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-24

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-24

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	76	25 - 121
Phenol-d5.....	72	24 - 113
Nitrobenzene-d5.....	82	23 - 120
2-Fluorobiphenyl.....	94	30 - 115
2,4,6-Tribromophenol.....	110	19 - 122
Terphenyl-d14.....	100	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/07/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-27

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB05077SD
Sample Number: 90028

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/30/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-27

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-27

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	84	25 - 121
Phenol-d5.....	79	24 - 113
Nitrobenzene-d5.....	86	23 - 120
2-Fluorobiphenyl.....	97	30 - 115
2,4,6-Tribromophenol.....	109	19 - 122
Terphenyl-d14.....	104	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-18

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB05089SD
Sample Number: 90010

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/30/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-18

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-18

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	80	25 - 121
Phenol-d5.....	78	24 - 113
Nitrobenzene-d5.....	86	23 - 120
2-Fluorobiphenyl.....	98	30 - 115
2,4,6-Tribromophenol.....	113	19 - 122
Terphenyl-d14.....	101	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/07/92

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METALS

PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-17

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB05003SF
Sample Number: 90006 Matrix: Soil

Date Sampled: 3/18/92 Date Received: 3/19/92
Date Digested: 3/20/92 {b} Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	3.5	5	2.5	3/24/92
Beryllium (Be)/6010.....	.52	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	13.	1	1.0	3/21/92
Copper (Cu)/6010.....	16.	1	1.0	3/21/92
Lead (Pb)/6010.....	18.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	10.	1	1.0	3/21/92
Selenium (Se)/7740.....	2.0	1	.25	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	52.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-23

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB05006SF
Sample Number: 90018

Matrix: Soil

Date Sampled: 3/18/92
Date Digested: 3/20/92 {b}

Date Received: 3/19/92
Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	4.6	5	2.5	3/24/92
Beryllium (Be)/6010.....	.39	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	11.	1	1.0	3/21/92
Copper (Cu)/6010.....	13.	1	1.0	3/21/92
Lead (Pb)/6010.....	10.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	8.4	1	1.0	3/21/92
Selenium (Se)/7740.....	7.6	4	1.0	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	36.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.
{e} The sample for Selenium was diluted 4 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald Lorem Date: 4/07/92
Cheryl Matterson, Association Chemist

The cover letter and attachments are integral parts of this report.

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-26

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB05057SF
Sample Number: 90024

Matrix: Soil

Date Sampled: 3/18/92
Date Digested: 3/20/92 {b}

Date Received: 3/19/92
Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	1.5	5	2.5	3/24/92
Beryllium (Be)/6010.....	.53	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	12.	1	1.0	3/21/92
Copper (Cu)/6010.....	17.	1	1.0	3/21/92
Lead (Pb)/6010.....	10.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	10.	1	1.0	3/21/92
Selenium (Se)/7740.....	1.1	1	.25	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	46.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} A high background reading was observed for Arsenic. A matrix interferent is present creating a false positive observation. A 5 fold dilution yielded an estimated result of 1.5.

Approved by: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Association Chemist

The cover letter and attachments are integral parts of this report.

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-29

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB05077SF
Sample Number: 90030

Matrix: Soil

Date Sampled: 3/18/92
Date Digested: 3/20/92 {b}

Date Received: 3/19/92
Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	2.8	5	2.5	3/24/92
Beryllium (Be)/6010.....	.55	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	12.	1	1.0	3/21/92
Copper (Cu)/6010.....	15.	1	1.0	3/21/92
Lead (Pb)/6010.....	12.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	10.	1	1.0	3/21/92
Selenium (Se)/7740.....	2.1	1	.25	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	44.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.

Approved by: Nancy M McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/07/92

The cover letter and attachments are integral parts of this report.

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-20

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB05089SF
Sample Number: 90012

Matrix: Soil

Date Sampled: 3/18/92
Date Digested: 3/20/92 {b}

Date Received: 3/19/92
Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	1.3	5	2.5	3/24/92
Beryllium (Be)/6010.....	.54	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	11.	1	1.0	3/21/92
Copper (Cu)/6010.....	14.	1	1.0	3/21/92
Lead (Pb)/6010.....	12.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	9.2	1	1.0	3/21/92
Selenium (Se)/7740.....	1.3	1	.25	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	36.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} A high background reading was observed for Arsenic. A matrix interferent is present creating a false positive observation. A 5 fold dilution yielded an estimated result of 1.3.

Approved by: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Association Chemist

The cover letter and attachments are integral parts of this report.

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RADIONUCLIDES

Table: Results of the analyses for iodine-129 and strontium-90 in thirty-five (35) soil samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Conc. pci/gwet I-129	Date Analyzed	Conc. pci/gdry Sr-90	Date Analyzed
90140	M4SA	03/17/92	SPS-1908	<0.2	05/20	0.06±0.01	06/03
88901	BB13024SA	03/17/92	1909	<0.2	05/20	0.01±0.01	05/14
88907	BB13037SA	03/17/92	1910	<0.2	05/21	0.01±0.01	05/14
88913	BB13039SA	03/17/92	1911	<0.2	05/21	0.01±0.01	05/15
88919	BB13011SA	03/17/92	1912	<0.2	05/22	0.01±0.01	06/03
88925	BB13010SA	03/17/92	1913	<0.2	05/22	<0.01	06/09
89151	BB06017SA	03/17/92	1914	<0.2	05/22	0.01±0.01	05/14
89157	BB06007SA	03/17/92	1915	<0.3	06/09	<0.01	05/14
89163	BB06092SA	03/17/92	1916	<0.2	05/26	<0.01	05/14
89169	BB06066SA	03/17/92	1917	<0.2	05/27	<0.01	05/14
89175	BB06013SA	03/17/92	1918	<0.2	05/28	0.01±0.01	05/14
90101	BB03025SA	03/17/92	1919	<0.2	06/01	0.09±0.01	06/09
90107	BB03092SA	03/17/92	1920	<0.2	06/01	0.04±0.01	05/14
90113	BB03079SA	03/17/92	1921	<0.2	06/01	0.03±0.01	06/09
90119	BB03017SA	03/17/92	1922	<0.3	06/09	0.05±0.01	06/09
90125	BB03005SA	03/17/92	1923	<0.2	06/02	0.06±0.01	05/15
90001	BB05003SA	03/18/92	1924	<0.2	06/02	0.02±0.01	06/09
90007	BB05089SA	03/18/92	1925	<0.2	06/02	0.02±0.01	05/22
90013	BB05006SA	03/18/92	1926	<0.2	06/03	0.02±0.01	05/22
90019	BB05057SA	03/18/92	1927	<0.2	06/04	0.03±0.01	05/22
90025	BB05077SA	03/18/92	1928	<0.2	06/04	0.06±0.01	05/22
90051	BB12006SA	03/18/92	1929	<0.2	06/05	0.03±0.01	05/22
90057	BB12019SA	03/18/92	1930	<0.2	06/05	0.04±0.01	05/22
90063	BB12023SA	03/18/92	1931	<0.3	06/05	0.02±0.01	05/22
90069	BB12020SA	03/18/92	1932	<0.2	06/08	0.03±0.01	05/22
90075	BB12003SA	03/18/92	1933	<0.2	06/08	0.01±0.01	05/22
90251	BB01056SA	03/18/92	1934	<0.3	06/08	0.04±0.01	06/03
90263	BB01001SA	03/18/92	1935	<0.3	06/10	<0.01	06/03
90269	BB01027SA	03/18/92	1936	<0.3	06/10	<0.01	06/09
90275	BB01038SA	03/18/92	1937	<0.2	06/10	0.02±0.01	06/03
90282	BB00004SA	03/18/92	1938	<0.3	06/10	0.01±0.01	06/03
89251	BB11018SA	03/18/92	1939	<0.3	06/10	0.02±0.01	06/03
89257	BB11061SA	03/18/92	1940	<0.3	06/11	<0.01	06/03
89263	BB11057SA	03/18/92	1941	<0.2	06/11	0.02±0.01	06/09
89269	BB11032SA	03/18/92	1942	<0.3	04/14	0.02±0.01	06/09

The error given is the probable counting error at 95% confidence level. Less than (<) values are based on 3 sigma counting error for background sample.

TELEDYNE 1 'ES

REPORT OF ANALYSIS

RUN DATE 06/10/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
3-0626	04-0029403-012	03/25/92	04/27/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70856	90002 BB05003SB		03/18	0815			PU-238	L.T. 1. E-02		05/12			6
							PU-239	L.T. 5. E-03		05/12			6
70857	90003 BB05003SC		03/18	0815			BE-7	L.T. 4. E-01		04/25			4
							K-40	2.26+-0.23E 01		04/25			4
							MN-54	L.T. 3. E-02		04/25			4
							CO-58	L.T. 4. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 3. E-02		04/25			4
							ZN-65	L.T. 8. E-02		04/25			4
							ZR-95	L.T. 5. E-02		04/25			4
							RU-103	L.T. 5. E-02		04/25			4
							RU-106	L.T. 3. E-01		04/25			4
							I-131	L.T. 7. E-01		04/25			4
							CS-134	L.T. 4. E-02		04/25			4
							CS-137	2.22+-0.33E-01		04/25			4
							BA-140	L.T. 2. E-01		04/25			4
							CE-141	L.T. 9. E-02		04/25			4
							CE-144	L.T. 2. E-01		04/25			4
							RA-226	2.09+-0.50E 00		04/25			4
							TH-228	1.12+-0.11E 00		04/25			4
							H-3	1.5 +-0.7 E-02		06/04			5
70858	90008 BB05089SB		03/18	0830			PU-238	L.T. 3. E-02		05/16			6
							PU-239	L.T. 2. E-02		05/16			6
70859	90009 BB05089SC		03/18	0830			BE-7	L.T. 5. E-01		04/25			4
							K-40	2.38+-0.24E 01		04/25			4
							MN-54	L.T. 4. E-02		04/25			4
							CO-58	L.T. 5. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 4. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

REVISED 09/30/92
RUN DATE 06/10/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 2
3-0626	04-0029403-012	03/25/92	04/27/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70859	90009 BB05089SC		03/18	0830			ZR-95	L.T. 7. E-02		04/25			4
							RU-103	L.T. 7. E-02		04/25			4
							RU-106	L.T. 3. E-01		04/25			4
							I-131	L.T. 1. E 00		04/25			4
							CS-134	L.T. 5. E-02		04/25			4
							CS-137	1.35+-0.40E-01		04/25			4
							BA-140	L.T. 4. E-01		04/25			4
							CE-141	L.T. 1. E-01		04/25			4
							CE-144	L.T. 3. E-01		04/25			4
							RA-226	2.27+-0.68E 00		04/25			4
							TH-228	1.44+-0.14E 00		04/25			4
							H-3	L.T. 2. E-02		09/14			5
70860	90014 BB05006SB		03/18	0840			PU-238	L.T. 3. E-02		05/16			6
							PU-239	L.T. 8. E-03		05/16			6
70861	90015 BB05006SC		03/18	0840			BE-7	L.T. 4. E-01		04/25			4
							K-40	2.32+-0.23E 01		04/25			4
							MN-54	L.T. 3. E-02		04/25			4
							CO-58	L.T. 4. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 3. E-02		04/25			4
							ZN-65	L.T. 8. E-02		04/25			4
							ZR-95	L.T. 6. E-02		04/25			4
							RU-103	L.T. 5. E-02		04/25			4
							RU-106	L.T. 3. E-01		04/25			4
							I-131	L.T. 8. E-01		04/25			4
							CS-134	L.T. 4. E-02		04/25			4
							CS-137	1.09+-0.23E-01		04/25			4
							BA-140	L.T. 2. E-01		04/25			4
							CE-141	L.T. 1. E-01		04/25			4
							CE-144	L.T. 2. E-01		04/25			4
							RA-226	5.26+-0.59E 00		04/25			4

The H-3 result for TI#70859 has been revised based upon reanalysis of the sample using an analytical method considered to be more reliable for soil samples. In units of pCi/l the result was L.T. 2. E 02.

D Martin 9-30-92

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REPORT OF ANALYSIS

RUN DATE 06/10/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 3
3-0626	04-0029403-012	03/25/92	04/27/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70861	90015 BB05006SC		03/18	0840			TH-228	9.31+-0.93E-01		04/25			4
							H-3	1.3 +-0.7 E-02		06/02			5
70862	90020 BB05057SB		03/18	0900			PU-238	L.T. 6. E-03		05/13			6
							PU-239	L.T. 6. E-03		05/13			6
70863	90021 BB05057SC		03/18	0900			BE-7	L.T. 5. E-01		04/25			4
							K-40	2.48+-0.25E 01		04/25			4
							MN-54	L.T. 4. E-02		04/25			4
							CO-58	L.T. 5. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 4. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4
							ZR-95	L.T. 6. E-02		04/25			4
							RU-103	L.T. 6. E-02		04/25			4
							RU-106	L.T. 3. E-01		04/25			4
							I-131	L.T. 9. E-01		04/25			4
							CS-134	L.T. 5. E-02		04/25			4
							CS-137	5.23+-3.01E-02		04/25			4
							BA-140	L.T. 3. E-01		04/25			4
							CE-141	L.T. 1. E-01		04/25			4
							CE-144	L.T. 3. E-01		04/25			4
							RA-226	2.06+-0.64E 00		04/25			4
							TH-228	1.24+-0.12E 00		04/25			4
							H-3	L.T. 1. E-02		06/05			5
70864	90026 BB05077SB		03/18	0930			PU-238	L.T. 8. E-03		05/13			6
							PU-239	L.T. 1. E-02		05/13			6

TELEDYNE [illegible]ES

REPORT OF ANALYSIS

RUN DATE 06/10/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 4
3-0626	04-0029403-012	03/25/92	04/27/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70865	90027 8805077SC		03/18	0930			BE-7	L.T. 5. E-01		04/25			4
							K-40	2.41+-0.24E 01		04/25			4
							MN-54	L.T. 4. E-02		04/25			4
							CO-58	L.T. 5. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 4. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4
							ZR-95	L.T. 7. E-02		04/25			4
							RU-103	L.T. 7. E-02		04/25			4
							RU-106	L.T. 4. E-01		04/25			4
							I-131	L.T. 1. E 00		04/25			4
							CS-134	L.T. 5. E-02		04/25			4
							CS-137	1.55+-0.36E-01		04/25			4
							BA-140	L.T. 3. E-01		04/25			4
							CE-141	L.T. 1. E-01		04/25			4
							CE-144	L.T. 3. E-01		04/25			4
							RA-226	2.37+-0.64E 00		04/25			4
							TH-228	1.33+-0.13E 00		04/25			4
							H-3	L.T. 2. E-02		06/05			5
70866	90031 8800004SB		03/18	0815			PU-238	L.T. 2. E-02		05/13			5
							PU-239	L.T. 2. E-02		05/13			6
70867	90052 8812006SB		03/18	1025			PU-238	L.T. 7. E-02		05/14			6
							PU-239	L.T. 2. E-02		05/14			6
70868	90053 8812006SC		03/18	1025			BE-7	L.T. 4. E-01		04/25			4
							K-40	2.32+-0.23E 01		04/25			4
							MN-54	L.T. 3. E-02		04/25			4
							CO-58	L.T. 4. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 3. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4

BB-06

Volatile Organic Compounds

VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-47

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB06007SE
Sample Number: 89161

Matrix: Soil

Date Sampled: 3/17/92
Date Analyzed: 3/21/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 47

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	104	70 - 121
Toluene-D8	111	81 - 117
4-Bromofluorobenzene	81	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy M McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-56

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB06013SE
Sample Number: 89179

Matrix: Soil

Date Sampled: 3/17/92
Date Analyzed: 3/23/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 56

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	98	70 - 121
Toluene-D8	114	81 - 117
4-Bromofluorobenzene	95	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-44

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB06017SE
Sample Number: 89155

Matrix: Soil

Date Sampled: 3/17/92
Date Analyzed: 3/21/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 44

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	101	70 - 121
Toluene-D8	104	81 - 117
4-Bromofluorobenzene	85	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-53

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB06066SE
Sample Number: 89173

Matrix: Soil

Date Sampled: 3/17/92
Date Analyzed: 3/23/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 53

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	101	70 - 121
Toluene-D8	107	81 - 117
4-Bromofluorobenzene	101	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-50

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB06092SE
Sample Number: 89167

Matrix: Soil

Date Sampled: 3/17/92
Date Analyzed: 3/21/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 50

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	101	70 - 121
Toluene-D8	97	81 - 117
4-Bromofluorobenzene	94	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

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Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANIC COMPOUNDS

SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-46

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB06007SD
Sample Number: 89160

Matrix: Soil

Date Sampled: 3/17/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/27/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-46

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-46

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	95	25 - 121
Phenol-d5.....	93	24 - 113
Nitrobenzene-d5.....	84	23 - 120
2-Fluorobiphenyl.....	87	30 - 115
2,4,6-Tribromophenol.....	121	19 - 122
Terphenyl-d14.....	92	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-55

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB06013SD
Sample Number: 89178

Matrix: Soil

Date Sampled: 3/17/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/26/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-55

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-55

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	110	25 - 121
Phenol-d5.....	106	24 - 113
Nitrobenzene-d5.....	100	23 - 120
2-Fluorobiphenyl.....	108	30 - 115
2,4,6-Tribromophenol.....	104	19 - 122
Terphenyl-d14.....	115	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-43

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB06017SD
Sample Number: 89154

Matrix: Soil

Date Sampled: 3/17/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/27/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-43

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-43

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	75	25 - 121
Phenol-d5.....	77	24 - 113
Nitrobenzene-d5.....	70	23 - 120
2-Fluorobiphenyl.....	76	30 - 115
2,4,6-Tribromophenol.....	102	19 - 122
Terphenyl-d14.....	83	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/01/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-52

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB06066SD
Sample Number: 89172

Matrix: Soil

Date Sampled: 3/17/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/26/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-52

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-52

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	106	25 - 121
Phenol-d5.....	103	24 - 113
Nitrobenzene-d5.....	99	23 - 120
2-Fluorobiphenyl.....	105	30 - 115
2,4,6-Tribromophenol.....	99	19 - 122
Terphenyl-d14.....	115	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/01/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-49

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB06092SD
Sample Number: 89166

Matrix: Soil

Date Sampled: 3/17/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/27/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-49

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-49

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	89	25 - 121
Phenol-d5.....	91	24 - 113
Nitrobenzene-d5.....	85	23 - 120
2-Fluorobiphenyl.....	87	30 - 115
2,4,6-Tribromophenol.....	107	19 - 122
Terphenyl-d14.....	94	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy M Wancald for CM
Cheryl Matterson, Associate Chemist

Date: 4/01/92

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METALS

PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-48

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB06007SF
Sample Number: 89162 Matrix: Soil

Date Sampled: 3/17/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1106 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	5.5	5	2.5	3/24/92
Beryllium (Be)/6010.....	.88	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	20.	1	1.0	3/20/92
Copper (Cu)/6010.....	20.	1	1.0	3/20/92
Lead (Pb)/6010.....	17.	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	15.	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	80.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1104; and Hg was digested on 3/19/92, Batch # 920319-1102 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-57

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB06013SF
Sample Number: 89180 Matrix: Soil

Date Sampled: 3/17/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1106 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	4.6	4	2.0	3/24/92
Beryllium (Be)/6010.....	.77	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	23.	1	1.0	3/20/92
Copper (Cu)/6010.....	22.	1	1.0	3/20/92
Lead (Pb)/6010.....	13.	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	23.	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	72.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1104; and Hg was digested on 3/19/92, Batch # 920319-1102 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 4 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-45

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB06017SF
Sample Number: 89156 Matrix: Soil

Date Sampled: 3/17/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1106 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	3.4	5	2.5	3/24/92
Beryllium (Be)/6010.....	.80	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	19.	1	1.0	3/20/92
Copper (Cu)/6010.....	20.	1	1.0	3/20/92
Lead (Pb)/6010.....	16.	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	16.	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	73.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1104; and Hg was digested on 3/19/92, Batch # 920319-1102 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-54

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB06066SF
Sample Number: 89174 Matrix: Soil

Date Sampled: 3/17/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1106 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	1.4	1	.50	3/24/92
Beryllium (Be)/6010.....	.83	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	15.	1	1.0	3/20/92
Copper (Cu)/6010.....	18.	1	1.0	3/20/92
Lead (Pb)/6010.....	15.	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	10.	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	53.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1104; and Hg was digested on 3/19/92, Batch # 920319-1102 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-51

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB06092SF
Sample Number: 89168 Matrix: Soil

Date Sampled: 3/17/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1106 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	3.2	5	2.5	3/24/92
Beryllium (Be)/6010.....	.72	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	14.	1	1.0	3/20/92
Copper (Cu)/6010.....	19.	1	1.0	3/20/92
Lead (Pb)/6010.....	15.	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	9.6	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	54.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1104; and Hg was digested on 3/19/92, Batch # 920319-1102 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

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RADIONUCLIDES

Table: Results of the analyses for iodine-129 and strontium-90 in thirty-five (35) soil samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Conc. pci/gwet I-129	Date Analyzed	Conc. pci/gdry Sr-90	Date Analyzed
90140	M4SA	03/17/92	SPS-1908	<0.2	05/20	0.06±0.01	06/03
88901	BB13024SA	03/17/92	1909	<0.2	05/20	0.01±0.01	05/14
88907	BB13037SA	03/17/92	1910	<0.2	05/21	0.01±0.01	05/14
88913	BB13039SA	03/17/92	1911	<0.2	05/21	0.01±0.01	05/15
88919	BB13011SA	03/17/92	1912	<0.2	05/22	0.01±0.01	06/03
88925	BB13010SA	03/17/92	1913	<0.2	05/22	<0.01	06/09
89151	BB06017SA	03/17/92	1914	<0.2	05/22	0.01±0.01	05/14
89157	BB06007SA	03/17/92	1915	<0.3	06/09	<0.01	05/14
89163	BB06092SA	03/17/92	1916	<0.2	05/26	<0.01	05/14
89169	BB06066SA	03/17/92	1917	<0.2	05/27	<0.01	05/14
89175	BB06013SA	03/17/92	1918	<0.2	05/28	0.01±0.01	05/14
90101	BB03025SA	03/17/92	1919	<0.2	06/01	0.09±0.01	06/09
90107	BB03092SA	03/17/92	1920	<0.2	06/01	0.04±0.01	05/14
90113	BB03079SA	03/17/92	1921	<0.2	06/01	0.03±0.01	06/09
90119	BB03017SA	03/17/92	1922	<0.3	06/09	0.05±0.01	06/09
90125	BB03005SA	03/17/92	1923	<0.2	06/02	0.06±0.01	05/15
90001	BB05003SA	03/18/92	1924	<0.2	06/02	0.02±0.01	06/09
90007	BB05089SA	03/18/92	1925	<0.2	06/02	0.02±0.01	05/22
90013	BB05006SA	03/18/92	1926	<0.2	06/03	0.02±0.01	05/22
90019	BB05057SA	03/18/92	1927	<0.2	06/04	0.03±0.01	05/22
90025	BB05077SA	03/18/92	1928	<0.2	06/04	0.06±0.01	05/22
90051	BB12006SA	03/18/92	1929	<0.2	06/05	0.03±0.01	05/22
90057	BB12019SA	03/18/92	1930	<0.2	06/05	0.04±0.01	05/22
90063	BB12023SA	03/18/92	1931	<0.3	06/05	0.02±0.01	05/22
90069	BB12020SA	03/18/92	1932	<0.2	06/08	0.03±0.01	05/22
90075	BB12003SA	03/18/92	1933	<0.2	06/08	0.01±0.01	05/22
90251	BB01056SA	03/18/92	1934	<0.3	06/08	0.04±0.01	06/03
90263	BB01001SA	03/18/92	1935	<0.3	06/10	<0.01	06/03
90269	BB01027SA	03/18/92	1936	<0.3	06/10	<0.01	06/09
90275	BB01038SA	03/18/92	1937	<0.2	06/10	0.02±0.01	06/03
90282	BB00004SA	03/18/92	1938	<0.3	06/10	0.01±0.01	06/03
89251	BB11018SA	03/18/92	1939	<0.3	06/10	0.02±0.01	06/03
89257	BB11061SA	03/18/92	1940	<0.3	06/11	<0.01	06/03
89263	BB11057SA	03/18/92	1941	<0.2	06/11	0.02±0.01	06/09
89269	BB11032SA	03/18/92	1942	<0.3	04/14	0.02±0.01	06/09

The error given is the probable counting error at 95% confidence level. Less than (<) values are based on 3 sigma counting error for background sample.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/08/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0625	04-0029403-012	03/25/92	04/27/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70839	89152 BB06017SB		03/17	0815			PU-238	L.T. 1. E-02		05/09			6
							PU-239	L.T. 4. E-03		05/09			6
70840	89153 BB06017SC		03/17	0815			BE-7	L.T. 3. E-01		04/13			4
							K-40	2.48+-0.25E 01		04/13			4
							MN-54	L.T. 3. E-02		04/13			4
							CO-58	L.T. 3. E-02		04/13			4
							FE-59	L.T. 9. E-02		04/13			4
							CO-60	L.T. 3. E-02		04/13			4
							ZN-65	L.T. 7. E-02		04/13			4
							ZR-95	L.T. 4. E-02		04/13			4
							RU-103	L.T. 4. E-02		04/13			4
							RU-106	L.T. 3. E-01		04/13			4
							I-131	L.T. 3. E-01		04/13			4
							CS-134	L.T. 4. E-02		04/13			4
							CS-137	L.T. 3. E-02		04/13			4
							BA-140	L.T. 2. E-01		04/13			4
							CE-141	L.T. 7. E-02		04/13			4
							CE-144	L.T. 2. E-01		04/13			4
							RA-226	2.44+-0.46E 00		04/13			4
							TH-228	1.38+-0.14E 00		04/13			4
							H-3	NOT ANALYZED					5
70841	89158 BB06007SB		03/17	0840			PU-238	L.T. 2. E-02		05/09			6
							PU-239	L.T. 4. E-03		05/09			6
70842	89159 BB06007SC		03/17	0840			BE-7	L.T. 6. E-01		04/25			4
							K-40	2.26+-0.23E 01		04/25			4
							MN-54	L.T. 4. E-02		04/25			4
							CO-58	L.T. 6. E-02		04/25			4
							FE-59	L.T. 2. E-01		04/25			4
							CO-60	L.T. 5. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4

TI#70840 (and its duplicate TI#70854) was probably dried in its entirety by the gamma lab before an aliquot was removed for the tritium lab.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

REVISED 11/04/92
REVISED 07/08/92
RUN DATE 06/08/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0625	04-0029403-012	03/25/92	04/27/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70842	89159 BB06007SC		03/17	0840			ZR-95	L.T. 8. E-02		04/25			4
							RU-103	L.T. 8. E-02		04/25			4
							RU-106	L.T. 4. E-01		04/25			4
							I-131	L.T. 1. E 00		04/25			4
							CS-134	L.T. 6. E-02		04/25			4
							CS-137	L.T. 5. E-02		04/25			4
							BA-140	L.T. 4. E-01		04/25			4
							CE-141	L.T. 2. E-01		04/25			4
							CE-144	L.T. 4. E-01		04/25			4
							RA-226	1.58+-0.80E 00		04/25			4
							TH-228	1.34+-0.13E 00		04/25			4
							H-3	3 9 +-1.4 E-02		09/29			5
70843	89164 BB06092SB		03/17	0850			PU-238	L.T. 6. E-03		05/09			6
							PU-239	L.T. 6. E-03		05/09			6
70844	89165 BB06092SC		03/17	0850			BE-7	L.T. 4. E-01		04/25			4
							K-40	2.57+-0.26E 01		04/25			4
							MN-54	L.T. 4. E-02		04/25			4
							CO-58	L.T. 4. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 4. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4
							ZR-95	L.T. 5. E-02		04/25			4
							RU-103	L.T. 6. E-02		04/25			4
							RU-106	L.T. 3. E-01		04/25			4
							I-131	L.T. 9. E-01		04/25			4
							CS-134	L.T. 5. E-02		04/25			4
							CS-137	L.T. 4. E-02		04/25			4
							BA-140	L.T. 3. E-01		04/25			4
							CE-141	L.T. 1. E-01		04/25			4
							CE-144	L.T. 2. E-01		04/25			4
							RA-226	2.38+-0.48E 00		04/25			4

The H-3 result for TI#70842 has been revised. The original result was incorrectly calculated. for Martin 7-8-92

The H-3 result for TI#70842 has been revised based upon reanalysis of the sample using an analytical method considered to be more reliable for soil samples. In units of pCi/l the result was 3.8 ± 1.4 E 02. for Martin 11-4-92

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

REVISED 09/30/92
REVISED 07/08/92
RUN DATE 06/08/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0625	04-0029403-012	03/25/92	04/27/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70844	89165 BB06092SC		03/17	0850			TH-228	1.69+-0.17E 00		04/25			4
							H-3	1.3 +-0.7 E-02		06/02			5
70845	89170 BB06066SB		03/17	0905			PU-238	L.T. 1. E-02		05/09			6
							PU-239	L.T. 9. E-03		05/09			6
70846	89171 BB06066SC		03/17	0905			BE-7	L.T. 5. E-01		04/25			4
							K-40	2.39+-0.24E 01		04/25			4
							MN-54	L.T. 4. E-02		04/25			4
							CO-58	L.T. 5. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 4. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4
							ZR-95	L.T. 7. E-02		04/25			4
							RU-103	L.T. 7. E-02		04/25			4
							RU-106	L.T. 3. E-01		04/25			4
							I-131	L.T. 1. E 00		04/25			4
							CS-134	L.T. 5. E-02		04/25			4
							CS-137	L.T. 4. E-02		04/25			4
							BA-140	L.T. 3. E-01		04/25			4
							CE-141	L.T. 1. E-01		04/25			4
							CE-144	L.T. 3. E-01		04/25			4
							RA-226	2.24+-0.55E 00		04/25			4
							TH-228	1.38+-0.14E 00		04/25			4
							H-3	L.T. 3. E-02		09/14			5
70847	89176 BB06013SB		03/17	0925			PU-238	L.T. 2. E-02		05/06			6
							PU-239	L.T. 1. E-02		05/06			6

The H-3 results for TI#70846 and 70851 have been revised based upon reanalysis of the samples using an analytical method considered to be more reliable for soil samples. In units of pCi/l the results are L.T. 3. E 02 and L.T. 2. E 02 respectively. J Martin 9-30-92

The H-3 result for TI#70846 has been revised. The original result was incorrectly calculated. J Martin 7-8-92

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/09/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0625	04-0029403-012	03/25/92	04/27/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70848	89177 BB06013SC		03/17	0925			BE-7	L.T. 6. E-01		04/25			4
							K-40	1.99+-0.20E 01		04/25			4
							MN-54	L.T. 5. E-02		04/25			4
							CO-58	L.T. 6. E-02		04/25			4
							FE-59	L.T. 2. E-01		04/25			4
							CO-60	L.T. 5. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4
							ZR-95	L.T. 7. E-02		04/25			4
							RU-103	L.T. 8. E-02		04/25			4
							RU-106	L.T. 4. E-01		04/25			4
							I-131	L.T. 1. E 00		04/25			4
							CS-134	L.T. 6. E-02		04/25			4
							CS-137	L.T. 5. E-02		04/25			4
							BA-140	L.T. 4. E-01		04/25			4
							CE-141	L.T. 2. E-01		04/25			4
							CE-144	L.T. 4. E-01		04/25			4
							RA-226	1.58+-0.73E 00		04/25			4
							TH-228	1.16+-0.12E 00		04/25			4
							H-3	L.T. 2. E-02		06/02			5
70849	88921 BB13011SC		03/17	1550			BE-7	L.T. 5. E-01		04/25			4
							K-40	1.94+-0.19E 01		04/25			4
							MN-54	L.T. 4. E-02		04/25			4
							CO-58	L.T. 5. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 4. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4
							ZR-95	L.T. 7. E-02		04/25			4
							RU-103	L.T. 7. E-02		04/25			4
							RU-106	L.T. 3. E-01		04/25			4
							I-131	L.T. 1. E 00		04/25			4
							CS-134	L.T. 5. E-02		04/25			4
							CS-137	9.81+-3.92E-02		04/25			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/08/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 6
3-0625	04-0029403-012	03/25/92	04/27/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70852	88931 BB00003SB		03/17	1630			PU-238	L.T. 5. E-02		05/06			6
							PU-239	L.T. 1. E-02		05/06			6
70853	196883 BB13011RB		03/17	1550			PU-238	L.T. 3. E-02		05/20			6
							PU-239	L.T. 1. E-02		05/20			6
70854	89153 BB06017SC DUP		03/17	0815			BE-7	L.T. 6. E-01		04/30			4
							K-40	2.72+-0.27E 01		04/30			4
							MN-54	L.T. 4. E-02		04/30			4
							CO-58	L.T. 6. E-02		04/30			4
							FE-59	L.T. 2. E-01		04/30			4
							CO-60	L.T. 5. E-02		04/30			4
							ZN-65	L.T. 1. E-01		04/30			4
							ZR-95	L.T. 7. E-02		04/30			4
							RU-103	L.T. 9. E-02		04/30			4
							RU-106	L.T. 4. E-01		04/30			4
							I-131	L.T. 3. E 00		04/30			4
							CS-134	L.T. 5. E-02		04/30			4
							CS-137	L.T. 4. E-02		04/30			4
							BA-140	L.T. 6. E-01		04/30			4
							CE-141	L.T. 1. E-01		04/30			4
							CE-144	L.T. 3. E-01		04/30			4
							RA-226	2.65+-0.60E 00		04/30			4
							TH-228	1.98+-0.20E 01		04/30			4
							H-3	NOT ANALYZED					5

BB-07

VOLATILE ORGANIC COMPOUNDS

VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-61

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB07012SE
Sample Number: 88973

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/26/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 61

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	97	70 - 121
Toluene-D8	108	81 - 117
4-Bromofluorobenzene	86	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

The cover letter and the attachments are integral parts of this report.

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-52

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB07035SE
Sample Number: 88955

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/25/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 52

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	103	70 - 121
Toluene-D8	113	81 - 117
4-Bromofluorobenzene	92	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-55

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB07036SE
Sample Number: 88961

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/25/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 55

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	104	70 - 121
Toluene-D8	103	81 - 117
4-Bromofluorobenzene	96	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-64

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB07038SE
Sample Number: 88979

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/26/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene	1	5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene	1	5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 64

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	99	70 - 121
Toluene-D8	104	81 - 117
4-Bromofluorobenzene	88	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.
{d} The results reported for Toluene and Ethylbenzene are estimated concentrations below the established reporting limits.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-58

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB07058SE
Sample Number: 88967

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/25/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 58

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	100	70 - 121
Toluene-D8	111	81 - 117
4-Bromofluorobenzene	90	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANIC COMPOUNDS

SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-60

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB07012SD
Sample Number: 88972

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 4/01/92

Batch Number: 920323-2602

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-60

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate	370	330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-60

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	81	25 - 121
Phenol-d5.....	86	24 - 113
Nitrobenzene-d5.....	78	23 - 120
2-Fluorobiphenyl.....	92	30 - 115
2,4,6-Tribromophenol.....	106	19 - 122
Terphenyl-d14.....	91	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-51

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB07035SD
Sample Number: 88954

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 4/01/92

Batch Number: 920323-2601

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-51

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate	3100	330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-51

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	56	25 - 121
Phenol-d5.....	70	24 - 113
Nitrobenzene-d5.....	55	23 - 120
2-Fluorobiphenyl.....	77	30 - 115
2,4,6-Tribromophenol.....	111	19 - 122
Terphenyl-d14.....	93	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-54

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB07036SD
Sample Number: 88960

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 4/03/92

Batch Number: 920323-2601

Dilution Factor: 2

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		670
Bis(2-chloroethyl)ether		670
2-Chlorophenol		670
1,3-Dichlorobenzene		670
1,4-Dichlorobenzene		670
Benzyl alcohol		670
2-Methylphenol		670
1,2-Dichlorobenzene		670
Bis(2-Chloroisopropyl)ether		670
4-Methylphenol		670
N-Nitroso-di-n-propylamine		670
Hexachloroethane		670
Nitrobenzene		670
Isophorone		670
2,4-Dimethylphenol		670
1,2,4-Trichlorobenzene		670
2-Nitrophenol		670
Benzoic acid		3300
Bis(2-Chloroethoxy)methane		670
2,4-Dichlorophenol		670
Naphthalene		670
4-Chloroaniline		670
Hexachlorobutadiene		670
4-Chloro-3-methylphenol		670
2-Methylnaphthalene		670
Hexachlorocyclopentadiene		670
2,4,6-Trichlorophenol		670
2,4,5-Trichlorophenol		670
2-Chloronaphthalene		670
3-Nitroaniline		3300
Dimethylphthalate		670
2,6-Dinitrotoluene		670
Acenaphthylene		670
2-Nitroaniline		3300

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-54

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		670
2,4-Dinitrophenol		3300
4-Nitrophenol		3300
2,4-Dinitrotoluene		670
Dibenzofuran		670
Diethylphthalate		670
alpha-BHC {b}		670
4-Chlorophenyl phenyl ether		670
Fluorene		670
4-Nitroaniline		3300
4,6-Dinitro-2-methylphenol		3300
N-Nitrosodiphenylamine		670
4-Bromophenyl phenyl ether		670
beta-BHC {b}		670
Lindane {b}		670
Hexachlorobenzene		670
Pentachlorophenol		3300
Phenanthrene		670
Anthracene		670
Delta-BHC {b}		670
Heptachlor {b}		670
Aldrin {b}		670
Endrin {b}		670
Butyl benzyl phthalate		670
Fluoranthene		670
Heptachlor Epoxide		670
Pyrene		670
Dieldrin {b}		670
4,4'-DDE {b}		670
Endosulfan sulfate		670
4,4'-DDT {b}		670
4,4'-DDD {b}		670
Di-n-butylphthalate		670
3,3'-Dichlorobenzidine		1300
Benzo(a)anthracene		670
Bis(2-Ethylhexyl)phthalate	5800	670
Chrysene		670
Di-n-octylphthalate		670
Benzo(b)fluoranthene		670
Benzo(k)fluoranthene		670
Benzo(a)pyrene		670
Indeno(1,2,3-c,d)pyrene		670
Dibenzo(a,h)anthracene		670
Benzo(g,h,i)perylene		670

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-54

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	67	25 - 121
Phenol-d5.....	82	24 - 113
Nitrobenzene-d5.....	75	23 - 120
2-Fluorobiphenyl.....	80	30 - 115
2,4,6-Tribromophenol.....	103	19 - 122
Terphenyl-d14.....	90	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.
{d} The sample was diluted 2 fold to bring target analytes within linear working range.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/10/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-63

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB07038SD
Sample Number: 88978

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 4/03/92

Batch Number: 920323-2602

Dilution Factor: 2

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		670
Bis(2-chloroethyl)ether		670
2-Chlorophenol		670
1,3-Dichlorobenzene		670
1,4-Dichlorobenzene		670
Benzyl alcohol		670
2-Methylphenol		670
1,2-Dichlorobenzene		670
Bis(2-Chloroisopropyl)ether		670
4-Methylphenol		670
N-Nitroso-di-n-propylamine		670
Hexachloroethane		670
Nitrobenzene		670
Isophorone		670
2,4-Dimethylphenol		670
1,2,4-Trichlorobenzene		670
2-Nitrophenol		670
Benzoic acid		3300
Bis(2-Chloroethoxy)methane		670
2,4-Dichlorophenol		670
Naphthalene		670
4-Chloroaniline		670
Hexachlorobutadiene		670
4-Chloro-3-methylphenol		670
2-Methylnaphthalene		670
Hexachlorocyclopentadiene		670
2,4,6-Trichlorophenol		670
2,4,5-Trichlorophenol		670
2-Chloronaphthalene		670
3-Nitroaniline		3300
Dimethylphthalate		670
2,6-Dinitrotoluene		670
Acenaphthylene		670
2-Nitroaniline		3300

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-63

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		670
2,4-Dinitrophenol		3300
4-Nitrophenol		3300
2,4-Dinitrotoluene		670
Dibenzofuran		670
Diethylphthalate		670
alpha-BHC {b}		670
4-Chlorophenyl phenyl ether		670
Fluorene		670
4-Nitroaniline		3300
4,6-Dinitro-2-methylphenol		3300
N-Nitrosodiphenylamine		670
4-Bromophenyl phenyl ether		670
beta-BHC {b}		670
Lindane {b}		670
Hexachlorobenzene		670
Pentachlorophenol		3300
Phenanthrene		670
Anthracene		670
Delta-BHC {b}		670
Heptachlor {b}		670
Aldrin {b}		670
Endrin {b}		670
Butyl benzyl phthalate		670
Fluoranthene		670
Heptachlor Epoxide		670
Pyrene		670
Dieldrin {b}		670
4,4'-DDE {b}		670
Endosulfan sulfate		670
4,4'-DDT {b}		670
4,4'-DDD {b}		670
Di-n-butylphthalate		670
3,3'-Dichlorobenzidine		1300
Benzo(a)anthracene		670
Bis(2-Ethylhexyl)phthalate	8100	670
Chrysene		670
Di-n-octylphthalate		670
Benzo(b)fluoranthene		670
Benzo(k)fluoranthene		670
Benzo(a)pyrene		670
Indeno(1,2,3-c,d)pyrene		670
Dibenzo(a,h)anthracene		670
Benzo(g,h,i)perylene		670

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-63

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	63	25 - 121
Phenol-d5.....	81	24 - 113
Nitrobenzene-d5.....	78	23 - 120
2-Fluorobiphenyl.....	85	30 - 115
2,4,6-Tribromophenol.....	110	19 - 122
Terphenyl-d14.....	95	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.
{d} The sample was diluted 2 fold to bring target analytes within linear working range.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/10/92

The cover letter and attachments are integral parts of this report.

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-57

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB07058SD
Sample Number: 88966

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 4/03/92

Batch Number: 920323-2602

Dilution Factor: 2

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		670
Bis(2-chloroethyl)ether		670
2-Chlorophenol		670
1,3-Dichlorobenzene		670
1,4-Dichlorobenzene		670
Benzyl alcohol		670
2-Methylphenol		670
1,2-Dichlorobenzene		670
Bis(2-Chloroisopropyl)ether		670
4-Methylphenol		670
N-Nitroso-di-n-propylamine		670
Hexachloroethane		670
Nitrobenzene		670
Isophorone		670
2,4-Dimethylphenol		670
1,2,4-Trichlorobenzene		670
2-Nitrophenol		670
Benzoic acid		3300
Bis(2-Chloroethoxy)methane		670
2,4-Dichlorophenol		670
Naphthalene		670
4-Chloroaniline		670
Hexachlorobutadiene		670
4-Chloro-3-methylphenol		670
2-Methylnaphthalene		670
Hexachlorocyclopentadiene		670
2,4,6-Trichlorophenol		670
2,4,5-Trichlorophenol		670
2-Chloronaphthalene		670
3-Nitroaniline		3300
Dimethylphthalate		670
2,6-Dinitrotoluene		670
Acenaphthylene		670
2-Nitroaniline		3300

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-57

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		670
2,4-Dinitrophenol		3300
4-Nitrophenol		3300
2,4-Dinitrotoluene		670
Dibenzofuran		670
Diethylphthalate		670
alpha-BHC {b}		670
4-Chlorophenyl phenyl ether		670
Fluorene		670
4-Nitroaniline		3300
4,6-Dinitro-2-methylphenol		3300
N-Nitrosodiphenylamine		670
4-Bromophenyl phenyl ether		670
beta-BHC {b}		670
Lindane {b}		670
Hexachlorobenzene		670
Pentachlorophenol		3300
Phenanthrene		670
Anthracene		670
Delta-BHC {b}		670
Heptachlor {b}		670
Aldrin {b}		670
Endrin {b}		670
Butyl benzyl phthalate		670
Fluoranthene		670
Heptachlor Epoxide		670
Pyrene		670
Dieldrin {b}		670
4,4'-DDE {b}		670
Endosulfan sulfate		670
4,4'-DDT {b}		670
4,4'-DDD {b}		670
Di-n-butylphthalate		670
3,3'-Dichlorobenzidine		1300
Benzo(a)anthracene		670
Bis(2-Ethylhexyl)phthalate	8500	670
Chrysene		670
Di-n-octylphthalate		670
Benzo(b)fluoranthene		670
Benzo(k)fluoranthene		670
Benzo(a)pyrene		670
Indeno(1,2,3-c,d)pyrene		670
Dibenzo(a,h)anthracene		670
Benzo(g,h,i)perylene		670

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-57

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	51	25 - 121
Phenol-d5.....	87	24 - 113
Nitrobenzene-d5.....	72	23 - 120
2-Fluorobiphenyl.....	79	30 - 115
2,4,6-Tribromophenol.....	106	19 - 122
Terphenyl-d14.....	91	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.
{d} The sample was diluted 2 fold to bring target analytes within linear working range.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/10/92

The cover letter and attachments are integral parts of this report.

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METALS

PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-62

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB07012SF
Sample Number: 88974 Matrix: Soil

Date Sampled: 3/19/92 Date Received: 3/20/92
Date Digested: 3/23/92 {b} Batch Number: 920323-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	3.2	1	.50	3/26/92
Beryllium (Be)/6010.....	.52	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	9.4	1	1.0	3/26/92
Copper (Cu)/6010.....	10.	1	1.0	3/26/92
Lead (Pb)/6010.....	11.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	6.6	1	1.0	3/26/92
Selenium (Se)/7740.....		1	.25	3/26/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/31/92
Zinc (Zn)/6010.....	46.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1105; and Hg was digested on 3/23/92, Batch # 920323-1106 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-53

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB07035SF
Sample Number: 88956 Matrix: Soil

Date Sampled: 3/19/92 Date Received: 3/20/92
Date Digested: 3/23/92 {b} Batch Number: 920323-1101 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	2.0	1	.50	3/26/92
Beryllium (Be)/6010.....	.48	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	13.	1	1.0	3/26/92
Copper (Cu)/6010.....	13.	1	1.0	3/26/92
Lead (Pb)/6010.....	12.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	8.7	1	1.0	3/26/92
Selenium (Se)/7740.....	6.4	4	1.0	3/25/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/30/92
Zinc (Zn)/6010.....	48.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1102; and Hg was digested on 3/23/92, Batch # 920323-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Selenium was diluted 4 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-56

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB07036SF
Sample Number: 88962 Matrix: Soil

Date Sampled: 3/19/92 Date Received: 3/20/92
Date Digested: 3/23/92 {b} Batch Number: 920323-1101 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	2.9	1	.50	3/26/92
Beryllium (Be)/6010.....	.44	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	9.8	1	1.0	3/26/92
Copper (Cu)/6010.....	11.	1	1.0	3/26/92
Lead (Pb)/6010.....	9.7	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	7.1	1	1.0	3/26/92
Selenium (Se)/7740.....	8.1	4	1.0	3/25/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/30/92
Zinc (Zn)/6010.....	42.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1102; and Hg was digested on 3/23/92, Batch # 920323-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Selenium was diluted 4 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-65

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB07038SF
Sample Number: 88980

Matrix: Soil

Date Sampled: 3/19/92
Date Digested: 3/23/92 {b}

Date Received: 3/20/92
Batch Number: 920323-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	2.5	1	.50	3/26/92
Beryllium (Be)/6010.....	.50	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	10.	1	1.0	3/26/92
Copper (Cu)/6010.....	9.3	1	1.0	3/26/92
Lead (Pb)/6010.....	12.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	7.4	1	1.0	3/26/92
Selenium (Se)/7740.....	.35	1	.25	3/26/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/31/92
Zinc (Zn)/6010.....	45.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1105; and Hg was digested on 3/23/92, Batch # 920323-1106 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald Lorem
Cheryl Matterson, Association Chemist

Date: 4/09/92

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-59

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB07058SF
Sample Number: 88968 Matrix: Soil

Date Sampled: 3/19/92 Date Received: 3/20/92
Date Digested: 3/23/92 {b} Batch Number: 920323-1101 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	2.4	1	.50	3/26/92
Beryllium (Be)/6010.....	.47	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	8.1	1	1.0	3/26/92
Copper (Cu)/6010.....	11.	1	1.0	3/26/92
Lead (Pb)/6010.....	15.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	6.7	1	1.0	3/26/92
Selenium (Se)/7740.....	7.2	4	1.0	3/25/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/30/92
Zinc (Zn)/6010.....	41.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1102; and Hg was digested on 3/23/92, Batch # 920323-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Selenium was diluted 4 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Association Chemist

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RADIONUCLIDES

Table1. Results of the analyses for iodine-129 and strontium-90 in thirty (30) soil samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Conc. pCi/g wet I-129	Date Analyzed	Conc. pCi/g dry Sr-90	Date Analyzed
89275	BB11006SA	03/18/92	SPS-1943	<0.3	06/11	0.02±0.01	06/09
88963	BB07058SA	03/19/92	1944	<0.2	06/12	0.01±0.01	06/10
88969	BB07012SA	03/19/92	1945	<0.3	06/11	0.01±0.01	06/10
88975	BB07038SA	03/19/92	1946	<0.2	06/12	0.02±0.01	06/10
88981	M 7 SA	03/19/92	1947	<0.3	06/12	0.04±0.01	06/10
89651	BB10067SA	03/19/92	1948	<0.3	06/12	0.06±0.01	06/10
89657	BB10078SA	03/19/92	1949	<0.3	06/15	0.05±0.01	06/10
89663	BB10081SA	03/19/92	1950	<0.3	06/16	0.02±0.01	06/10
89669	BB10023SA	03/19/92	1951	<0.3	06/15	0.02±0.01	06/10
89675	BB10029SA	03/19/92	1952	<0.3	06/15	0.02±0.01	07/15
89825	BB02078SA	03/19/92	1953	<0.3	06/16	0.02±0.01	06/10
88801	BB03070SA	03/19/92	1954	<0.2	06/16	0.01±0.01	06/12
88807	BB03032SA	03/19/92	1955	<0.3	06/16	0.02±0.01	06/12
88813	BB03031SA	03/19/92	1956	<0.3	06/16	0.02±0.01	06/20
88819	BB03051SA	03/19/92	1957	<0.3	06/17	0.02±0.01	06/20
88825	BB09100SA	03/19/92	1958	<0.3	06/17	0.02±0.01	06/12
88833	BB00005SA	03/19/92	1959	<0.3	06/17	0.02±0.01	06/12
88834	M 6 SA	03/19/92	1960	<0.3	06/17	0.05±0.01	06/12
88951	BB07035SA	03/19/92	1961	<0.3	06/17	0.02±0.01	06/11
88957	BB07036SA	03/19/92	1962	<0.4	06/17	0.02±0.01	06/11
89351	BB08034SA	03/19/92	1963	<0.3	06/17	<0.01	07/15
89357	BB08035SA	03/19/92	1964	<0.3	06/17	<0.01	06/11
89363	BB08003SA	03/19/92	1965	<0.3	06/18	0.02±0.01	06/11
89369	BB08027SA	03/19/92	1966	<0.3	06/17	0.01±0.01	07/15
89375	BB08038SA	03/19/92	1967	<0.3	06/18	0.02±0.01	06/11
89382	M 5 SA	03/19/92	1968	<0.2	06/18	0.20±0.08	06/11
89801	BB02071SA	03/19/92	1969	<0.3	06/18	0.01±0.01	06/11
89807	BB02045SA	03/19/92	1970	<0.2	06/19	<0.01	06/11
89813	BB02060SA	03/19/92	1971	<0.2	06/19	0.01±0.01	06/11
89819	BB02075SA	03/19/92	1972	<0.3	06/19	0.01±0.01	06/11

The error given is the probable counting error at 95% confidence level. Less than (<) values are based on 3 sigma counting error for background sample.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/19/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
3-0629	04-0029403-012	03/24/92	04/26/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70949	88964 BB07058SB		03/19	1230			PU-238	L.T. 6. E-02		04/30			6
							PU-239	L.T. 1. E-02		04/30			6
70950	88965 BB07058SC		03/19	1230			BE-7	L.T. 6. E-01		05/21			4
							K-40	2.41+-0.24E 01		05/21			4
							MN-54	L.T. 4. E-02		05/21			4
							CO-58	L.T. 6. E-02		05/21			4
							FE-59	L.T. 2. E-01		05/21			4
							CO-60	L.T. 4. E-02		05/21			4
							ZN-65	L.T. 1. E-01		05/21			4
							ZR-95	L.T. 7. E-02		05/21			4
							RU-103	L.T. 9. E-02		05/21			4
							RU-106	L.T. 3. E-01		05/21			4
							I-131	L.T. 7. E 00		05/21			4
							CS-134	L.T. 5. E-02		05/21			4
							CS-137	9.87+-3.61E-02		05/21			4
							BA-140	L.T. 8. E-01		05/21			4
							CE-141	L.T. 2. E-01		05/21			4
							CE-144	L.T. 2. E-01		05/21			4
							RA-226	L.T. 7. E-01		05/21			4
							TH-228	1.04+-0.10E 00		05/21			4
							H-3	2.3 +-1.0 E-02		06/18			5
70951	88970 BB07012SB		03/19	1240			PU-238	L.T. 6. E-02		05/01			6
							PU-239	L.T. 2. E-02		05/01			6
70952	88971 BB07012SC		03/19	1240			BE-7	L.T. 5. E-01		05/21			4
							K-40	2.38+-0.24E 01		05/21			4
							MN-54	L.T. 4. E-02		05/21			4
							CO-58	L.T. 5. E-02		05/21			4
							FE-59	L.T. 2. E-01		05/21			4
							CO-60	L.T. 3. E-02		05/21			4
							ZN-65	L.T. 1. E-01		05/21			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/19/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0629	04-0029403-012	03/24/92	04/26/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70952	88971 BB07012SC		03/19	1240			ZR-95	L.T. 7. E-02		05/21			4
							RU-103	L.T. 8. E-02		05/21			4
							RU-106	L.T. 3. E-01		05/21			4
							I-131	L.T. 6. E 00		05/21			4
							CS-134	L.T. 4. E-02		05/21			4
							CS-137	4.38+-2.07E-02		05/21			4
							BA-140	L.T. 7. E-01		05/21			4
							CE-141	L.T. 2. E-01		05/21			4
							CE-144	L.T. 2. E-01		05/21			4
							RA-226	1.82+-0.40E 00		05/21			4
							TH-228	1.34+-0.13E 00		05/21			4
							H-3	2.3 +-0.8 E-02		06/18			5
70953	88976 BB07038SB		03/19	1300			PU-238	L.T. 2. E-01		05/01			6
							PU-239	L.T. 4. E-02		05/01			6
70954	88977 BB07038SC		03/19	1300			BE-7	L.T. 6. E-01		05/21			4
							K-40	2.40+-0.24E 01		05/21			4
							MN-54	L.T. 4. E-02		05/21			4
							CO-58	L.T. 6. E-02		05/21			4
							FE-59	L.T. 2. E-01		05/21			4
							CO-60	L.T. 4. E-02		05/21			4
							ZN-65	L.T. 1. E-01		05/21			4
							ZR-95	L.T. 8. E-02		05/21			4
							RU-103	L.T. 1. E-01		05/21			4
							RU-106	L.T. 4. E-01		05/21			4
							I-131	L.T. 8. E 00		05/21			4
							CS-134	L.T. 5. E-02		05/21			4
							CS-137	1.31+-0.28E-01		05/21			4
							BA-140	L.T. 1. E 00		05/21			4
							CE-141	L.T. 2. E-01		05/21			4
							CE-144	L.T. 2. E-01		05/21			4
							RA-226	1.83+-0.53E 00		05/21			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

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WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
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TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70954	88977 BB07038SC		03/19	1300			TH-228	1.26+-0.13E 00		05/21			4
							H-3	L.T. 2. E-02		06/18			5
70955	88982 M7SB	MS	03/19	1215			PU-238	L.T. 1. E-01		05/01			6
							PU-239	3.6 +-1.1 E-01		05/01			6
70956	88983 M7SC	MS	03/19	1215			BE-7	L.T. 1. E 00		06/22			4
							K-40	2.39+-0.24E 01		06/22			4
							MN-54	L.T. 4. E-02		06/22			4
							CO-58	L.T. 7. E-02		06/22			4
							FE-59	L.T. 3. E-01		06/22			4
							CO-60	L.T. 3. E-02		06/22			4
							ZN-65	L.T. 1. E-01		06/22			4
							ZR-95	L.T. 9. E-02		06/22			4
							RU-103	L.T. 2. E-01		06/22			4
							RU-106	L.T. 3. E-01		06/22			4
							I-131	L.T. 1. E 02		06/22			4
							CS-134	L.T. 4. E-02		06/22			4
							CS-137	9.99+-1.00E-01		06/22			4
							BA-140	L.T. 5. E 00		06/22			4
							CE-141	L.T. 4. E-01		06/22			4
							CE-144	L.T. 3. E-01		06/22			4
							RA-226	1.79+-0.54E 00		06/22			4
							TH-228	1.26+-0.13E 00		06/22			4
							H-3	5.1 +-0.2 E-01		06/18			5
70957	89652 BB10067SB		03/19	1415			PU-238	L.T. 3. E-02		05/01			6
							PU-239	L.T. 8. E-03		05/01			6

TI#70955 was prepared with 3.3 E-01 pCi/g of Pu-239. TI#70956 was prepared with 7.74E-01 pCi/g of Cs-137. The unspiked Cs-137 activity of the sample was 9.04E-02 pCi/g. TI#70956 was also prepared with 5.7 E-01 pCi/g of H-3. The unspiked H-3 activity was 2.6 E-02 pCi/g.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

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WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
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S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION		STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70941	88835	M6SB	MS	03/19	1115			PU-238	L.T. 2. E-01		05/09			6
								PU-239	2.6 +-1.1 E-01		05/09			6
70942	88836	M6SC	MS	03/19	1115			BE-7	L.T. 1. E 00		06/22			4
								K-40	2.16+-0.22E 01		06/22			4
								MN-54	L.T. 5. E-02		06/22			4
								CO-58	L.T. 8. E-02		06/22			4
								FE-59	L.T. 4. E-01		06/22			4
								CO-60	L.T. 4. E-02		06/22			4
								ZN-65	L.T. 1. E-01		06/22			4
								ZR-95	L.T. 1. E-01		06/22			4
								RU-103	L.T. 2. E-01		06/22			4
								RU-106	L.T. 4. E-01		06/22			4
								I-131	L.T. 1. E 02		06/22			4
								CS-134	L.T. 5. E-02		06/22			4
								CS-137	6.52+-0.65E-01		06/22			4
								BA-140	L.T. 7. E 00		06/22			4
								CE-141	L.T. 4. E-01		06/22			4
								CE-144	L.T. 3. E-01		06/22			4
								RA-226	1.48+-0.58E 00		06/22			4
								TH-228	1.29+-0.13E 00		06/22			4
								H-3	2.0 +-0.2 E-01		06/15			5
70943	88952	BB07035SB		03/19	1200			PU-238	L.T. 6. E-02		05/06			6
								PU-239	L.T. 2. E-02		05/06			6
70944	88953	BB07035SC		03/19	1200			BE-7	L.T. 4. E-01		05/16			4
								K-40	2.36+-0.24E 01		05/16			4
								MN-54	L.T. 3. E-02		05/16			4
								CO-58	L.T. 4. E-02		05/16			4
								FE-59	L.T. 1. E-01		05/16			4
								CO-60	L.T. 3. E-02		05/16			4
								ZN-65	L.T. 7. E-02		05/16			4

TELEDYNE ISOTOPES

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S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70944	88953 BB07035SC		03/19	1200			ZR-95	L.T. 5. E-02		05/16			4
							RU-103	L.T. 6. E-02		05/16			4
							RU-106	L.T. 2. E-01		05/16			4
							I-131	L.T. 3. E 00		05/16			4
							CS-134	L.T. 3. E-02		05/16			4
							CS-137	9.51+-2.73E-02		05/16			4
							BA-140	L.T. 5. E-01		05/16			4
							CE-141	L.T. 1. E-01		05/16			4
							CE-144	L.T. 2. E-01		05/16			4
							RA-226	1.29+-0.38E 00		05/16			4
							TH-228	1.45+-0.14E 00		05/16			4
							H-3	L.T. 2. E-02		06/15			5
70945	88958 BB07036SB		03/19	1215			PU-238	L.T. 8. E-02		04/27			6
							PU-239	L.T. 4. E-02		04/27			6
70946	88959 BB07036SC		03/19	1215			BE-7	L.T. 6. E-01		05/16			4
							K-40	2.26+-0.23E 01		05/16			4
							MN-54	L.T. 4. E-02		05/16			4
							CO-58	L.T. 5. E-02		05/16			4
							FE-59	L.T. 2. E-01		05/16			4
							CO-60	L.T. 3. E-02		05/16			4
							ZN-65	L.T. 9. E-02		05/16			4
							ZR-95	L.T. 7. E-02		05/16			4
							RU-103	L.T. 8. E-02		05/16			4
							RU-106	L.T. 3. E-01		05/16			4
							I-131	L.T. 5. E 00		05/16			4
							CS-134	L.T. 5. E-02		05/16			4
							CS-137	9.50+-2.62E-02		05/16			4
							BA-140	L.T. 1. E 00		05/16			4
							CE-141	L.T. 2. E-01		05/16			4
							CE-144	L.T. 3. E-01		05/16			4
							RA-226	2.09+-0.56E 00		05/16			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/19/92

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S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70946	88959 BB07036SC		03/19	1215			TH-228	1.61+-0.16E 00		05/16			4
							H-3	L.T. 2. E-02		06/15			5
70947	88831 BB00005SB DUP		03/19	1050			PU-238	L.T. 2. E-01		05/09			6
							PU-239	L.T. 4. E-02		05/09			6

DEVELOP SITE 1
BB-08

VOLATILE ORGANIC COMPOUNDS

VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-8

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB08003SE
Sample Number: 89367

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/24/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene	3	5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene	1	5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 8

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	100	70 - 121
Toluene-D8	108	81 - 117
4-Bromofluorobenzene	82	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.
{d} The results reported for Toluene and m & p Xylene are estimated concentrations below the established reporting limits.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

The cover letter and the attachments are integral parts of this report.

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-11

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB08022SE
Sample Number: 89373

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/24/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene	2	5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 11

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	98	70 - 121
Toluene-D8	101	81 - 117
4-Bromofluorobenzene	82	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.
{d} The result reported for Toluene is an estimated concentration below the established reporting limit.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-2

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB08034SE
Sample Number: 89355

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/24/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene	4	5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene	2	5
o-Xylene	1	5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 2

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	100	70 - 121
Toluene-D8	105	81 - 117
4-Bromofluorobenzene	87	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.
{d} The results reported for Toluene, m & p Xylene, and o-Xylene are estimated concentrations below the established reporting limits.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-5

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB08035SE
Sample Number: 89361

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/24/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene	1	5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 5

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	103	70 - 121
Toluene-D8	101	81 - 117
4-Bromofluorobenzene	86	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.
{d} The result reported for Toluene is an estimated concentration below the established reporting limit.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-14

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB08038SE
Sample Number: 89379

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/24/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 14

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	99	70 - 121
Toluene-D8	107	81 - 117
4-Bromofluorobenzene	83	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANIC COMPOUNDS

SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-7

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB08003SD
Sample Number: 89366

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 3/31/92

Batch Number: 920323-2601

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-7

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-7

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	85	25 - 121
Phenol-d5.....	82	24 - 113
Nitrobenzene-d5.....	76	23 - 120
2-Fluorobiphenyl.....	80	30 - 115
2,4,6-Tribromophenol.....	98	19 - 122
Terphenyl-d14.....	84	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-10

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB08022SD
Sample Number: 89372

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 3/31/92

Batch Number: 920323-2601

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-10

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-10

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	77	25 - 121
Phenol-d5.....	76	24 - 113
Nitrobenzene-d5.....	71	23 - 120
2-Fluorobiphenyl.....	80	30 - 115
2,4,6-Tribromophenol.....	98	19 - 122
Terphenyl-d14.....	80	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-1

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB08034SD
Sample Number: 89354

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 3/31/92

Batch Number: 920323-2601

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-1

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	80	25 - 121
Phenol-d5.....	82	24 - 113
Nitrobenzene-d5.....	75	23 - 120
2-Fluorobiphenyl.....	83	30 - 115
2,4,6-Tribromophenol.....	99	19 - 122
Terphenyl-d14.....	91	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-4

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB08035SD
Sample Number: 89360

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 3/31/92

Batch Number: 920323-2601

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-4

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-4

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	89	25 - 121
Phenol-d5.....	88	24 - 113
Nitrobenzene-d5.....	74	23 - 120
2-Fluorobiphenyl.....	80	30 - 115
2,4,6-Tribromophenol.....	101	19 - 122
Terphenyl-d14.....	87	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-13

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB08038SD
Sample Number: 89378

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 3/31/92

Batch Number: 920323-2601

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-13

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-13

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	89	25 - 121
Phenol-d5.....	84	24 - 113
Nitrobenzene-d5.....	80	23 - 120
2-Fluorobiphenyl.....	89	30 - 115
2,4,6-Tribromophenol.....	111	19 - 122
Terphenyl-d14.....	89	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy M McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

The cover letter and attachments are integral parts of this report.

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METALS

PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-9

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB08003SF
Sample Number: 89368 Matrix: Soil

Date Sampled: 3/19/92 Date Received: 3/20/92
Date Digested: 3/23/92 {b} Batch Number: 920323-1101 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....		1	.50	3/25/92
Beryllium (Be)/6010.....	.56	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	21.	1	1.0	3/26/92
Copper (Cu)/6010.....	24.	1	1.0	3/26/92
Lead (Pb)/6010.....	16.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	15.	1	1.0	3/26/92
Selenium (Se)/7740.....	2.0	1	.25	3/25/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/30/92
Zinc (Zn)/6010.....	58.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1102; and Hg was digested on 3/23/92, Batch # 920323-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-12

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB08022SF
Sample Number: 89374 Matrix: Soil

Date Sampled: 3/19/92 Date Received: 3/20/92
Date Digested: 3/23/92 {b} Batch Number: 920323-1101 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....		1	.50	3/25/92
Beryllium (Be)/6010.....	.62	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	21.	1	1.0	3/26/92
Copper (Cu)/6010.....	25.	1	1.0	3/26/92
Lead (Pb)/6010.....	16.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	16.	1	1.0	3/26/92
Selenium (Se)/7740.....	2.1	1	.25	3/25/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/30/92
Zinc (Zn)/6010.....	59.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1102; and Hg was digested on 3/23/92, Batch # 920323-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Association Chemist

The cover letter and attachments are integral parts of this report.

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-3

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB08034SF
Sample Number: 89356 Matrix: Soil

Date Sampled: 3/19/92 Date Received: 3/20/92
Date Digested: 3/23/92 {b} Batch Number: 920323-1101 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	11.	4	2.0	3/25/92
Beryllium (Be)/6010.....	.61	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	22.	1	1.0	3/26/92
Copper (Cu)/6010.....	25.	1	1.0	3/26/92
Lead (Pb)/6010.....	16.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	16.	1	1.0	3/26/92
Selenium (Se)/7740.....	4.5	4	1.0	3/25/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/30/92
Zinc (Zn)/6010.....	61.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1102; and Hg was digested on 3/23/92, Batch # 920323-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The samples for Arsenic and Selenium were diluted 4 fold to bring target analytes within linear working range.

Approved by: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-6

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB08035SF
Sample Number: 89362 Matrix: Soil

Date Sampled: 3/19/92 Date Received: 3/20/92
Date Digested: 3/23/92 {b} Batch Number: 920323-1101 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....		1	.50	3/25/92
Beryllium (Be)/6010.....	.55	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	20.	1	1.0	3/26/92
Copper (Cu)/6010.....	25.	1	1.0	3/26/92
Lead (Pb)/6010.....	17.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	16.	1	1.0	3/26/92
Selenium (Se)/7740.....		1	.25	3/25/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/30/92
Zinc (Zn)/6010.....	60.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1102; and Hg was digested on 3/23/92, Batch # 920323-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-15

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB08038SF
Sample Number: 89380 Matrix: Soil

Date Sampled: 3/19/92 Date Received: 3/20/92
Date Digested: 3/23/92 {b} Batch Number: 920323-1101 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	13.	4	2.0	3/25/92
Beryllium (Be)/6010.....	.62	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	20.	1	1.0	3/26/92
Copper (Cu)/6010.....	26.	1	1.0	3/26/92
Lead (Pb)/6010.....	16.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	16.	1	1.0	3/26/92
Selenium (Se)/7740.....	5.8	4	1.0	3/25/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/30/92
Zinc (Zn)/6010.....	60.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1102; and Hg was digested on 3/23/92, Batch # 920323-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The samples for Arsenic and Selenium were diluted 4 fold to bring target analytes within linear working range.

Approved by: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Association Chemist

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RADIONUCLIDES

Table1. Results of the analyses for iodine-129 and strontium-90 in thirty (30) soil samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Conc. pCi/g wet I-129	Date Analyzed	Conc. pCi/g dry Sr-90	Date Analyzed
89275	BB11006SA	03/18/92	SPS-1943	<0.3	06/11	0.02±0.01	06/09
88963	BB07058SA	03/19/92	1944	<0.2	06/12	0.01±0.01	06/10
88969	BB07012SA	03/19/92	1945	<0.3	06/11	0.01±0.01	06/10
88975	BB07038SA	03/19/92	1946	<0.2	06/12	0.02±0.01	06/10
88981	M 7 SA	03/19/92	1947	<0.3	06/12	0.04±0.01	06/10
89651	BB10067SA	03/19/92	1948	<0.3	06/12	0.06±0.01	06/10
89657	BB10078SA	03/19/92	1949	<0.3	06/15	0.05±0.01	06/10
89663	BB10081SA	03/19/92	1950	<0.3	06/16	0.02±0.01	06/10
89669	BB10023SA	03/19/92	1951	<0.3	06/15	0.02±0.01	06/10
89675	BB10029SA	03/19/92	1952	<0.3	06/15	0.02±0.01	07/15
89825	BB02078SA	03/19/92	1953	<0.3	06/16	0.02±0.01	06/10
88801	BB03070SA	03/19/92	1954	<0.2	06/16	0.01±0.01	06/12
88807	BB03072SA	03/19/92	1955	<0.3	06/16	0.02±0.01	06/12
88813	BB03031SA	03/19/92	1956	<0.3	06/16	0.02±0.01	06/20
88819	BB03051SA	03/19/92	1957	<0.3	06/17	0.02±0.01	06/20
88825	BB09100SA	03/19/92	1958	<0.3	06/17	0.02±0.01	06/12
88833	BB00005SA	03/19/92	1959	<0.3	06/17	0.02±0.01	06/12
88834	M 6 SA	03/19/92	1960	<0.3	06/17	0.05±0.01	06/12
88951	BB07035SA	03/19/92	1961	<0.3	06/17	0.02±0.01	06/11
88957	BB07036SA	03/19/92	1962	<0.4	06/17	0.02±0.01	06/11
89351	BB08034SA	03/19/92	1963	<0.3	06/17	<0.01	07/15
89357	BB08035SA	03/19/92	1964	<0.3	06/17	<0.01	06/11
89363	BB08003SA	03/19/92	1965	<0.3	06/18	0.02±0.01	06/11
89369	BB08027SA	03/19/92	1966	<0.3	06/17	0.01±0.01	07/15
89375	BB08038SA	03/19/92	1967	<0.3	06/18	0.02±0.01	06/11
89382	M 5 SA	03/19/92	1968	<0.2	06/18	0.20±0.08	06/11
89801	BB02071SA	03/19/92	1969	<0.3	06/18	0.01±0.01	06/11
89807	BB02045SA	03/19/92	1970	<0.2	06/19	<0.01	06/11
89813	BB02060SA	03/19/92	1971	<0.2	06/19	0.01±0.01	06/11
89819	BB02075SA	03/19/92	1972	<0.3	06/19	0.01±0.01	06/11

The error given is the probable counting error at 95% confidence level. Less than (<) values are based on 3 sigma counting error for background sample.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/19/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
3-0632	04-0029403-012	03/24/92	04/26/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70905	89352 BB08034SB		03/19	0815			PU-238	L.T. 6. E-02		06/10			6
							PU-239	L.T. 2. E-02		06/10			6
70906	89353 BB08034SC		03/19	0815			BE-7	L.T. 5. E-01		04/27			4
							K-40	1.97+-0.20E 01		04/27			4
							MN-54	L.T. 4. E-02		04/27			4
							CO-58	L.T. 5. E-02		04/27			4
							FE-59	L.T. 1. E-01		04/27			4
							CO-60	L.T. 4. E-02		04/27			4
							ZN-65	L.T. 1. E-01		04/27			4
							ZR-95	L.T. 6. E-02		04/27			4
							RU-103	L.T. 6. E-02		04/27			4
							RU-106	L.T. 4. E-01		04/27			4
							I-131	L.T. 1. E 00		04/27			4
							CS-134	L.T. 5. E-02		04/27			4
							CS-137	1.49+-0.42E-01		04/27			4
							BA-140	L.T. 3. E-01		04/27			4
							CE-141	L.T. 1. E-01		04/27			4
							CE-144	L.T. 2. E-01		04/27			4
							RA-226	2.16+-0.57E 00		04/27			4
							TH-228	1.11+-0.11E 00		04/27			4
							H-3	L.T. 2. E-02		06/13			5
70907	89358 BB08035SB		03/19	0820			PU-238	L.T. 1. E-01		04/26			6
							PU-239	L.T. 3. E-02		04/26			6
70908	89359 BB08035SC		03/19	0820			BE-7	L.T. 5. E-01		04/27			4
							K-40	2.21+-0.22E 01		04/27			4
							MN-54	L.T. 4. E-02		04/27			4
							CO-58	L.T. 5. E-02		04/27			4
							FE-59	L.T. 1. E-01		04/27			4
							CO-60	L.T. 3. E-02		04/27			4
							ZN-65	L.T. 1. E-01		04/27			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/19/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 2
3-0632	04-0029403-012	03/24/92	04/26/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70908	89359 BB08035SC		03/19	0820			ZR-95	L.T. 6. E-02		04/27			4
							RU-103	L.T. 6. E-02		04/27			4
							RU-106	L.T. 3. E-01		04/27			4
							I-131	L.T. 1. E 00		04/27			4
							CS-134	L.T. 4. E-02		04/27			4
							CS-137	1.66+-0.35E-01		04/27			4
							BA-140	L.T. 2. E-01		04/27			4
							CE-141	L.T. 1. E-01		04/27			4
							CE-144	L.T. 2. E-01		04/27			4
							RA-226	1.73+-0.51E 00		04/27			4
							TH-228	1.46+-0.15E 00		04/27			4
							H-3	2.6 +-1.2 E-02		06/14			5
70909	89364 BB08003SC		03/19	0840			PU-238	L.T. 1. E-01		04/26			6
							PU-239	L.T. 3. E-02		04/26			6
70910	89365 BB08003SC		03/19	0840			BE-7	L.T. 5. E-01		04/27			4
							K-40	2.00+-0.20E 01		04/27			4
							MN-54	L.T. 4. E-02		04/27			4
							CO-58	L.T. 5. E-02		04/27			4
							FE-59	L.T. 1. E-01		04/27			4
							CO-60	L.T. 4. E-02		04/27			4
							ZN-65	L.T. 1. E-01		04/27			4
							ZR-95	L.T. 7. E-02		04/27			4
							RU-103	L.T. 7. E-02		04/27			4
							RU-106	L.T. 3. E-01		04/27			4
							I-131	L.T. 1. E 00		04/27			4
							CS-134	L.T. 5. E-02		04/27			4
							CS-137	1.62+-0.40E-01		04/27			4
							BA-140	L.T. 3. E-01		04/27			4
							CE-141	L.T. 1. E-01		04/27			4
							CE-144	L.T. 2. E-01		04/27			4
							RA-226	1.85+-0.53E 00		04/27			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/19/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 3
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ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70910	89365 BB08003SC		03/19	0840			TH-228	4.00+-0.65E-01		04/27			4
							H-3	2.7 +-0.9 E-02		06/14			5
70911	89370 BB08022SB		03/19	0900			PU-238	L.T. 1. E-01		05/09			6
							PU-239	L.T. 8. E-02		05/09			6
70912	89371 BB08022SC		03/19	0900			BE-7	L.T. 5. E-01		04/27			4
							K-40	1.99+-0.20E 01		04/27			4
							MN-54	L.T. 4. E-02		04/27			4
							CO-58	L.T. 5. E-02		04/27			4
							FE-59	L.T. 1. E-01		04/27			4
							CO-60	L.T. 4. E-02		04/27			4
							ZN-65	L.T. 1. E-01		04/27			4
							ZR-95	L.T. 7. E-02		04/27			4
							RU-103	L.T. 7. E-02		04/27			4
							RU-106	L.T. 4. E-01		04/27			4
							I-131	L.T. 1. E 00		04/27			4
							CS-134	L.T. 5. E-02		04/27			4
							CS-137	1.37+-0.37E-01		04/27			4
							BA-140	L.T. 3. E-01		04/27			4
							CE-141	L.T. 1. E-01		04/27			4
							CE-144	L.T. 3. E-01		04/27			4
							RA-226	1.60+-0.57E 00		04/27			4
							TH-228	1.10+-0.11E 00		04/27			4
							H-3	3.0 +-1.2 E-02		06/14			5
70913	89376 BB08038SB		03/19	0920			PU-238	L.T. 5. E-02		05/09			6
							PU-239	L.T. 2. E-02		05/09			6

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/19/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 4
3-0632	04-0029403-012	03/24/92	04/26/92	

ERIC SMITH
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S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70914	89377 BB08038SC		03/19	0920			BE-7	L.T. 5. E-01		04/27			4
							K-40	2.06+-0.21E 01		04/27			4
							MN-54	L.T. 4. E-02		04/27			4
							CO-58	L.T. 5. E-02		04/27			4
							FE-59	L.T. 1. E-01		04/27			4
							CO-60	L.T. 4. E-02		04/27			4
							ZN-65	L.T. 1. E-01		04/27			4
							ZR-95	L.T. 6. E-02		04/27			4
							RU-103	L.T. 7. E-02		04/27			4
							RU-106	L.T. 3. E-01		04/27			4
							I-131	L.T. 1. E 00		04/27			4
							CS-134	L.T. 4. E-02		04/27			4
							CS-137	9.36+-3.54E-02		04/27			4
							BA-140	L.T. 3. E-01		04/27			4
							CE-141	L.T. 1. E-01		04/27			4
							CE-144	L.T. 2. E-01		04/27			4
							RA-226	1.91+-0.50E 00		04/27			4
							TH-228	3.94+-0.65E-01		04/27			4
							H-3	3.9 +-0.9 E-02		06/14			5
70915	89383 M5SB	MS	03/19	0820			PU-238	L.T. 5. E-02		05/18			6
							PU-239	3.0 +-0.8 E-01		05/18			6
70916	89384 M5SC	MS	03/19	0820			BE-7	L.T. 1. E 00		06/12			4
							K-40	2.08+-0.21E 01		06/12			4
							MN-54	L.T. 6. E-02		06/12			4
							CO-58	L.T. 1. E-01		06/12			4
							FE-59	L.T. 4. E-01		06/12			4
							CO-60	L.T. 5. E-02		06/12			4
							ZN-65	L.T. 2. E-01		06/12			4
							ZR-95	L.T. 1. E-01		06/12			4
							RU-103	L.T. 2. E-01		06/12			4
							RU-106	L.T. 5. E-01		06/12			4

TI #70915 was prepared with 0.33 pCi/g of Pu-239.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/19/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 8
3-0632	04-0029403-012	03/24/92	04/26/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70924	89821 BB02075SC		03/19	1015			TH-228	9.20+-0.92E-01		06/18			4
							H-3	L.T. 1. E-02		06/14			5
70925	89352 BB08034SB DUP		03/19	0815			PU-238	L.T. 2. E-01		04/26			6
							PU-239	L.T. 1. E-01		04/26			6

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/04/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
3-0631	04-0029403-012	03/24/92	04/26/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

WATER

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/LITER)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
71283	196836-37	BB08034RD	03/19	0815			BE-7	L.T. 6. E 01		05/04			4
							K-40	L.T. 1. E 02		05/04			4
							MN-54	L.T. 4. E 00		05/04			4
							CO-58	L.T. 5. E 00		05/04			4
							FE-59	L.T. 2. E 01		05/04			4
							CO-60	L.T. 4. E 00		05/04			4
							ZN-65	L.T. 9. E 00		05/04			4
							ZR-95	L.T. 6. E 00		05/04			4
							RU-103	L.T. 8. E 00		05/04			4
							RU-106	L.T. 4. E 01		05/04			4
							I-131	L.T. 2. E 02		05/04			4
							CS-134	L.T. 4. E 00		05/04			4
							CS-137	L.T. 4. E 00		05/04			4
							BA-140	L.T. 5. E 01		05/04			4
							CE-141	L.T. 1. E 01		05/04			4
							CE-144	L.T. 2. E 01		05/04			4
							RA-226	L.T. 7. E 01		05/04			4
							TH-228	L.T. 7. E 00		05/04			4
71284	196838	BB08035RE	03/19	0820			H-3	L.T. 2. E 02		06/02			5
71285	197951-52	BB10067RD	03/19	1415			BE-7	L.T. 5. E 01		05/04			4
							K-40	L.T. 5. E 01		05/04			4
							MN-54	L.T. 3. E 00		05/04			4
							CO-58	L.T. 5. E 00		05/04			4
							FE-59	L.T. 1. E 01		05/04			4
							CO-60	L.T. 4. E 00		05/04			4
							ZN-65	L.T. 7. E 00		05/04			4
							ZR-95	L.T. 5. E 00		05/04			4
							RU-103	L.T. 8. E 00		05/04			4
							RU-106	L.T. 3. E 01		05/04			4
							I-131	L.T. 2. E 02		05/04			4
							CS-134	L.T. 4. E 00		05/04			4

Volatile Organic Compounds

VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-42

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB09031SE
Sample Number: 88817

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/31/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene	1	5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 42

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	98	70 - 121
Toluene-D8	113	81 - 117
4-Bromofluorobenzene	79	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.
{d} The result reported for Toluene is an estimated concentration below the established reporting limit.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

The cover letter and the attachments are integral parts of this report.

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-45

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB09051SE
Sample Number: 88823

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/25/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 45

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	101	70 - 121
Toluene-D8	112	81 - 117
4-Bromofluorobenzene	83	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-36

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB09070SE
Sample Number: 88805

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/24/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 36

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	105	70 - 121
Toluene-D8	100	81 - 117
4-Bromofluorobenzene	87	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy M McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-39

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB09092SE
Sample Number: 88811

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/24/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene	2	5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene	1	5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 39

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	103	70 - 121
Toluene-D8	103	81 - 117
4-Bromofluorobenzene	81	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.
{d} The results reported for Toluene and m & p Xylene are estimated concentrations below the established reporting limits.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-48

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB09100SE
Sample Number: 88829

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/25/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 48

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	99	70 - 121
Toluene-D8	111	81 - 117
4-Bromofluorobenzene	89	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy M Donald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANIC COMPOUNDS

SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-41

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB09031SD
Sample Number: 88816

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 4/02/92

Batch Number: 920323-2601

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-41

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-41

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	86	25 - 121
Phenol-d5.....	83	24 - 113
Nitrobenzene-d5.....	67	23 - 120
2-Fluorobiphenyl.....	79	30 - 115
2,4,6-Tribromophenol.....	91	19 - 122
Terphenyl-d14.....	85	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/08/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-44

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB09051SD
Sample Number: 88822

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 4/01/92

Batch Number: 920323-2601

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-44

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-44

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	72	25 - 121
Phenol-d5.....	84	24 - 113
Nitrobenzene-d5.....	71	23 - 120
2-Fluorobiphenyl.....	81	30 - 115
2,4,6-Tribromophenol.....	103	19 - 122
Terphenyl-d14.....	82	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-35

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB09070SD
Sample Number: 88804

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 3/31/92

Batch Number: 920323-2601

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-35

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-35

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	92	25 - 121
Phenol-d5.....	93	24 - 113
Nitrobenzene-d5.....	81	23 - 120
2-Fluorobiphenyl.....	89	30 - 115
2,4,6-Tribromophenol.....	110	19 - 122
Terphenyl-d14.....	94	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/08/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-38

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB09092SD
Sample Number: 88810

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 4/01/92

Batch Number: 920323-2601

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-38

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-38

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	84	25 - 121
Phenol-d5.....	86	24 - 113
Nitrobenzene-d5.....	77	23 - 120
2-Fluorobiphenyl.....	85	30 - 115
2,4,6-Tribromophenol.....	104	19 - 122
Terphenyl-d14.....	89	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-47

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB09100SD
Sample Number: 88828

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 4/01/92

Batch Number: 920323-2601

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-47

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-47

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	81	25 - 121
Phenol-d5.....	84	24 - 113
Nitrobenzene-d5.....	68	23 - 120
2-Fluorobiphenyl.....	80	30 - 115
2,4,6-Tribromophenol.....	121	19 - 122
Terphenyl-d14.....	87	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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METALS

PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-43

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB09031SF
Sample Number: 88818

Matrix: Soil

Date Sampled: 3/19/92
Date Digested: 3/23/92 {b}

Date Received: 3/20/92
Batch Number: 920323-1101 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....		1	.50	3/25/92
Beryllium (Be)/6010.....	.76	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	22.	1	1.0	3/26/92
Copper (Cu)/6010.....	28.	1	1.0	3/26/92
Lead (Pb)/6010.....	18.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	19.	1	1.0	3/26/92
Selenium (Se)/7740.....	2.4	1	.25	3/25/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/30/92
Zinc (Zn)/6010.....	63.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1102; and Hg was digested on 3/23/92, Batch # 920323-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/09/92

The cover letter and attachments are integral parts of this report.

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-46

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB09051SF
Sample Number: 88824

Matrix: Soil

Date Sampled: 3/19/92
Date Digested: 3/23/92 {b}

Date Received: 3/20/92
Batch Number: 920323-1101 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	16.	4	2.0	3/25/92
Beryllium (Be)/6010.....	.73	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	21.	1	1.0	3/26/92
Copper (Cu)/6010.....	29.	1	1.0	3/26/92
Lead (Pb)/6010.....	17.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	18.	1	1.0	3/26/92
Selenium (Se)/7740.....	7.8	4	1.0	3/25/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/30/92
Zinc (Zn)/6010.....	60.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1102; and Hg was digested on 3/23/92, Batch # 920323-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The samples for Arsenic and Selenium were diluted 4 fold to bring target analytes within linear working range.

Approved by: Nancy McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/09/92

The cover letter and attachments are integral parts of this report.

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-37

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB09070SF
Sample Number: 88806

Matrix: Soil

Date Sampled: 3/19/92
Date Digested: 3/23/92 {b}

Date Received: 3/20/92
Batch Number: 920323-1101 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....		1	.50	3/25/92
Beryllium (Be)/6010.....	.83	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	27.	1	1.0	3/26/92
Copper (Cu)/6010.....	28.	1	1.0	3/26/92
Lead (Pb)/6010.....	19.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	20.	1	1.0	3/26/92
Selenium (Se)/7740.....		1	.25	3/25/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/30/92
Zinc (Zn)/6010.....	65.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1102; and Hg was digested on 3/23/92, Batch # 920323-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} Arsenic and Selenium were detected below the reporting limits. Suspect sample matrix interferences are present which could be responsible for laboratory reporting of false negatives.

Approved by: Nancy McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/09/92

The cover letter and attachments are integral parts of this report.

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-40

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB09092SF
Sample Number: 88812 Matrix: Soil

Date Sampled: 3/19/92 Date Received: 3/20/92
Date Digested: 3/23/92 {b} Batch Number: 920323-1101 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....		1	.50	3/25/92
Beryllium (Be)/6010.....	.74	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	24.	1	1.0	3/26/92
Copper (Cu)/6010.....	27.	1	1.0	3/26/92
Lead (Pb)/6010.....	19.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	19.	1	1.0	3/26/92
Selenium (Se)/7740.....	2.0	1	.25	3/25/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/30/92
Zinc (Zn)/6010.....	62.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1102; and Hg was digested on 3/23/92, Batch # 920323-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy M McDonald for CM Date: 4/09/92
Cheryl Matterson, Association Chemist

The cover letter and attachments are integral parts of this report.

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-49

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB09100SF
Sample Number: 88830

Matrix: Soil

Date Sampled: 3/19/92
Date Digested: 3/23/92 {b}

Date Received: 3/20/92
Batch Number: 920323-1101 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	4.4	1	.50	3/26/92
Beryllium (Be)/6010.....	.71	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	24.	1	1.0	3/26/92
Copper (Cu)/6010.....	27.	1	1.0	3/26/92
Lead (Pb)/6010.....	16.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	18.	1	1.0	3/26/92
Selenium (Se)/7740.....	1.3	1	.25	3/25/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/30/92
Zinc (Zn)/6010.....	60.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1102; and Hg was digested on 3/23/92, Batch # 920323-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/09/92

The cover letter and attachments are integral parts of this report.

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RADIONUCLIDES

Table1. Results of the analyses for iodine-129 and strontium-90 in thirty (30) soil samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Conc. pCi/g wet I-129	Date Analyzed	Conc. pCi/g dry Sr-90	Date Analyzed
89275	BB11006SA	03/18/92	SPS-1943	<0.3	06/11	0.02±0.01	06/09
88963	BB07058SA	03/19/92	1944	<0.2	06/12	0.01±0.01	06/10
88969	BB07012SA	03/19/92	1945	<0.3	06/11	0.01±0.01	06/10
88975	BB07038SA	03/19/92	1946	<0.2	06/12	0.02±0.01	06/10
88981	M 7 SA	03/19/92	1947	<0.3	06/12	0.04±0.01	06/10
89651	BB10067SA	03/19/92	1948	<0.3	06/12	0.06±0.01	06/10
89657	BB10078SA	03/19/92	1949	<0.3	06/15	0.05±0.01	06/10
89663	BB10081SA	03/19/92	1950	<0.3	06/16	0.02±0.01	06/10
89669	BB10023SA	03/19/92	1951	<0.3	06/15	0.02±0.01	06/10
89675	BB10029SA	03/19/92	1952	<0.3	06/15	0.02±0.01	07/15
89825	BB02078SA	03/19/92	1953	<0.3	06/16	0.02±0.01	06/10
88801	BB03070SA	03/19/92	1954	<0.2	06/16	0.01±0.01	06/12
88807	BB03032SA	03/19/92	1955	<0.3	06/16	0.02±0.01	06/12
88813	BB03031SA	03/19/92	1956	<0.3	06/16	0.02±0.01	06/20
88819	BB03051SA	03/19/92	1957	<0.3	06/17	0.02±0.01	06/20
88825	BB09100SA	03/19/92	1958	<0.3	06/17	0.02±0.01	06/12
88833	BB00005SA	03/19/92	1959	<0.3	06/17	0.02±0.01	06/12
88834	M 6 SA	03/19/92	1960	<0.3	06/17	0.05±0.01	06/12
88951	BB07035SA	03/19/92	1961	<0.3	06/17	0.02±0.01	06/11
88957	BB07036SA	03/19/92	1962	<0.4	06/17	0.02±0.01	06/11
89351	BB08034SA	03/19/92	1963	<0.3	06/17	<0.01	07/15
89357	BB08035SA	03/19/92	1964	<0.3	06/17	<0.01	06/11
89363	BB08003SA	03/19/92	1965	<0.3	06/18	0.02±0.01	06/11
89369	BB08027SA	03/19/92	1966	<0.3	06/17	0.01±0.01	07/15
89375	BB08038SA	03/19/92	1967	<0.3	06/18	0.02±0.01	06/11
89382	M 5 SA	03/19/92	1968	<0.2	06/18	0.20±0.08	06/11
89801	BB02071SA	03/19/92	1969	<0.3	06/18	0.01±0.01	06/11
89807	BB02045SA	03/19/92	1970	<0.2	06/19	<0.01	06/11
89813	BB02060SA	03/19/92	1971	<0.2	06/19	0.01±0.01	06/11
89819	BB02075SA	03/19/92	1972	<0.3	06/19	0.01±0.01	06/11

The error given is the probable counting error at 95% confidence level. Less than (<) values are based on 3 sigma counting error for background sample.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/19/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0633	04-0029403-012	03/24/92	04/26/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70929	89832 BB00005SC		03/19	1015			I-131	L.T. 5. E 00		05/16			4
							CS-134	L.T. 5. E-02		05/16			4
							CS-137	L.T. 5. E-02		05/16			4
							BA-140	L.T. 9. E-01		05/16			4
							CE-141	L.T. 2. E-01		05/16			4
							CE-144	L.T. 3. E-01		05/16			4
							RA-226	1.46+-0.63E 00		05/16			4
							TH-228	1.24+-0.12E 00		05/16			4
							H-3	L.T. 1. E-02		06/14			5
70930	88802 BB09070SB		03/19	1050			PU-238	L.T. 9. E-02		05/18			6
							PU-239	L.T. 2. E-02		05/18			6
70931	88803 BB09070SC		03/19	1050			BE-7	L.T. 5. E-01		05/16			4
							K-40	2.18+-0.22E 01		05/16			4
							MN-54	L.T. 4. E-02		05/16			4
							CO-58	L.T. 4. E-02		05/16			4
							FE-59	L.T. 2. E-01		05/16			4
							CO-60	L.T. 3. E-02		05/16			4
							ZN-65	L.T. 8. E-02		05/16			4
							ZR-95	L.T. 6. E-02		05/16			4
							RU-103	L.T. 7. E-02		05/16			4
							RU-106	L.T. 3. E-01		05/16			4
							I-131	L.T. 4. E 00		05/16			4
							CS-134	L.T. 4. E-02		05/16			4
							CS-137	9.22+-2.03E-02		05/16			4
							BA-140	L.T. 8. E-01		05/16			4
							CE-141	L.T. 1. E-01		05/16			4
							CE-144	L.T. 2. E-01		05/16			4
							RA-226	1.77+-0.38E 00		05/16			4
							TH-228	1.24+-0.12E 00		05/16			4
							H-3	L.T. 3. E-02		06/14			5

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/19/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0633	04-0029403-012	03/24/92	04/26/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70932	88808 BB09092SB		03/19	1050			PU-238	L.T. 1. E-01		05/09			6
							PU-239	L.T. 4. E-02		05/09			6
70933	88809 BB09092SC		03/19	1050			BE-7	L.T. 5. E-01		05/16			4
							K-40	2.09+-0.21E 01		05/16			4
							MN-54	L.T. 4. E-02		05/16			4
							CO-58	L.T. 5. E-02		05/16			4
							FE-59	L.T. 2. E-01		05/16			4
							CO-60	L.T. 3. E-02		05/16			4
							ZN-65	L.T. 8. E-02		05/16			4
							ZR-95	L.T. 6. E-02		05/16			4
							RU-103	L.T. 8. E-02		05/16			4
							RU-106	L.T. 3. E-01		05/16			4
							I-131	L.T. 4. E 00		05/16			4
							CS-134	L.T. 4. E-02		05/16			4
							CS-137	6.91+-2.60E-02		05/16			4
							BA-140	L.T. 8. E-01		05/16			4
							CE-141	L.T. 1. E-01		05/16			4
							CE-144	L.T. 2. E-01		05/16			4
							RA-226	1.49+-0.48E 00		05/16			4
							TH-228	1.17+-0.12E 00		05/16			4
							H-3	2.9 +-1.4 E-02		06/15			5
70934	88814 BB09031SB		03/19	1100			PU-238	L.T. 7. E-02		05/04			6
							PU-239	L.T. 2. E-02		05/04			6
70935	88815 BB09031SC		03/19	1100			BE-7	L.T. 7. E-01		05/16			4
							K-40	2.16+-0.22E 01		05/16			4
							MN-54	L.T. 5. E-02		05/16			4
							CO-58	L.T. 6. E-02		05/16			4
							FE-59	L.T. 2. E-01		05/16			4
							CO-60	L.T. 4. E-02		05/16			4
							ZN-65	L.T. 1. E-01		05/16			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/19/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 4
3-0633	04-0029403-012	03/24/92	04/26/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70935	88815 BB09031SC		03/19	1100			ZR-95	L.T. 8. E-02		05/16			4
							RU-103	L.T. 1. E-01		05/16			4
							RU-106	L.T. 4. E-01		05/16			4
							I-131	L.T. 7. E 00		05/16			4
							CS-134	L.T. 6. E-02		05/16			4
							CS-137	6.15+-3.40E-02		05/16			4
							BA-140	L.T. 1. E 00		05/16			4
							CE-141	L.T. 3. E-01		05/16			4
							CE-144	L.T. 4. E-01		05/16			4
							RA-226	1.66+-0.72E 00		05/16			4
							TH-228	1.21+-0.12E 00		05/16			4
							H-3	2.4 +-1.4 E-02		06/15			5
70936	88820 BB09051SB		03/19	1115			PU-238	L.T. 5. E-02		05/18			6
							PU-239	L.T. 2. E-02		05/18			6
70937	88821 BB09051SC		03/19	1115			BE-7	L.T. 9. E-01		05/18			4
							K-40	2.17+-0.22E 01		05/18			4
							MN-54	L.T. 5. E-02		05/18			4
							CO-58	L.T. 7. E-02		05/18			4
							FE-59	L.T. 3. E-01		05/18			4
							CO-60	L.T. 4. E-02		05/18			4
							ZN-65	L.T. 1. E-01		05/18			4
							ZR-95	L.T. 1. E-01		05/18			4
							RU-103	L.T. 1. E-01		05/18			4
							RU-106	L.T. 4. E-01		05/18			4
							I-131	L.T. 8. E 00		05/18			4
							CS-134	L.T. 6. E-02		05/18			4
							CS-137	1.07+-0.45E-01		05/18			4
							BA-140	L.T. 1. E 00		05/18			4
							CE-141	L.T. 3. E-01		05/18			4
							CE-144	L.T. 4. E-01		05/18			4
							RA-226	2.33+-0.92E 00		05/18			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/19/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 5
3-0633	04-0029403-012	03/24/92	04/26/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70937	88821 BB09051SC		03/19	1115			TH-228	1.22+-0.12E 00		05/18			4
							H-3	L.T. 2. E-02		06/15			5
70938	88826 BB09100SB		03/19	1130			PU-238	L.T. 1. E-01		05/04			6
							PU-239	L.T. 5. E-02		05/04			6
70939	88827 BB09100SC		03/19	1130			BE-7	L.T. 5. E-01		05/16			4
							K-40	2.22+-0.22E 01		05/16			4
							MN-54	L.T. 3. E-02		05/16			4
							CO-58	L.T. 4. E-02		05/16			4
							FE-59	L.T. 1. E-01		05/16			4
							CO-60	L.T. 3. E-02		05/16			4
							ZN-65	L.T. 8. E-02		05/16			4
							ZR-95	L.T. 6. E-02		05/16			4
							RU-103	L.T. 7. E-02		05/16			4
							RU-106	L.T. 3. E-01		05/16			4
							I-131	L.T. 4. E 00		05/16			4
							CS-134	L.T. 4. E-02		05/16			4
							CS-137	6.60+-1.98E-02		05/16			4
							BA-140	L.T. 7. E-01		05/16			4
							CE-141	L.T. 1. E-01		05/16			4
							CE-144	L.T. 2. E-01		05/16			4
							RA-226	1.30+-0.46E 00		05/16			4
							TH-228	1.25+-0.12E 00		05/16			4
							H-3	L.T. 3. E-02		06/15			5
70940	88831 BB00005SB		03/19	1050			PU-238	L.T. 2. E-02		04/26			6
							PU-239	L.T. 2. E-02		04/26			6

VOLATILE ORGANIC COMPOUNDS

VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-90

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB10023SE
Sample Number: 89673

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/25/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 90

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	104	70 - 121
Toluene-D8	114	81 - 117
4-Bromofluorobenzene	92	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-93

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB10029SE
Sample Number: 89679

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/25/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 93

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	103	70 - 121
Toluene-D8	117	81 - 117
4-Bromofluorobenzene	85	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-81

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB10067SE
Sample Number: 89655

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/25/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 81

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	102	70 - 121
Toluene-D8	107	81 - 117
4-Bromofluorobenzene	87	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McGonicle for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-84

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB10079SE
Sample Number: 89661

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/26/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene	1	5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 84

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	93	70 - 121
Toluene-D8	105	81 - 117
4-Bromofluorobenzene	83	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.
{d} The result reported for Toluene is an estimated concentration below the established reporting limit.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-87

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB10081SE
Sample Number: 89667

Matrix: Soil

Date Sampled: 3/19/92
Date Analyzed: 3/26/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene	1	5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene	1	5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 87

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	94	70 - 121
Toluene-D8	102	81 - 117
4-Bromofluorobenzene	86	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.
{d} The results reported for Toluene and m & p Xylene are estimated concentrations below the established reporting limits.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANIC COMPOUNDS

SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-89

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB10023SD
Sample Number: 89672

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 4/02/92

Batch Number: 920323-2602

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-89

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-89

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	63	25 - 121
Phenol-d5.....	74	24 - 113
Nitrobenzene-d5.....	57	23 - 120
2-Fluorobiphenyl.....	82	30 - 115
2,4,6-Tribromophenol.....	103	19 - 122
Terphenyl-d14.....	89	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-92

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB10029SD
Sample Number: 89678

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 4/02/92

Batch Number: 920323-2602

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-92

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-92

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	58	25 - 121
Phenol-d5.....	74	24 - 113
Nitrobenzene-d5.....	62	23 - 120
2-Fluorobiphenyl.....	76	30 - 115
2,4,6-Tribromophenol.....	99	19 - 122
Terphenyl-d14.....	93	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/08/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-80

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB10067SD
Sample Number: 89654

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 4/03/92

Batch Number: 920323-2602

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-80

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-80

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	64	25 - 121
Phenol-d5.....	71	24 - 113
Nitrobenzene-d5.....	71	23 - 120
2-Fluorobiphenyl.....	76	30 - 115
2,4,6-Tribromophenol.....	92	19 - 122
Terphenyl-d14.....	76	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-83

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB10079SD
Sample Number: 89660

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 4/03/92

Batch Number: 920323-2602

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-83

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-83

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	51	25 - 121
Phenol-d5.....	63	24 - 113
Nitrobenzene-d5.....	59	23 - 120
2-Fluorobiphenyl.....	69	30 - 115
2,4,6-Tribromophenol.....	96	19 - 122
Terphenyl-d14.....	88	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-86

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB10081SD
Sample Number: 89666

Matrix: Soil

Date Sampled: 3/19/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 4/02/92

Batch Number: 920323-2602

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-86

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-86

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	60	25 - 121
Phenol-d5.....	80	24 - 113
Nitrobenzene-d5.....	72	23 - 120
2-Fluorobiphenyl.....	85	30 - 115
2,4,6-Tribromophenol.....	98	19 - 122
Terphenyl-d14.....	98	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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METALS

PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-91

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB10023SF
Sample Number: 89674

Matrix: Soil

Date Sampled: 3/19/92
Date Digested: 3/23/92 {b}

Date Received: 3/20/92
Batch Number: 920323-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	4.6	1	.50	3/26/92
Beryllium (Be)/6010.....	.65	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	19.	1	1.0	3/26/92
Copper (Cu)/6010.....	17.	1	1.0	3/26/92
Lead (Pb)/6010.....	17.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	15.	1	1.0	3/26/92
Selenium (Se)/7740.....	1.4	1	.25	3/26/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/31/92
Zinc (Zn)/6010.....	61.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1105; and Hg was digested on 3/23/92, Batch # 920323-1106 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/09/92

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-94

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB10029SF
Sample Number: 89680

Matrix: Soil

Date Sampled: 3/19/92
Date Digested: 3/23/92 {b}

Date Received: 3/20/92
Batch Number: 920323-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....		1	.50	3/26/92
Beryllium (Be)/6010.....	.87	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	24.	1	1.0	3/26/92
Copper (Cu)/6010.....	24.	1	1.0	3/26/92
Lead (Pb)/6010.....	18.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	20.	1	1.0	3/26/92
Selenium (Se)/7740.....	1.9	1	.25	3/26/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/31/92
Zinc (Zn)/6010.....	80.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1105; and Hg was digested on 3/23/92, Batch # 920323-1106 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-82

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB10067SF
Sample Number: 89656

Matrix: Soil

Date Sampled: 3/19/92
Date Digested: 3/23/92 {b}

Date Received: 3/20/92
Batch Number: 920323-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	3.4	1	.50	3/26/92
Beryllium (Be)/6010.....	.88	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	25.	1	1.0	3/26/92
Copper (Cu)/6010.....	22.	1	1.0	3/26/92
Lead (Pb)/6010.....	17.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	19.	1	1.0	3/26/92
Selenium (Se)/7740.....	2.0	1	.25	3/26/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/31/92
Zinc (Zn)/6010.....	80.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1105; and Hg was digested on 3/23/92, Batch # 920323-1106 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/09/92

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-85

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB10079SF
Sample Number: 89662

Matrix: Soil

Date Sampled: 3/19/92
Date Digested: 3/23/92 {b}

Date Received: 3/20/92
Batch Number: 920323-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	3.1	1	.50	3/26/92
Beryllium (Be)/6010.....	.64	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	17.	1	1.0	3/26/92
Copper (Cu)/6010.....	16.	1	1.0	3/26/92
Lead (Pb)/6010.....	13.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	13.	1	1.0	3/26/92
Selenium (Se)/7740.....	.35	1	.25	3/26/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/31/92
Zinc (Zn)/6010.....	60.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1105; and Hg was digested on 3/23/92, Batch # 920323-1106 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/09/92

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-88

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB10081SF
Sample Number: 89668

Matrix: Soil

Date Sampled: 3/19/92
Date Digested: 3/23/92 {b}

Date Received: 3/20/92
Batch Number: 920323-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	4.7	1	.50	3/26/92
Beryllium (Be)/6010.....	.64	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	18.	1	1.0	3/26/92
Copper (Cu)/6010.....	15.	1	1.0	3/26/92
Lead (Pb)/6010.....	13.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	13.	1	1.0	3/26/92
Selenium (Se)/7740.....		1	.25	3/26/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/31/92
Zinc (Zn)/6010.....	54.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1105; and Hg was digested on 3/23/92, Batch # 920323-1106 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/09/92

The cover letter and attachments are integral parts of this report.

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RADIONUCLIDES

Table1. Results of the analyses for iodine-129 and strontium-90 in thirty (30) soil samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Conc. pCi/g wet I-129	Date Analyzed	Conc. pCi/g dry Sr-90	Date Analyzed
89275	BB11006SA	03/18/92	SPS-1943	<0.3	06/11	0.02±0.01	06/09
88963	BB07058SA	03/19/92	1944	<0.2	06/12	0.01±0.01	06/10
88969	BB07012SA	03/19/92	1945	<0.3	06/11	0.01±0.01	06/10
88975	BB07038SA	03/19/92	1946	<0.2	06/12	0.02±0.01	06/10
88981	M 7 SA	03/19/92	1947	<0.3	06/12	0.04±0.01	06/10
89651	BB10067SA	03/19/92	1948	<0.3	06/12	0.06±0.01	06/10
89657	BB10078SA	03/19/92	1949	<0.3	06/15	0.05±0.01	06/10
89663	BB10081SA	03/19/92	1950	<0.3	06/16	0.02±0.01	06/10
89669	BB10023SA	03/19/92	1951	<0.3	06/15	0.02±0.01	06/10
89675	BB10029SA	03/19/92	1952	<0.3	06/15	0.02±0.01	07/15
89825	BB02078SA	03/19/92	1953	<0.3	06/16	0.02±0.01	06/10
88801	BB03070SA	03/19/92	1954	<0.2	06/16	0.01±0.01	06/12
88807	BB03032SA	03/19/92	1955	<0.3	06/16	0.02±0.01	06/12
88813	BB03031SA	03/19/92	1956	<0.3	06/16	0.02±0.01	06/20
88819	BB03051SA	03/19/92	1957	<0.3	06/17	0.02±0.01	06/20
88825	BB09100SA	03/19/92	1958	<0.3	06/17	0.02±0.01	06/12
88833	BB00005SA	03/19/92	1959	<0.3	06/17	0.02±0.01	06/12
88834	M 6 SA	03/19/92	1960	<0.3	06/17	0.05±0.01	06/12
88951	BB07035SA	03/19/92	1961	<0.3	06/17	0.02±0.01	06/11
88957	BB07036SA	03/19/92	1962	<0.4	06/17	0.02±0.01	06/11
89351	BB08034SA	03/19/92	1963	<0.3	06/17	<0.01	07/15
89357	BB08035SA	03/19/92	1964	<0.3	06/17	<0.01	06/11
89363	BB08003SA	03/19/92	1965	<0.3	06/18	0.02±0.01	06/11
89369	BB08027SA	03/19/92	1966	<0.3	06/17	0.01±0.01	07/15
89375	BB08038SA	03/19/92	1967	<0.3	06/18	0.02±0.01	06/11
89382	M 5 SA	03/19/92	1968	<0.2	06/18	0.20±0.08	06/11
89801	BB02071SA	03/19/92	1969	<0.3	06/18	0.01±0.01	06/11
89807	BB02045SA	03/19/92	1970	<0.2	06/19	<0.01	06/11
89813	BB02060SA	03/19/92	1971	<0.2	06/19	0.01±0.01	06/11
89819	BB02075SA	03/19/92	1972	<0.3	06/19	0.01±0.01	06/11

The error given is the probable counting error at 95% confidence level. Less than (<) values are based on 3 sigma counting error for background sample.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/19/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0629	04-0029403-012	03/24/92	04/26/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70954	88977 BB07038SC		03/19	1300			TH-228	1.26+-0.13E 00		05/21			4
							H-3	L.T. 2. E-02		06/18			5
70955	88982 M7SB	MS	03/19	1215			PU-238	L.T. 1. E-01		05/01			6
							PU-239	3.6 +-1.1 E-01		05/01			6
70956	88983 M7SC	MS	03/19	1215			BE-7	L.T. 1. E 00		06/22			4
							K-40	2.39+-0.24E 01		06/22			4
							MN-54	L.T. 4. E-02		06/22			4
							CO-58	L.T. 7. E-02		06/22			4
							FE-59	L.T. 3. E-01		06/22			4
							CO-60	L.T. 3. E-02		06/22			4
							ZN-65	L.T. 1. E-01		06/22			4
							ZR-95	L.T. 9. E-02		06/22			4
							RU-103	L.T. 2. E-01		06/22			4
							RU-106	L.T. 3. E-01		06/22			4
							I-131	L.T. 1. E 02		06/22			4
							CS-134	L.T. 4. E-02		06/22			4
							CS-137	9.99+-1.00E-01		06/22			4
							BA-140	L.T. 5. E 00		06/22			4
							CE-141	L.T. 4. E-01		06/22			4
							CE-144	L.T. 3. E-01		06/22			4
							RA-226	1.79+-0.54E 00		06/22			4
							TH-228	1.26+-0.13E 00		06/22			4
							H-3	5.1 +-0.2 E-01		06/18			5
70957	89652 BB10067SB		03/19	1415			PU-238	L.T. 3. E-02		05/01			6
							PU-239	L.T. 8. E-03		05/01			6

TI#70955 was prepared with 3.3 E-01 pCi/g of Pu-239. TI#70956 was prepared with 7.74E-01 pCi/g of Cs-137. The unspiked Cs-137 activity of the sample was 9.04E-02 pCi/g. TI#70956 was also prepared with 5.7 E-01 pCi/g of H-3. The unspiked H-3 activity was 2.6 E-02 pCi/g.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/19/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0629	04-0029403-012	03/24/92	04/26/92

ERIC SMITH
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16755 VON KARMAN AVE
IRVINE CA 92714

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TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70958	89653 BB10067SC		03/19	1415			BE-7	L.T. 7. E-01		05/21			4
							K-40	2.48+-0.25E 01		05/21			4
							MN-54	L.T. 5. E-02		05/21			4
							CO-58	L.T. 6. E-02		05/21			4
							FE-59	L.T. 2. E-01		05/21			4
							CO-60	L.T. 4. E-02		05/21			4
							ZN-65	L.T. 1. E-01		05/21			4
							ZR-95	L.T. 8. E-02		05/21			4
							RU-103	L.T. 1. E-01		05/21			4
							RU-106	L.T. 4. E-01		05/21			4
							I-131	L.T. 8. E 00		05/21			4
							CS-134	L.T. 5. E-02		05/21			4
							CS-137	9.80+-2.87E-02		05/21			4
							BA-140	L.T. 1. E 00		05/21			4
							CE-141	L.T. 2. E-01		05/21			4
							CE-144	L.T. 2. E-01		05/21			4
							RA-226	2.12+-0.49E 00		05/21			4
							TH-228	4.59+-0.73E-01		05/21			4
							H-3	L.T. 2. E-02		06/18			5
70959	89658 BB10079SB		03/19	1430			PU-238	L.T. 2. E-02		05/01			6
							PU-239	L.T. 5. E-03		05/01			6
70960	89659 BB10079SC		03/19	1430			BE-7	L.T. 7. E-01		05/21			4
							K-40	2.10+-0.21E 01		05/21			4
							MN-54	L.T. 4. E-02		05/21			4
							CO-58	L.T. 6. E-02		05/21			4
							FE-59	L.T. 2. E-01		05/21			4
							CO-60	L.T. 4. E-02		05/21			4
							ZN-65	L.T. 1. E-01		05/21			4
							ZR-95	L.T. 8. E-02		05/21			4
							RU-103	L.T. 1. E-01		05/21			4
							RU-106	L.T. 4. E-01		05/21			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

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S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70960	89659 BB10079SC		03/19	1430			I-131	L.T. 8. E 00		05/21			4
							CS-134	L.T. 5. E-02		05/21			4
							CS-137	1.52+-0.41E-01		05/21			4
							BA-140	L.T. 1. E 00		05/21			4
							CE-141	L.T. 2. E-01		05/21			4
							CE-144	L.T. 3. E-01		05/21			4
							RA-226	2.35+-0.71E 00		05/21			4
							TH-228	1.16+-0.12E 00		05/21			4
							H-3	L.T. 1. E-02		06/18			5
70961	89664 BB10081SB		03/19	1440			PU-238	L.T. 3. E-02		05/01			6
							PU-239	L.T. 1. E-02		05/01			6
70962	89665 BB10081SC		03/19	1440			BE-7	L.T. 7. E-01		05/21			4
							K-40	1.97+-0.20E 01		05/21			4
							MN-54	L.T. 5. E-02		05/21			4
							CO-58	L.T. 6. E-02		05/21			4
							FE-59	L.T. 2. E-01		05/21			4
							CO-60	L.T. 4. E-02		05/21			4
							ZN-65	L.T. 1. E-01		05/21			4
							ZR-95	L.T. 8. E-02		05/21			4
							RU-103	L.T. 1. E-01		05/21			4
							RU-106	L.T. 4. E-01		05/21			4
							I-131	L.T. 8. E 00		05/21			4
							CS-134	L.T. 5. E-02		05/21			4
							CS-137	9.28+-3.84E-02		05/21			4
							BA-140	L.T. 1. E 00		05/21			4
							CE-141	L.T. 2. E-01		05/21			4
							CE-144	L.T. 3. E-01		05/21			4
							RA-226	1.48+-0.64E 00		05/21			4
							TH-228	1.18+-0.12E 00		05/21			4
							H-3	L.T. 2. E-02		06/18			5

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/19/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0629	04-0029403-012	03/24/92	04/26/92

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S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70963	89670 BB10023SB		03/19	1450			PU-238	L.T. 4. E-02		05/01			6
							PU-239	L.T. 2. E-02		05/01			6
70964	89671 BB10023SC		03/19	1450			BE-7	L.T. 1. E 00		05/21			4
							K-40	2.06+-0.21E 01		05/21			4
							MN-54	L.T. 6. E-02		05/21			4
							CO-58	L.T. 9. E-02		05/21			4
							FE-59	L.T. 3. E-01		05/21			4
							CO-60	L.T. 6. E-02		05/21			4
							ZN-65	L.T. 2. E-01		05/21			4
							ZR-95	L.T. 1. E-01		05/21			4
							RU-103	L.T. 1. E-01		05/21			4
							RU-106	L.T. 6. E-01		05/21			4
							I-131	L.T. 1. E 01		05/21			4
							CS-134	L.T. 8. E-02		05/21			4
							CS-137	1.59+-0.39E-01		05/21			4
							BA-140	L.T. 1. E 00		05/21			4
							CE-141	L.T. 4. E-01		05/21			4
							CE-144	L.T. 5. E-01		05/21			4
							RA-226	L.T. 1. E 00		05/21			4
							TH-228	1.30+-0.13E 00		05/21			4
							H-3	L.T. 3. E-02		06/18			5
70965	89676 BB10029SB		03/19	1500			PU-238	L.T. 4. E-02		05/01			6
							PU-239	L.T. 1. E-02		05/01			6
70966	89677 BB10029SC		03/19	1500			BE-7	L.T. 7. E-01		05/21			4
							K-40	2.31+-0.23E 01		05/21			4
							MN-54	L.T. 4. E-02		05/21			4
							CO-58	L.T. 6. E-02		05/21			4
							FE-59	L.T. 2. E-01		05/21			4
							CO-60	L.T. 4. E-02		05/21			4
							ZN-65	L.T. 1. E-01		05/21			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

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3-0629	04-0029403-012	03/24/92	04/26/92

ERIC SMITH
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IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70966	89677 BB10029SC		03/19	1500			ZR-95	L.T. 8. E-02		05/21			4
							RU-103	L.T. 1. E-01		05/21			4
							RU-106	L.T. 4. E-01		05/21			4
							I-131	L.T. 7. E 00		05/21			4
							CS-134	L.T. 5. E-02		05/21			4
							CS-137	6.76+-2.82E-02		05/21			4
							BA-140	L.T. 1. E 00		05/21			4
							CE-141	L.T. 2. E-01		05/21			4
							CE-144	L.T. 2. E-01		05/21			4
							RA-226	1.84+-0.59E 00		05/21			4
							TH-228	1.30+-0.13E 00		05/21			4
							H-3	L.T. 2. E-02		06/18			5
70967	89692 BB00006SC		03/19	1430			BE-7	L.T. 6. E-01		05/21			4
							K-40	2.29+-0.23E 01		05/21			4
							MN-54	L.T. 4. E-02		05/21			4
							CO-58	L.T. 6. E-02		05/21			4
							FE-59	L.T. 2. E-01		05/21			4
							CO-60	L.T. 4. E-02		05/21			4
							ZN-65	L.T. 1. E-01		05/21			4
							ZR-95	L.T. 7. E-02		05/21			4
							RU-103	L.T. 9. E-02		05/21			4
							RU-106	L.T. 4. E-01		05/21			4
							I-131	L.T. 7. E 00		05/21			4
							CS-134	L.T. 5. E-02		05/21			4
							CS-137	1.31+-0.35E-01		05/21			4
							BA-140	L.T. 1. E 00		05/21			4
							CE-141	L.T. 2. E-01		05/21			4
							CE-144	L.T. 3. E-01		05/21			4
							RA-226	1.47+-0.51E 00		05/21			4
							TH-228	1.08+-0.11E 00		05/21			4
							H-3	2.2 +-1.0 E-02		06/18			5

Volatile Organic Compounds

VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-109

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB11006SE
Sample Number: 89279

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/25/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-109

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	97	70 - 121
Toluene-D8	99	81 - 117
4-Bromofluorobenzene	93	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower n the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

The cover letter and the attachments are integral parts of this report.

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-98

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB11018SE
Sample Number: 89255

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/25/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene	1	5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758- 98

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	97	70 - 121
Toluene-D8	99	81 - 117
4-Bromofluorobenzene	91	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.
{d} The result reported for Toluene is an estimated concentration below the established reporting limit.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-106

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB11032SE
Sample Number: 89273

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/25/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-106

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	94	70 - 121
Toluene-D8	104	81 - 117
4-Bromofluorobenzene	89	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-103

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB11057SE
Sample Number: 89267

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/25/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene	1	5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-103

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	102	70 - 121
Toluene-D8	102	81 - 117
4-Bromofluorobenzene	92	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.
{d} The result reported for Toluene is an estimated concentration below the established reporting limit.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-112

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB11061SE
Sample Number: 89289

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/25/92

Date Received: 3/20/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5758-112

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	96	70 - 121
Toluene-D8	102	81 - 117
4-Bromofluorobenzene	91	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANIC COMPOUNDS

SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5784-1

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: **BB11006SD**
Sample Number: 89278

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/30/92

Date Received: 3/30/92
Date Analyzed: 4/08/92

Batch Number: 920330-1902

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5784-1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}	190	330
Endosulfan sulfate		330
4,4'-DDT {b}	46	330
4,4'-DDD {b}	46	330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5784-1

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	52	25 - 121
Phenol-d5.....	61	24 - 113
Nitrobenzene-d5.....	53	23 - 120
2-Fluorobiphenyl.....	59	30 - 115
2,4,6-Tribromophenol.....	78	19 - 122
Terphenyl-d14.....	69	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.
{d} The results reported for 4,4'-DDE, 4,4'-DDT, and 4,4'-DDD are estimated concentrations below the established reporting limits.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/14/92

The cover letter and attachments are integral parts of this report.

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-97

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB11018SD
Sample Number: 89254

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 4/03/92

Batch Number: 920323-2602

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-97

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}	310	330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}	79	330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-97

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	75	25 - 121
Phenol-d5.....	78	24 - 113
Nitrobenzene-d5.....	70	23 - 120
2-Fluorobiphenyl.....	83	30 - 115
2,4,6-Tribromophenol.....	97	19 - 122
Terphenyl-d14.....	94	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.
{d} The results for 4,4'-DDE and 4,4'-DDD are reported as estimated concentrations below the established reporting limits.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

The cover letter and attachments are integral parts of this report.

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-105

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB11032SD
Sample Number: 89272

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 4/02/92

Batch Number: 920323-2602

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-105

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}	340	330
Endosulfan sulfate		330
4,4'-DDT {b}	76	330
4,4'-DDD {b}	85	330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-105

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	80	25 - 121
Phenol-d5.....	80	24 - 113
Nitrobenzene-d5.....	74	23 - 120
2-Fluorobiphenyl.....	76	30 - 115
2,4,6-Tribromophenol.....	90	19 - 122
Terphenyl-d14.....	83	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.
{d} The results for 4,4'-DDT and 4,4'-DDD are reported as estimated concentrations below the established reporting limits.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-102

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB11057SD
Sample Number: 89266

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 4/02/92

Batch Number: 920323-2602

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-102

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene	35	330
Heptachlor Epoxide		330
Pyrene	45	330
Dieldrin {b}		330
4,4'-DDE {b}	320	330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}	110	330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-102

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	75	25 - 121
Phenol-d5.....	79	24 - 113
Nitrobenzene-d5.....	69	23 - 120
2-Fluorobiphenyl.....	71	30 - 115
2,4,6-Tribromophenol.....	90	19 - 122
Terphenyl-d14.....	84	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.
{d} The results for Fluoranthene, Pyrene, 4,4'-DDE, and 4,4'-DDD are reported as estimated concentrations below the established reporting limits.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-100

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB11061SD
Sample Number: 89260

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/20/92
Date Analyzed: 4/02/92

Batch Number: 920323-2602

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-100

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5758-100

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	86	25 - 121
Phenol-d5.....	86	24 - 113
Nitrobenzene-d5.....	75	23 - 120
2-Fluorobiphenyl.....	88	30 - 115
2,4,6-Tribromophenol.....	105	19 - 122
Terphenyl-d14.....	97	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/08/92

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METALS

PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-110

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB11006SF
Sample Number: 89280

Matrix: Soil

Date Sampled: 3/18/92
Date Digested: 3/23/92 {b}

Date Received: 3/20/92
Batch Number: 920323-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	4.4	1	.50	3/26/92
Beryllium (Be)/6010.....	.57	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	14.	1	1.0	3/26/92
Copper (Cu)/6010.....	16.	1	1.0	3/26/92
Lead (Pb)/6010.....	19.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	11.	1	1.0	3/26/92
Selenium (Se)/7740.....	1.3	1	.25	3/26/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/31/92
Zinc (Zn)/6010.....	69.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1105; and Hg was digested on 3/23/92, Batch # 920323-1106 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-99

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB11018SF
Sample Number: 89256

Matrix: Soil

Date Sampled: 3/18/92
Date Digested: 3/23/92 {b}

Date Received: 3/20/92
Batch Number: 920323-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	4.0	1	.50	3/26/92
Beryllium (Be)/6010.....	.56	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	14.	1	1.0	3/26/92
Copper (Cu)/6010.....	15.	1	1.0	3/26/92
Lead (Pb)/6010.....	19.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	10.	1	1.0	3/26/92
Selenium (Se)/7740.....	.59	1	.25	3/26/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/31/92
Zinc (Zn)/6010.....	65.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1105; and Hg was digested on 3/23/92, Batch # 920323-1106 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/09/92

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-107

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB11032SF
Sample Number: 89274

Matrix: Soil

Date Sampled: 3/18/92
Date Digested: 3/23/92 {b}

Date Received: 3/20/92
Batch Number: 920323-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	4.1	1	.50	3/26/92
Beryllium (Be)/6010.....	.60	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	16.	1	1.0	3/26/92
Copper (Cu)/6010.....	15.	1	1.0	3/26/92
Lead (Pb)/6010.....	22.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	11.	1	1.0	3/26/92
Selenium (Se)/7740.....	.72	1	.25	3/26/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/31/92
Zinc (Zn)/6010.....	69.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1105; and Hg was digested on 3/23/92, Batch # 920323-1106 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-104

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB11057SF
Sample Number: 89268 Matrix: Soil

Date Sampled: 3/18/92 Date Received: 3/20/92
Date Digested: 3/23/92 {b} Batch Number: 920323-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	3.8	1	.50	3/26/92
Beryllium (Be)/6010.....	.50	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	13.	1	1.0	3/26/92
Copper (Cu)/6010.....	15.	1	1.0	3/26/92
Lead (Pb)/6010.....	22.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	8.9	1	1.0	3/26/92
Selenium (Se)/7740.....	.79	1	.25	3/26/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/31/92
Zinc (Zn)/6010.....	64.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1105; and Hg was digested on 3/23/92, Batch # 920323-1106 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-101

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB11061SF
Sample Number: 89262 Matrix: Soil

Date Sampled: 3/18/92 Date Received: 3/20/92
Date Digested: 3/23/92 {b} Batch Number: 920323-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/26/92
Arsenic (As)/7060.....	4.5	1	.50	3/26/92
Beryllium (Be)/6010.....	.69	1	.25	3/26/92
Cadmium (Cd)/6010.....		1	.50	3/26/92
Chromium (Cr)/6010.....	15.	1	1.0	3/26/92
Copper (Cu)/6010.....	23.	1	1.0	3/26/92
Lead (Pb)/6010.....	18.	1	2.5	3/26/92
Mercury (Hg)/7471.....		1	.25	3/26/92
Nickel (Ni)/6010.....	11.	1	1.0	3/26/92
Selenium (Se)/7740.....	.68	1	.25	3/26/92
Silver (Ag)/6010.....		1	1.0	3/26/92
Thallium (Tl)/7841.....		1	.50	3/31/92
Zinc (Zn)/6010.....	70.	1	1.0	3/26/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/23/92, Batch # 920323-1105; and Hg was digested on 3/23/92, Batch # 920323-1106 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/09/92
Cheryl Matterson, Association Chemist

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RADIONUCLIDES

Table: Results of the analyses for iodine-129 and strontium-90 in thirty-five (35) soil samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Conc. pci/gwet I-129	Date Analyzed	Conc. pci/gdry Sr-90	Date Analyzed
90140	M4SA	03/17/92	SPS-1908	<0.2	05/20	0.06±0.01	06/03
88901	BB13024SA	03/17/92	1909	<0.2	05/20	0.01±0.01	05/14
88907	BB13037SA	03/17/92	1910	<0.2	05/21	0.01±0.01	05/14
88913	BB13039SA	03/17/92	1911	<0.2	05/21	0.01±0.01	05/15
88919	BB13011SA	03/17/92	1912	<0.2	05/22	0.01±0.01	06/03
88925	BB13010SA	03/17/92	1913	<0.2	05/22	<0.01	06/09
89151	BB06017SA	03/17/92	1914	<0.2	05/22	0.01±0.01	05/14
89157	BB06007SA	03/17/92	1915	<0.3	06/09	<0.01	05/14
89163	BB06092SA	03/17/92	1916	<0.2	05/26	<0.01	05/14
89169	BB06066SA	03/17/92	1917	<0.2	05/27	<0.01	05/14
89175	BB06013SA	03/17/92	1918	<0.2	05/28	0.01±0.01	05/14
90101	BB03025SA	03/17/92	1919	<0.2	06/01	0.09±0.01	06/09
90107	BB03092SA	03/17/92	1920	<0.2	06/01	0.04±0.01	05/14
90113	BB03079SA	03/17/92	1921	<0.2	06/01	0.03±0.01	06/09
90119	BB03017SA	03/17/92	1922	<0.3	06/09	0.05±0.01	06/09
90125	BB03005SA	03/17/92	1923	<0.2	06/02	0.06±0.01	05/15
90001	BB05003SA	03/18/92	1924	<0.2	06/02	0.02±0.01	06/09
90007	BB05089SA	03/18/92	1925	<0.2	06/02	0.02±0.01	05/22
90013	BB05006SA	03/18/92	1926	<0.2	06/03	0.02±0.01	05/22
90019	BB05057SA	03/18/92	1927	<0.2	06/04	0.03±0.01	05/22
90025	BB05077SA	03/18/92	1928	<0.2	06/04	0.06±0.01	05/22
90051	BB12006SA	03/18/92	1929	<0.2	06/05	0.03±0.01	05/22
90057	BB12019SA	03/18/92	1930	<0.2	06/05	0.04±0.01	05/22
90063	BB12023SA	03/18/92	1931	<0.3	06/05	0.02±0.01	05/22
90069	BB12020SA	03/18/92	1932	<0.2	06/08	0.03±0.01	05/22
90075	BB12003SA	03/18/92	1933	<0.2	06/08	0.01±0.01	05/22
90251	BB01056SA	03/18/92	1934	<0.3	06/08	0.04±0.01	06/03
90263	BB01001SA	03/18/92	1935	<0.3	06/10	<0.01	06/03
90269	BB01027SA	03/18/92	1936	<0.3	06/10	<0.01	06/09
90275	BB01038SA	03/18/92	1937	<0.2	06/10	0.02±0.01	06/03
90282	BB00004SA	03/18/92	1938	<0.3	06/10	0.01±0.01	06/03
89251	BB11018SA	03/18/92	1939	<0.3	06/10	0.02±0.01	06/03
89257	BB11061SA	03/18/92	1940	<0.3	06/11	<0.01	06/03
89263	BB11057SA	03/18/92	1941	<0.2	06/11	0.02±0.01	06/09
89269	BB11032SA	03/18/92	1942	<0.3	04/14	0.02±0.01	06/09

The error given is the probable counting error at 95% confidence level. Less than (<) values are based on 3 sigma counting error for background sample.

Table1. Results of the analyses for iodine-129 and strontium-90 in thirty (30) soil samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Conc. pCi/g wet I-129	Date Analyzed	Conc. pCi/g dry Sr-90	Date Analyzed
89275	BB11006SA	03/18/92	SPS-1943	<0.3	06/11	0.02±0.01	06/09
88963	BB07058SA	03/19/92	1944	<0.2	06/12	0.01±0.01	06/10
88969	BB07012SA	03/19/92	1945	<0.3	06/11	0.01±0.01	06/10
88975	BB07038SA	03/19/92	1946	<0.2	06/12	0.02±0.01	06/10
88981	M 7 SA	03/19/92	1947	<0.3	06/12	0.04±0.01	06/10
89651	BB10067SA	03/19/92	1948	<0.3	06/12	0.06±0.01	06/10
89657	BB10078SA 9	03/19/92	1949	<0.3	06/15	0.05±0.01	06/10
89663	BB10081SA	03/19/92	1950	<0.3	06/16	0.02±0.01	06/10
89669	BB10023SA	03/19/92	1951	<0.3	06/15	0.02±0.01	06/10
89675	BB10029SA	03/19/92	1952	<0.3	06/15	0.02±0.01	07/15
89825	BB02078SA	03/19/92	1953	<0.3	06/16	0.02±0.01	06/10
88801	BB03070SA	03/19/92	1954	<0.2	06/16	0.01±0.01	06/12
88807	BB03072SA	03/19/92	1955	<0.3	06/16	0.02±0.01	06/12
88813	BB03031SA	03/19/92	1956	<0.3	06/16	0.02±0.01	06/20
88819	BB03051SA	03/19/92	1957	<0.3	06/17	0.02±0.01	06/20
88825	BB09100SA	03/19/92	1958	<0.3	06/17	0.02±0.01	06/12
88833	BB00005SA	03/19/92	1959	<0.3	06/17	0.02±0.01	06/12
88834	M 6 SA	03/19/92	1960	<0.3	06/17	0.05±0.01	06/12
88951	BB07035SA	03/19/92	1961	<0.3	06/17	0.02±0.01	06/11
88957	BB07036SA	03/19/92	1962	<0.4	06/17	0.02±0.01	06/11
89351	BB08034SA	03/19/92	1963	<0.3	06/17	<0.01	07/15
89357	BB08035SA	03/19/92	1964	<0.3	06/17	<0.01	06/11
89363	BB08003SA	03/19/92	1965	<0.3	06/18	0.02±0.01	06/11
89369	BB08027SA 2	03/19/92	1966	<0.3	06/17	0.01±0.01	07/15
89375	BB08038SA	03/19/92	1967	<0.3	06/18	0.02±0.01	06/11
89382	M 5 SA	03/19/92	1968	<0.2	06/18	0.20±0.08	06/11
89801	BB02071SA	03/19/92	1969	<0.3	06/18	0.01±0.01	06/11
89807	BB02045SA	03/19/92	1970	<0.2	06/19	<0.01	06/11
89813	BB02060SA	03/19/92	1971	<0.2	06/19	0.01±0.01	06/11
89819	BB02075SA	03/19/92	1972	<0.3	06/19	0.01±0.01	06/11

The error given is the probable counting error at 95% confidence level. Less than (<) values are based on 3 sigma counting error for background sample.

TELEDYNE ISOTOPES

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ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70888	90277 BB01038SC		03/18	1445			TH-228	1.02+-0.10E 00		05/13			4
							H-3	L.T. 8. E-03		06/07			5
70889	90281 BB00004SC		03/18	1300			BE-7	L.T. 6. E-01		05/13			4
							K-40	1.77+-0.18E 01		05/13			4
							MN-54	L.T. 4. E-02		05/13			4
							CO-58	L.T. 5. E-02		05/13			4
							FE-59	L.T. 2. E-01		05/13			4
							CO-60	L.T. 4. E-02		05/13			4
							ZN-65	L.T. 1. E-01		05/13			4
							ZR-95	L.T. 7. E-02		05/13			4
							RU-103	L.T. 8. E-02		05/13			4
							RU-106	L.T. 3. E-01		05/13			4
							I-131	L.T. 4. E 00		05/13			4
							CS-134	L.T. 4. E-02		05/13			4
							CS-137	L.T. 4. E-02		05/13			4
							BA-140	L.T. 8. E-01		05/13			4
							CE-141	L.T. 2. E-01		05/13			4
							CE-144	L.T. 3. E-01		05/13			4
							RA-226	1.38+-0.60E 00		05/13			4
							TH-228	1.16+-0.12E 00		05/13			4
							H-3	L.T. 1. E-02		06/10			5
70890	89252 BB11018SB		03/18	1530			PU-238	L.T. 7. E-02		04/21			6
							PU-239	L.T. 5. E-02		04/21			6
70891	89253 BB11018SC		03/18	1530			BE-7	L.T. 4. E-01		05/13			4
							K-40	2.35+-0.23E 01		05/13			4
							MN-54	L.T. 3. E-02		05/13			4
							CO-58	L.T. 4. E-02		05/13			4
							FE-59	L.T. 1. E-01		05/13			4
							CO-60	L.T. 2. E-02		05/13			4
							ZN-65	L.T. 7. E-02		05/13			4

TELEDYNE ISOTOPES

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ERIC SMITH
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16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70891	89253 BB11018SC		03/18	1530			ZR-95	L.T. 5. E-02		05/13			4
							RU-103	L.T. 7. E-02		05/13			4
							RU-106	L.T. 3. E-01		05/13			4
							I-131	L.T. 3. E 00		05/13			4
							CS-134	L.T. 3. E-02		05/13			4
							CS-137	1.55+-0.28E-01		05/13			4
							BA-140	L.T. 5. E-01		05/13			4
							CE-141	L.T. 1. E-01		05/13			4
							CE-144	L.T. 2. E-01		05/13			4
							RA-226	1.64+-0.45E 00		05/13			4
							TH-228	1.10+-0.11E 00		05/13			4
							H-3	L.T. 2. E-02		06/10			5
70892	89258 BB11061SB		03/18	1540			PU-238	L.T. 5. E-02		04/21			6
							PU-239	L.T. 1. E-02		04/21			6
70893	89259 BB11061SC		03/18	1540			BE-7	L.T. 6. E-01		05/13			4
							K-40	2.00+-0.20E 01		05/13			4
							MN-54	L.T. 4. E-02		05/13			4
							CO-58	L.T. 5. E-02		05/13			4
							FE-59	L.T. 2. E-01		05/13			4
							CO-60	L.T. 4. E-02		05/13			4
							ZN-65	L.T. 1. E-01		05/13			4
							ZR-95	L.T. 7. E-02		05/13			4
							RU-103	L.T. 8. E-02		05/13			4
							RU-106	L.T. 3. E-01		05/13			4
							I-131	L.T. 4. E 00		05/13			4
							CS-134	L.T. 5. E-02		05/13			4
							CS-137	L.T. 5. E-02		05/13			4
							BA-140	L.T. 8. E-01		05/13			4
							CE-141	L.T. 2. E-01		05/13			4
							CE-144	L.T. 3. E-01		05/13			4
							RA-226	1.69+-0.62E 00		05/13			4

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ERIC SMITH
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IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70893	89259 BB11061SC		03/18	1540			TH-228	1.17+-0.12E 00		05/13			4
							H-3	L.T. 1. E-02		06/10			5
70894	89264 BB11057SB		03/18	1555			PU-238	L.T. 6. E-02		04/21			6
							PU-239	L.T. 2. E-02		04/21			6
70895	89265 BB11057SC		03/18	1555			BE-7	L.T. 4. E-01		05/13			4
							K-40	1.95+-0.19E 01		05/13			4
							MN-54	L.T. 3. E-02		05/13			4
							CO-58	L.T. 4. E-02		05/13			4
							FE-59	L.T. 1. E-01		05/13			4
							CO-60	L.T. 3. E-02		05/13			4
							ZN-65	L.T. 9. E-02		05/13			4
							ZR-95	L.T. 6. E-02		05/13			4
							RU-103	L.T. 7. E-02		05/13			4
							RU-106	L.T. 3. E-01		05/13			4
							I-131	L.T. 3. E 00		05/13			4
							CS-134	L.T. 4. E-02		05/13			4
							CS-137	1.07+-0.29E-01		05/13			4
							BA-140	L.T. 6. E-01		05/13			4
							CE-141	L.T. 1. E-01		05/13			4
							CE-144	L.T. 2. E-01		05/13			4
							RA-226	1.19+-0.41E 00		05/13			4
							TH-228	8.22+-0.82E-01		05/13			4
							H-3	L.T. 1. E-02		06/10			5
70896	89270 BB11032SB		03/18	1615			PU-238	L.T. 7. E-02		04/22			6
							PU-239	L.T. 2. E-02		04/22			6

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ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

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TELEDYNE SAMPLE NUMBER		CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70897	89271	BB11032SC		03/19	1615			BE-7	L.T. 6. E-01		05/13			4
								K-40	2.13+-0.21E 01		05/13			4
								MN-54	L.T. 4. E-02		05/13			4
								CO-58	L.T. 5. E-02		05/13			4
								FE-59	L.T. 2. E-01		05/13			4
								CO-60	L.T. 4. E-02		05/13			4
								ZN-65	L.T. 9. E-02		05/13			4
								ZR-95	L.T. 6. E-02		05/13			4
								RU-103	L.T. 8. E-02		05/13			4
								RU-106	L.T. 3. E-01		05/13			4
								I-131	L.T. 4. E 00		05/13			4
								CS-134	L.T. 4. E-02		05/13			4
								CS-137	2.04+-0.35E-01		05/13			4
								BA-140	L.T. 7. E-01		05/13			4
								CE-141	L.T. 1. E-01		05/13			4
								CE-144	L.T. 2. E-01		05/13			4
								RA-226	2.07+-0.45E 00		05/13			4
								TH-228	1.04+-0.10E 00		05/13			4
								H-3	L.T. 2. E-02		06/10			5
70898	89276	BB11006SB		03/18	1640			PU-238	L.T. 3. E-02		04/21			6
								PU-239	L.T. 1. E-02		04/21			6
70899	89277	BB11006SC		03/18	1640			BE-7	L.T. 5. E-01		05/16			4
								K-40	1.94+-0.19E 01		05/16			4
								MN-54	L.T. 3. E-02		05/16			4
								CO-58	L.T. 4. E-02		05/16			4
								FE-59	L.T. 1. E-01		05/16			4
								CO-60	L.T. 3. E-02		05/16			4
								ZN-65	L.T. 8. E-02		05/16			4
								ZR-95	L.T. 6. E-02		05/16			4
								RU-103	L.T. 7. E-02		05/16			4
								RU-106	L.T. 3. E-01		05/16			4

TELEDYNE ISOTOPES

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ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER		CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70899	89277	BB11006SC		03/18	1640			I-131	L.T. 4. E 00		05/16			4
								CS-134	L.T. 4. E-02		05/16			4
								CS-137	1.12+-0.27E-01		05/16			4
								BA-140	L.T. 7. E-01		05/16			4
								CE-141	L.T. 1. E-01		05/16			4
								CE-144	L.T. 2. E-01		05/16			4
								RA-226	1.47+-0.47E 00		05/16			4
								TH-228	1.05+-0.11E 00		05/16			4
								H-3	L.T. 2. E-02		06/10			5
70903	90281	DUP BB00004SC		03/18	1300			BE-7	L.T. 5. E-01		05/16			4
								K-40	1.81+-0.18E 01		05/16			4
								MN-54	L.T. 4. E-02		05/16			4
								CO-58	L.T. 5. E-02		05/16			4
								FE-59	L.T. 1. E-01		05/16			4
								CO-60	L.T. 3. E-02		05/16			4
								ZN-65	L.T. 8. E-02		05/16			4
								ZR-95	L.T. 5. E-02		05/16			4
								RU-103	L.T. 8. E-02		05/16			4
								RU-106	L.T. 3. E-01		05/16			4
								I-131	L.T. 4. E 00		05/16			4
								CS-134	L.T. 4. E-02		05/16			4
								CS-137	L.T. 3. E-02		05/16			4
								BA-140	L.T. 9. E-01		05/16			4
								CE-141	L.T. 1. E-01		05/16			4
								CE-144	L.T. 2. E-01		05/16			4
								RA-226	1.92+-0.46E 00		05/16			4
								TH-228	1.39+-0.14E 00		05/16			4
								H-3	L.T. 1. E-02		06/10			5

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TELEDYNE ISOTOPES

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ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
89782	BB13024SA	88901	03/17	1430			H-3	3.6 +-2.1 E-02		09/29			5
89783	BB15003SA	89563	04/22	1135			H-3	NOT ANALYZED					5
89784	BB06007SA	89157	03/17	0840			H-3	3.9 +-1.4 E-02		09/29			5
89785	BG04025SA	88201	03/13	1030			H-3	2.8 +-1.3 E-02		09/29			5
89786	BG05026SA	88225	03/13	1605			H-3	2.7 +-1.0 E-02		09/29			5
89787	BG02007SA	88457	/				H-3	2.1 +-1.1 E-02		09/29			5
89788	BB02045SA	89807	03/19	1000			H-3	NOT ANALYZED		09/29			5
89789	BB15004SA	89569	04/22	1115			H-3	NOT ANALYZED		09/29			5
89790	BB12020SA	90069	03/18	1055			H-3	L.T. 7. E-03		09/29			5
89791	BB03005SA	90125	03/17	1200			H-3	L.T. 3. E-02		09/24			5
89792	BB16001SA	89892	04/22	1000			H-3	2.0 +-0.2 E-01		09/30			5
89793	BG04029SA	88213	03/13	1145			H-3	4.8 +-1.5 E-02		09/30			5
89794	BB14094SA	88419	03/16	1540			H-3	NOT ANALYZED		09/30			5
89795	BB11006SA	89275	03/18	1640			H-3	2.1 +-1.1 E-02		09/30			5
89796	BG02074SA	88451	03/10				H-3	NOT ANALYZED					5

Volatile Organic Compounds

VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-43

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB12003SE
Sample Number: 90079

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/24/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 43

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	106	70 - 121
Toluene-D8	107	81 - 117
4-Bromofluorobenzene	95	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

The cover letter and the attachments are integral parts of this report.

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-31

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB12006SE
Sample Number: 90055

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/24/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 31

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	104	70 - 121
Toluene-D8	111	81 - 117
4-Bromofluorobenzene	86	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-34

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB12019SE
Sample Number: 90061

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/24/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 34

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	109	70 - 121
Toluene-D8	102	81 - 117
4-Bromofluorobenzene	92	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy M McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-40

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB12020SE
Sample Number: 90073

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/24/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 40

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	105	70 - 121
Toluene-D8	105	81 - 117
4-Bromofluorobenzene	94	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-37

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB12023SE
Sample Number: 90067

Matrix: Soil

Date Sampled: 3/18/92
Date Analyzed: 3/24/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 37

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	104	70 - 121
Toluene-D8	105	81 - 117
4-Bromofluorobenzene	91	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANIC COMPOUNDS

SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-42

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB12003SD
Sample Number: 90078

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/30/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-42

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-42

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	74	25 - 121
Phenol-d5.....	72	24 - 113
Nitrobenzene-d5.....	79	23 - 120
2-Fluorobiphenyl.....	88	30 - 115
2,4,6-Tribromophenol.....	103	19 - 122
Terphenyl-d14.....	98	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/07/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-30

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB12006SD
Sample Number: 90054

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/30/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-30

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-30

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	76	25 - 121
Phenol-d5.....	78	24 - 113
Nitrobenzene-d5.....	74	23 - 120
2-Fluorobiphenyl.....	87	30 - 115
2,4,6-Tribromophenol.....	83	19 - 122
Terphenyl-d14.....	87	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/07/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-33

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB12019SD
Sample Number: 90060

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/31/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-33

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-33

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	88	25 - 121
Phenol-d5.....	85	24 - 113
Nitrobenzene-d5.....	92	23 - 120
2-Fluorobiphenyl.....	102	30 - 115
2,4,6-Tribromophenol.....	110	19 - 122
Terphenyl-d14.....	118	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/07/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-39

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB12020SD
Sample Number: 90072

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/30/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-39

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-39

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	74	25 - 121
Phenol-d5.....	77	24 - 113
Nitrobenzene-d5.....	81	23 - 120
2-Fluorobiphenyl.....	90	30 - 115
2,4,6-Tribromophenol.....	104	19 - 122
Terphenyl-d14.....	100	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/07/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-36

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB12023SD
Sample Number: 90066

Matrix: Soil

Date Sampled: 3/18/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/31/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-36

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-36

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	87	25 - 121
Phenol-d5.....	83	24 - 113
Nitrobenzene-d5.....	93	23 - 120
2-Fluorobiphenyl.....	101	30 - 115
2,4,6-Tribromophenol.....	111	19 - 122
Terphenyl-d14.....	110	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/07/92

The cover letter and attachments are integral parts of this report.

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METALS

PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-44

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB12003SF
Sample Number: 90080

Matrix: Soil

Date Sampled: 3/18/92
Date Digested: 3/20/92 {b}

Date Received: 3/19/92
Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	2.8	5	2.5	3/24/92
Beryllium (Be)/6010.....	.46	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	12.	1	1.0	3/21/92
Copper (Cu)/6010.....	16.	1	1.0	3/21/92
Lead (Pb)/6010.....	17.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	8.5	1	1.0	3/21/92
Selenium (Se)/7740.....	2.0	1	.25	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	72.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/07/92

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-32

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB12006SF
Sample Number: 90056 Matrix: Soil

Date Sampled: 3/18/92 Date Received: 3/19/92
Date Digested: 3/20/92 {b} Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	2.4	5	2.5	3/24/92
Beryllium (Be)/6010.....	.44	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	12.	1	1.0	3/21/92
Copper (Cu)/6010.....	16.	1	1.0	3/21/92
Lead (Pb)/6010.....	53.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	8.6	1	1.0	3/21/92
Selenium (Se)/7740.....	1.7	1	.25	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	78.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} A high background reading was observed for Arsenic. A matrix interferent is present creating a false positive observation. A 5 fold dilution yielded an estimated result of 2.4.

Approved by: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-35

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB12019SF
Sample Number: 90062

Matrix: Soil

Date Sampled: 3/18/92
Date Digested: 3/20/92 {b}

Date Received: 3/19/92
Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	2.8	5	2.5	3/24/92
Beryllium (Be)/6010.....	.52	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	15.	1	1.0	3/21/92
Copper (Cu)/6010.....	21.	1	1.0	3/21/92
Lead (Pb)/6010.....	20.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	9.9	1	1.0	3/21/92
Selenium (Se)/7740.....	2.0	1	.25	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	74.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-41

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB12020SF
Sample Number: 90074

Matrix: Soil

Date Sampled: 3/18/92
Date Digested: 3/20/92 {b}

Date Received: 3/19/92
Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	3.5	5	2.5	3/24/92
Beryllium (Be)/6010.....	.49	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	13.	1	1.0	3/21/92
Copper (Cu)/6010.....	21.	1	1.0	3/21/92
Lead (Pb)/6010.....	18.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	9.7	1	1.0	3/21/92
Selenium (Se)/7740.....	1.9	1	.25	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	70.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/07/92

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-38

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB12023SF
Sample Number: 90068

Matrix: Soil

Date Sampled: 3/18/92
Date Digested: 3/20/92 {b}

Date Received: 3/19/92
Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	2.5	5	2.5	3/24/92
Beryllium (Be)/6010.....	.46	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	13.	1	1.0	3/21/92
Copper (Cu)/6010.....	21.	1	1.0	3/21/92
Lead (Pb)/6010.....	25.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	10.	1	1.0	3/21/92
Selenium (Se)/7740.....	2.2	1	.25	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	76.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Association Chemist

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RADIONUCLIDES

Table: Results of the analyses for iodine-129 and strontium-90 in thirty-five (35) soil samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Conc. pci/gwet I-129	Date Analyzed	Conc. pci/gdry Sr-90	Date Analyzed
90140	M4SA	03/17/92	SPS-1908	<0.2	05/20	0.06±0.01	06/03
88901	BB13024SA	03/17/92	1909	<0.2	05/20	0.01±0.01	05/14
88907	BB13037SA	03/17/92	1910	<0.2	05/21	0.01±0.01	05/14
88913	BB13039SA	03/17/92	1911	<0.2	05/21	0.01±0.01	05/15
88919	BB13011SA	03/17/92	1912	<0.2	05/22	0.01±0.01	06/03
88925	BB13010SA	03/17/92	1913	<0.2	05/22	<0.01	06/09
89151	BB06017SA	03/17/92	1914	<0.2	05/22	0.01±0.01	05/14
89157	BB06007SA	03/17/92	1915	<0.3	06/09	<0.01	05/14
89163	BB06092SA	03/17/92	1916	<0.2	05/26	<0.01	05/14
89169	BB06066SA	03/17/92	1917	<0.2	05/27	<0.01	05/14
89175	BB06013SA	03/17/92	1918	<0.2	05/28	0.01±0.01	05/14
90101	BB03025SA	03/17/92	1919	<0.2	06/01	0.09±0.01	06/09
90107	BB03092SA	03/17/92	1920	<0.2	06/01	0.04±0.01	05/14
90113	BB03079SA	03/17/92	1921	<0.2	06/01	0.03±0.01	06/09
90119	BB03017SA	03/17/92	1922	<0.3	06/09	0.05±0.01	06/09
90125	BB03005SA	03/17/92	1923	<0.2	06/02	0.06±0.01	05/15
90001	BB05003SA	03/18/92	1924	<0.2	06/02	0.02±0.01	06/09
90007	BB05089SA	03/18/92	1925	<0.2	06/02	0.02±0.01	05/22
90013	BB05006SA	03/18/92	1926	<0.2	06/03	0.02±0.01	05/22
90019	BB05057SA	03/18/92	1927	<0.2	06/04	0.03±0.01	05/22
90025	BB05077SA	03/18/92	1928	<0.2	06/04	0.06±0.01	05/22
90051	BB12006SA	03/18/92	1929	<0.2	06/05	0.03±0.01	05/22
90057	BB12019SA	03/18/92	1930	<0.2	06/05	0.04±0.01	05/22
90063	BB12023SA	03/18/92	1931	<0.3	06/05	0.02±0.01	05/22
90069	BB12020SA	03/18/92	1932	<0.2	06/08	0.03±0.01	05/22
90075	BB12003SA	03/18/92	1933	<0.2	06/08	0.01±0.01	05/22
90251	BB01056SA	03/18/92	1934	<0.3	06/08	0.04±0.01	06/03
90263	BB01001SA	03/18/92	1935	<0.3	06/10	<0.01	06/03
90269	BB01027SA	03/18/92	1936	<0.3	06/10	<0.01	06/09
90275	BB01038SA	03/18/92	1937	<0.2	06/10	0.02±0.01	06/03
90282	BB00004SA	03/18/92	1938	<0.3	06/10	0.01±0.01	06/03
89251	BB11018SA	03/18/92	1939	<0.3	06/10	0.02±0.01	06/03
89257	BB11061SA	03/18/92	1940	<0.3	06/11	<0.01	06/03
89263	BB11057SA	03/18/92	1941	<0.2	06/11	0.02±0.01	06/09
89269	BB11032SA	03/18/92	1942	<0.3	04/14	0.02±0.01	06/09

The error given is the probable counting error at 95% confidence level. Less than (<) values are based on 3 sigma counting error for background sample.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/16/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
3-0628	04-0029403-012	03/24/92	04/26/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70878	90077 BB12003SC		03/18	1130			BE-7	L.T. 6. E-01		05/13			4
							K-40	2.15+-0.21E 01		05/13			4
							MN-54	L.T. 4. E-02		05/13			4
							CO-58	L.T. 6. E-02		05/13			4
							FE-59	L.T. 2. E-01		05/13			4
							CO-60	L.T. 4. E-02		05/13			4
							ZN-65	L.T. 1. E-01		05/13			4
							ZR-95	L.T. 7. E-02		05/13			4
							RU-103	L.T. 8. E-02		05/13			4
							RU-106	L.T. 3. E-01		05/13			4
							I-131	L.T. 4. E 00		05/13			4
							CS-134	L.T. 4. E-02		05/13			4
							CS-137	L.T. 4. E-02		05/13			4
							BA-140	L.T. 7. E-01		05/13			4
							CE-141	L.T. 1. E-01		05/13			4
							CE-144	L.T. 2. E-01		05/13			4
							RA-226	1.76+-0.53E 00		05/13			4
							TH-228	1.12+-0.11E 00		05/13			4
							H-3	L.T. 1. E-02		06/05			5
70879	90252 BB01056SB		03/18	1300			PU-238	L.T. 1. E-01		04/21			6
							PU-239	L.T. 4. E-02		04/21			6
70880	90253 BB01056SC		03/18	1300			BE-7	L.T. 5. E-01		05/13			4
							K-40	1.91+-0.19E 01		05/13			4
							MN-54	L.T. 3. E-02		05/13			4
							CO-58	L.T. 5. E-02		05/13			4
							FE-59	L.T. 1. E-01		05/13			4
							CO-60	L.T. 3. E-02		05/13			4
							ZN-65	L.T. 1. E-01		05/13			4
							ZR-95	L.T. 6. E-02		05/13			4
							RU-103	L.T. 7. E-02		05/13			4
							RU-106	L.T. 3. E-01		05/13			4

TELEDYNE PES

REPORT OF ANALYSIS

RUN DATE 06/10/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0626	04-0029403-012	03/25/92	04/27/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70865	90027 BB05077SC		03/18	0930			BE-7	L.T. 5. E-01		04/25			4
							K-40	2.41+-0.24E 01		04/25			4
							MN-54	L.T. 4. E-02		04/25			4
							CO-58	L.T. 5. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 4. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4
							ZR-95	L.T. 7. E-02		04/25			4
							RU-103	L.T. 7. E-02		04/25			4
							RU-106	L.T. 4. E-01		04/25			4
							I-131	L.T. 1. E 00		04/25			4
							CS-134	L.T. 5. E-02		04/25			4
							CS-137	1.55+-0.36E-01		04/25			4
							BA-140	L.T. 3. E-01		04/25			4
							CE-141	L.T. 1. E-01		04/25			4
							CE-144	L.T. 3. E-01		04/25			4
							RA-226	2.37+-0.64E 00		04/25			4
							TH-228	1.33+-0.13E 00		04/25			4
							H-3	L.T. 2. E-02		06/05			5
70866	90031 BB000045B		03/18	0815			PU-238	L.T. 2. E-02		05/13			6
							PU-239	L.T. 2. E-02		05/13			6
70867	90052 BB12006SB		03/18	1025			PU-238	L.T. 7. E-02		05/14			6
							PU-239	L.T. 2. E-02		05/14			6
70868	90053 BB12006SC		03/18	1025			BE-7	L.T. 4. E-01		04/25			4
							K-40	2.32+-0.23E 01		04/25			4
							MN-54	L.T. 3. E-02		04/25			4
							CO-58	L.T. 4. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 3. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4

TELEDYNE PES

REPORT OF ANALYSIS

RUN DATE 06/10/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 5
3-0626	04-0029403-012	03/25/92	04/27/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70868	90053 BB12006SC		03/18	1025			ZR-95	L.T. 5. E-02		04/25			4
							RU-103	L.T. 5. E-02		04/25			4
							RU-106	L.T. 3. E-01		04/25			4
							I-131	L.T. 7. E-01		04/25			4
							CS-134	L.T. 4. E-02		04/25			4
							CS-137	9.09+-2.70E-02		04/25			4
							BA-140	L.T. 2. E-01		04/25			4
							CE-141	L.T. 9. E-02		04/25			4
							CE-144	L.T. 2. E-01		04/25			4
							RA-226	1.79+-0.49E 00		04/25			4
							TH-228	1.08+-0.11E 00		04/25			4
							H-3	L.T. 8. E-03		06/05			5
70869	90058 BB12019SB		03/18	1030			PU-238	L.T. 1. E-01		05/13			6
							PU-239	L.T. 9. E-02		05/13			6
70870	90059 BB12019SC		03/18	1030			BE-7	L.T. 4. E-01		04/25			4
							K-40	2.13+-0.21E 01		04/25			4
							MN-54	L.T. 3. E-02		04/25			4
							CO-58	L.T. 4. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 3. E-02		04/25			4
							ZN-65	L.T. 7. E-02		04/25			4
							ZR-95	L.T. 4. E-02		04/25			4
							RU-103	L.T. 5. E-02		04/25			4
							RU-106	L.T. 3. E-01		04/25			4
							I-131	L.T. 7. E-01		04/25			4
							CS-134	L.T. 4. E-02		04/25			4
							CS-137	1.51+-0.30E-01		04/25			4
							BA-140	L.T. 2. E-01		04/25			4
							CE-141	L.T. 9. E-02		04/25			4
							CE-144	L.T. 2. E-01		04/25			4
							RA-226	1.69+-0.46E 00		04/25			4

TELEDYNE OPES

REPORT OF ANALYSIS

REVISED 06/22/92
RUN DATE 06/10/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 6
3-0626	04-0029403-012	03/25/92	04/27/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70870	90059 BB12019SC		03/18	1030			TH-228	1.32+-0.13E 00		04/25			4
							H-3	L.T. 1. E-02		06/05			5
70871	90064 BB12023SB		03/18	1050			PU-238	L.T. 7. E-02		05/13			6
							PU-239	L.T. 2. E-02		05/13			6
70872	90065 BB12023SC		03/18	1050			BE-7	L.T. 4. E-01		04/25			4
							K-40	2.13+-0.21E 01		04/25			4
							MN-54	L.T. 4. E-02		04/25			4
							CO-58	L.T. 4. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 3. E-02		04/25			4
							ZN-65	L.T. 8. E-02		04/25			4
							ZR-95	L.T. 5. E-02		04/25			4
							RU-103	L.T. 6. E-02		04/25			4
							RU-106	L.T. 3. E-01		04/25			4
							I-131	L.T. 8. E-01		04/25			4
							CS-134	L.T. 4. E-02		04/25			4
							CS-137	1.22+-0.30E-01		04/25			4
							BA-140	L.T. 2. E-01		04/25			4
							CE-141	L.T. 9. E-02		04/25			4
							CE-144	L.T. 2. E-01		04/25			4
							RA-226	1.20+-0.45E 00		04/25			4
							TH-228	9.72+-0.97E-01		04/25			4
							H-3	L.T. 2. E-02		06/05			5
70873	90070 BB12020SB		03/18	1055			PU-238	L.T. 1. E-01		05/14			6
							PU-239	L.T. 4. E-02		05/14			6

A visual inspection of the gamma ray spectrum for TI#70872 showed an irregular channel-by-channel region of interest for the spectrum from 828 KeV to 845 KeV. There was not a well defined peak. The software program did, however, identify a positive Mn-54 (with a large counting error). A "hand" integration and calculation did not arrive at a positive result, thus this revision.

In addition the sample was counted two additional times on 6/17 and 6/18 with Mn-54 results of L.T. 4. E-02 and L.T. 4. E-02.

J Martin
6-22-92

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

REVISED 11/04/92
RUN DATE 06/10/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 7
3-0626	04-0029403-012	03/25/92	04/27/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70874	90071 BB12020SC		03/18	1055			BE-7	L.T. 4. E-01		04/25			4
							K-40	7.21+-0.22E 01		04/25			4
							MN-54	L.T. 3. E-02		04/25			4
							CO-58	L.T. 4. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 3. E-02		04/25			4
							ZN-65	L.T. 8. E-02		04/25			4
							ZR-95	L.T. 5. E-02		04/25			4
							RU-103	L.T. 5. E-02		04/25			4
							RU-106	L.T. 3. E-01		04/25			4
							I-131	L.T. 7. E-01		04/25			4
							CS-134	L.T. 3. E-02		04/25			4
							CS-137	1.49+-0.30E-01		04/25			4
							BA-140	L.T. 2. E-01		04/25			4
							CE-141	L.T. 8. E-02		04/25			4
							CE-144	L.T. 2. E-01		04/25			4
							RA-226	1.53+-0.45E 00		04/25			4
							TH-228	1.03+-0.10E 00		04/25			4
							H-3	L.T. 7. E 03		09/29			5
70875	90076 BB12003SB		03/18	1130			PU-238	L.T. 8. E-02		05/12			6
							PU-239	L.T. 3. E-02		05/12			6
70876	90071 BB12020SC DUP		03/18	1055			BE-7	L.T. 5. E-01		04/30			4
							K-40	2.24+-0.22E 01		04/30			4
							MN-54	L.T. 3. E-02		04/30			4
							CO-58	L.T. 4. E-02		04/30			4
							FE-59	L.T. 1. E-01		04/30			4
							CO-60	L.T. 4. E-02		04/30			4
							ZN-65	L.T. 9. E-02		04/30			4
							ZR-95	L.T. 6. E-02		04/30			4
							RU-103	L.T. 6. E-02		04/30			4
							RU-106	L.T. 3. E-01		04/30			4

The H-3 result for TI#70874 has been revised based upon reanalysis of the sample using an analytical method considered to be more reliable for soil samples. In units of pCi/l the result was L.T. 2. E 02.

JMartin 11-4-92

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/10/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0626	04-0029403-012	03/25/92	04/27/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70876	90071 BB120205C DUP		03/18	1055			I-131	L.T. 1. E 00		04/30			4
							CS-134	L.T. 4. E-02		04/30			4
							CS-137	9.12+-3.00E-02		04/30			4
							BA-140	L.T. 3. E-01		04/30			4
							CE-141	L.T. 1. E-01		04/30			4
							CE-144	L.T. 2. E-01		04/30			4
							RA-226	1.61+-0.56E 00		04/30			4
							TH-228	1.04+-0.10E 00		04/30			4

The H-3 result for TI#70876 has been withdrawn. The H-3 results of several samples analyzed by the same analytical method were not confirmed by an alternate method.

JP Martin 12-3-92

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/10/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 9
3-0626	04-0029403-012	03/25/92	04/27/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

W A T E R

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/LITER)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70877	BLANK FOR SOIL		/				BE-7	L.T. 3. E 01		04/08			4
							K-40	L.T. 6. E 01		04/08			4
							MN-54	L.T. 3. E 00		04/08			4
							CO-58	L.T. 3. E 00		04/08			4
							FE-59	L.T. 6. E 00		04/08			4
							CO-60	L.T. 4. E 00		04/08			4
							ZN-65	L.T. 7. E 00		04/08			4
							ZR-95	L.T. 3. E 00		04/08			4
							RU-103	L.T. 3. E 00		04/08			4
							RU-106	L.T. 3. E 01		04/08			4
							I-131	L.T. 4. E 00		04/08			4
							CS-134	L.T. 4. E 00		04/08			4
							CS-137	L.T. 5. E 00		04/08			4
							BA-140	L.T. 4. E 00		04/08			4
							CE-141	L.T. 5. E 00		04/08			4
							CE-144	L.T. 2. E 01		04/08			4
							RA-226	L.T. 7. E 01		04/08			4
							TH-228	L.T. 6. E 00		04/08			4
							H-3	L.T. 1. E 02		06/10			5
							PU-238	L.T. 4. E-01		05/06			6
							PU-239	L.T. 1. E-01		05/06			6

LAST PAGE OF REPORT

APPROVED BY J. GUENTHER 06/10/92

SEND 1 COPIES TO MC480S ERIC SMITH

2 - GAS LAB. 3 - RADIO CHEMISTRY LAB. 4 - GE(LI) GAMMA SPEC LAB. 5 - TRITIUM GAS/L.S. LAB. 6 - ALPHA SPEC LAB.

TI#	H-3 (pCi/l)
70857	2.8 ± 1.3 E 02
70859	1.4 ± 0.1 E 03
70861	2.0 ± 1.1 E 02
70863	L.T. 2. E 02
70865	L.T. 2. E 02
70868	L.T. 1. E 02
70870	L.T. 2. E 02
70872	L.T. 2. E 02
70874	L.T. 2. E 02

The H-3 result for TI#70876 has been withdrawn. The H-3 results of several samples analyzed by the same analytical method were not confirmed by an alternate method.

11-7-92

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TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 10/07/92

PAGE 1

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-3796	04-0029403-012	09/17/92	10/20/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
89782	BB13024SA	88901	03/17	1430			H-3	3.6 +-2.1 E-02		09/29			5
89783	BB15003SA	89563	04/22	1135			H-3	NOT ANALYZED					5
89784	BB06007SA	89157	03/17	0840			H-3	3.9 +-1.4 E-02		09/29			5
89785	BG04025SA	88201	03/13	1030			H-3	2.8 +-1.3 E-02		09/29			5
89786	BG05026SA	88225	03/13	1605			H-3	2.2 +-1.0 E-02		09/29			5
89787	BG02007SA	88457	/				H-3	2.1 +-1.1 E-02		09/29			5
89788	BB02045SA	89807	03/19	1000			H-3	NOT ANALYZED		09/29			5
89789	BB15004SA	89569	04/22	1115			H-3	NOT ANALYZED		09/29			5
89790	BB12020SA	90069	03/18	1055			H-3	L.T. 7. E-03		09/29			5
89791	BB03005SA	90125	03/17	1200			H-3	L.T. 3. E-02		09/24			5
89792	BB16001SA	89892	04/22	1000			H-3	2.0 +-0.2 E-01		09/30			5
89793	BG04029SA	88213	03/13	1145			H-3	4.8 +-1.5 E-02		09/30			5
89794	BB14094SA	88419	03/16	1540			H-3	NOT ANALYZED		09/30			5
89795	BB11006SA	89275	03/18	1640			H-3	2.1 +-1.1 E-02		09/30			5
89796	BG02074SA	88451	03/10				H-3	NOT ANALYZED					5

FRUIT

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/11/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0621	04-0029403-012	03/24/92	04/26/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

FOOD/GARDEN CROPS-FRUIT

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM WET)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70661	90243 MSD20A	MS	03/18	2000			RA-226	L.T. 9. E-02		03/28			4
							TH-228	L.T. 9. E-03		03/28			4
							H-3	1.2 +-0.1 E 00		06/07			5
							PU-238	L.T. 1. E-04		04/14			6
							PU-239	L.T. 1. E-04		04/14			6
70662	90244 BB120207		03/18	1200			SR-90	L.T. 4. E-03		04/14		2.94 *	3
							I-129	L.T. 2. E-02		04/08			3
							BE-7	L.T. 4. E-02		03/28			4
							K-40	1.70+-0.17E 00		03/28			4
							MN-54	L.T. 4. E-03		03/28			4
							CO-58	L.T. 4. E-03		03/28			4
							FE-59	L.T. 1. E-02		03/28			4
							CO-60	L.T. 4. E-03		03/28			4
							ZN-65	L.T. 9. E-03		03/28			4
							ZR-95	L.T. 4. E-03		03/28			4
							RU-103	L.T. 5. E-03		03/28			4
							RU-106	L.T. 4. E-02		03/28			4
							I-131	L.T. 1. E-02		03/28			4
							CS-134	L.T. 4. E-03		03/28			4
							CS-137	L.T. 5. E-03		03/28			4
							BA-140	L.T. 7. E-03		03/28			4
							CE-141	L.T. 8. E-03		03/28			4
							CE-144	L.T. 3. E-02		03/28			4
							RA-226	L.T. 8. E-02		03/28			4
							TH-228	L.T. 7. E-03		03/28			4
							H-3	L.T. 1. E-01		06/07			5
							PU-238	L.T. 3. E-04		04/15			6
							PU-239	L.T. 9. E-05		04/15			6

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/11/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 7
3-0621	04-0029403-012	03/24/92	04/26/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

FOOD/GARDEN CROPS-FRUIT

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM WET)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70663	90205 BB12006LA		03/18	1200			SR-90	L.T. 2. E-03		04/14		2.42 *	3
							I-129	L.T. 3. E-02		04/08			3
							BE-7	L.T. 5. E-02		03/28			4
							K-40	1.25+-0.12E 00		03/28			4
							MN-54	L.T. 5. E-03		03/28			4
							CO-58	L.T. 5. E-03		03/28			4
							FE-59	L.T. 1. E-02		03/28			4
							CO-60	L.T. 6. E-03		03/28			4
							ZN-65	L.T. 1. E-02		03/28			4
							ZR-95	L.T. 6. E-03		03/28			4
							RU-103	L.T. 6. E-03		03/28			4
							RU-106	L.T. 5. E-02		03/28			4
							I-131	L.T. 1. E-02		03/28			4
							CS-134	L.T. 6. E-03		03/28			4
							CS-137	L.T. 6. E-03		03/28			4
							BA-140	L.T. 1. E-02		03/28			4
							CE-141	L.T. 1. E-02		03/28			4
							CE-144	L.T. 5. E-02		03/28			4
							RA-226	L.T. 1. E-01		03/28			4
							TH-228	L.T. 1. E-02		03/28			4
							H-3	L.T. 1. E-01		06/07			5
							PU-238	L.T. 8. E-04		04/14			6
							PU-239	L.T. 2. E-04		04/14			6
70664	90208 BB12006LA		03/18	1200			SR-90	L.T. 3. E-03		04/14		2.31 *	3
							I-129	L.T. 3. E-02		04/08			3
							BE-7	L.T. 3. E-02		03/28			4
							K-40	1.12+-0.11E 00		03/28			4
							MN-54	L.T. 3. E-03		03/28			4
							CO-58	L.T. 3. E-03		03/28			4
							FE-59	L.T. 8. E-03		03/28			4
							CO-60	L.T. 4. E-03		03/28			4
							ZN-65	L.T. 7. E-03		03/28			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/11/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 8
3-0621	04-0029403-012	03/24/92	04/26/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

FOOD/GARDEN CROPS-FRUIT

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM WET)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70664	90208 BB12006LA		03/18	1200			ZR-95	L.T. 3. E-03		03/28			4
							RU-103	L.T. 4. E-03		03/28			4
							RU-106	L.T. 3. E-02		03/28			4
							I-131	L.T. 9. E-03		03/28			4
							CS-134	L.T. 3. E-03		03/28			4
							CS-137	L.T. 3. E-03		03/28			4
							BA-140	L.T. 5. E-03		03/28			4
							CE-141	L.T. 7. E-03		03/28			4
							CE-144	L.T. 3. E-02		03/28			4
							RA-226	L.T. 7. E-02		03/28			4
							TH-228	L.T. 6. E-03		03/28			4
							H-3	L.T. 1. E-01		06/07			5
							PU-238	L.T. 5. E-04		04/14			6
							PU-239	L.T. 2. E-04		04/14			6
70665	90237 BB00009LA		03/18	1200			SR-90	3.2 +-2.2 E-03		04/14		2.47 *	3
							I-129	L.T. 4. E-02		04/08			3
							BE-7	L.T. 4. E-02		03/28			4
							K-40	1.41+-0.14E 00		03/28			4
							MN-54	L.T. 4. E-03		03/28			4
							CO-58	L.T. 4. E-03		03/28			4
							FE-59	L.T. 9. E-03		03/28			4
							CO-60	L.T. 4. E-03		03/28			4
							ZN-65	L.T. 9. E-03		03/28			4
							ZR-95	L.T. 4. E-03		03/28			4
							RU-103	L.T. 5. E-03		03/28			4
							RU-106	L.T. 3. E-02		03/28			4
							I-131	L.T. 9. E-03		03/28			4
							CS-134	L.T. 4. E-03		03/28			4
							CS-137	L.T. 4. E-03		03/28			4
							BA-140	L.T. 6. E-03		03/28			4
							CE-141	L.T. 7. E-03		03/28			4
							CE-144	L.T. 2. E-02		03/28			4

AVOCADO GROVE
BB-13

Volatile Organic Compounds

VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-11

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB13010SE
Sample Number: 88929

Matrix: Soil

Date Sampled: 3/17/92
Date Analyzed: 3/23/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 11

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	103	70 - 121
Toluene-D8	105	81 - 117
4-Bromofluorobenzene	99	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-8

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB13011SE
Sample Number: 88923

Matrix: Soil

Date Sampled: 3/17/92
Date Analyzed: 3/24/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 8

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	106	70 - 121
Toluene-D8	106	81 - 117
4-Bromofluorobenzene	91	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-84

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB13024SE
Sample Number: 88905

Matrix: Soil

Date Sampled: 3/17/92
Date Analyzed: 3/23/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 84

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	106	70 - 121
Toluene-D8	105	81 - 117
4-Bromofluorobenzene	101	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-2

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB13037SE
Sample Number: 88911

Matrix: Soil

Date Sampled: 3/17/92
Date Analyzed: 3/24/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 2

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	108	70 - 121
Toluene-D8	106	81 - 117
4-Bromofluorobenzene	95	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756-5

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB13039SE
Sample Number: 88917

Matrix: Soil

Date Sampled: 3/17/92
Date Analyzed: 3/23/92

Date Received: 3/19/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5756- 5

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	100	70 - 121
Toluene-D8	94	81 - 117
4-Bromofluorobenzene	99	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANIC COMPOUNDS

SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-10

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB13010SD
Sample Number: 88928

Matrix: Soil

Date Sampled: 3/17/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/27/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-10

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-10

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	88	25 - 121
Phenol-d5.....	87	24 - 113
Nitrobenzene-d5.....	93	23 - 120
2-Fluorobiphenyl.....	94	30 - 115
2,4,6-Tribromophenol.....	82	19 - 122
Terphenyl-d14.....	102	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy M Donald for CM
Cheryl Matterson, Associate Chemist

Date: 4/07/92

The cover letter and attachments are integral parts of this report.

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-7

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB13011SD
Sample Number: 88922

Matrix: Soil

Date Sampled: 3/17/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/27/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-7

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-7

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	78	25 - 121
Phenol-d5.....	82	24 - 113
Nitrobenzene-d5.....	84	23 - 120
2-Fluorobiphenyl.....	86	30 - 115
2,4,6-Tribromophenol.....	83	19 - 122
Terphenyl-d14.....	97	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/07/92

The cover letter and attachments are integral parts of this report.

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-83

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB13024SD
Sample Number: 88904

Matrix: Soil

Date Sampled: 3/17/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/27/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-83

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-83

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	77	25 - 121
Phenol-d5.....	82	24 - 113
Nitrobenzene-d5.....	68	23 - 120
2-Fluorobiphenyl.....	73	30 - 115
2,4,6-Tribromophenol.....	114	19 - 122
Terphenyl-d14.....	91	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/01/92

The cover letter and attachments are integral parts of this report.

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-1

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB13037SD
Sample Number: 88910

Matrix: Soil

Date Sampled: 3/17/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/27/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-1

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	92	25 - 121
Phenol-d5.....	97	24 - 113
Nitrobenzene-d5.....	97	23 - 120
2-Fluorobiphenyl.....	101	30 - 115
2,4,6-Tribromophenol.....	98	19 - 122
Terphenyl-d14.....	107	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-4

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB13039SD
Sample Number: 88916

Matrix: Soil

Date Sampled: 3/17/92
Date Extracted: 3/23/92

Date Received: 3/19/92
Date Analyzed: 3/27/92

Batch Number: 920323-2001

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-4

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5756-4

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	92	25 - 121
Phenol-d5.....	94	24 - 113
Nitrobenzene-d5.....	102	23 - 120
2-Fluorobiphenyl.....	107	30 - 115
2,4,6-Tribromophenol.....	94	19 - 122
Terphenyl-d14.....	108	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/07/92

The cover letter and attachments are integral parts of this report.

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METALS

PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-12

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB13010SF
Sample Number: 88930

Matrix: Soil

Date Sampled: 3/17/92
Date Digested: 3/20/92 {b}

Date Received: 3/19/92
Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	11.	5	2.5	3/24/92
Beryllium (Be)/6010.....	.85	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	22.	1	1.0	3/21/92
Copper (Cu)/6010.....	21.	1	1.0	3/21/92
Lead (Pb)/6010.....	17.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	19.	1	1.0	3/21/92
Selenium (Se)/7740.....	.75	1	.25	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	74.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/07/92

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-9

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB13011SF
Sample Number: 88924

Matrix: Soil

Date Sampled: 3/17/92
Date Digested: 3/20/92 {b}

Date Received: 3/19/92
Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	5.5	5	2.5	3/24/92
Beryllium (Be)/6010.....	.69	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	20.	1	1.0	3/21/92
Copper (Cu)/6010.....	17.	1	1.0	3/21/92
Lead (Pb)/6010.....	15.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	16.	1	1.0	3/21/92
Selenium (Se)/7740.....	2.5	1	.25	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	63.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM Date: 4/07/92
Cheryl Matterson, Association Chemist

The cover letter and attachments are integral parts of this report.

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-85

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB13024SF
Sample Number: 88906 Matrix: Soil

Date Sampled: 3/17/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1107 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	2.3	5	2.5	3/24/92
Beryllium (Be)/6010.....	.99	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	25.	1	1.0	3/20/92
Copper (Cu)/6010.....	20.	1	1.0	3/20/92
Lead (Pb)/6010.....	16.	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	18.	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	68.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1105; and Hg was digested on 3/19/92, Batch # 920319-1103 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} A high background reading was obtained for Arsenic. A matrix interferent is present creating a false positive. A 5 fold dilution yielded a result equal to or above the established reporting limit.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

The cover letter and attachments are integral parts of this report.

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-3

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB13037SF
Sample Number: 88913

Matrix: Soil

Date Sampled: 3/17/92
Date Digested: 3/20/92 {b}

Date Received: 3/19/92
Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	4.5	5	2.5	3/24/92
Beryllium (Be)/6010.....	.68	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	20.	1	1.0	3/21/92
Copper (Cu)/6010.....	19.	1	1.0	3/21/92
Lead (Pb)/6010.....	16.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	16.	1	1.0	3/21/92
Selenium (Se)/7740.....	2.9	1	.25	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	67.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM
Cheryl Matterson, Association Chemist

Date: 4/07/92

The cover letter and attachments are integral parts of this report.

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5756-6

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB13039SF
Sample Number: 88918 Matrix: Soil

Date Sampled: 3/17/92 Date Received: 3/19/92
Date Digested: 3/20/92 {b} Batch Number: 920320-1104 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/21/92
Arsenic (As)/7060.....	7.6	5	2.5	3/24/92
Beryllium (Be)/6010.....	.70	1	.25	3/21/92
Cadmium (Cd)/6010.....		1	.50	3/21/92
Chromium (Cr)/6010.....	21.	1	1.0	3/21/92
Copper (Cu)/6010.....	19.	1	1.0	3/21/92
Lead (Pb)/6010.....	17.	1	2.5	3/21/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	16.	1	1.0	3/21/92
Selenium (Se)/7740.....	3.0	1	.25	3/24/92
Silver (Ag)/6010.....		1	1.0	3/21/92
Thallium (Tl)/7841.....		1	.50	3/27/92
Zinc (Zn)/6010.....	67.	1	1.0	3/21/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/20/92, Batch # 920320-1103; and Hg was digested on 3/20/92, Batch # 920320-1105 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.

Approved by: Nancy M Wendell for CM Date: 4/07/92
Cheryl Matterson, Association Chemist

The cover letter and attachments are integral parts of this report.

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RADIONUCLIDES

Table: Results of the analyses for iodine-129 and strontium-90 in thirty-five (35) soil samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Conc. pci/gwet I-129	Date Analyzed	Conc. pci/gdry Sr-90	Date Analyzed
90140	M4SA	03/17/92	SPS-1908	<0.2	05/20	0.06±0.01	06/03
88901	BB13024SA	03/17/92	1909	<0.2	05/20	0.01±0.01	05/14
88907	BB13037SA	03/17/92	1910	<0.2	05/21	0.01±0.01	05/14
88913	BB13039SA	03/17/92	1911	<0.2	05/21	0.01±0.01	05/15
88919	BB13011SA	03/17/92	1912	<0.2	05/22	0.01±0.01	06/03
88925	BB13010SA	03/17/92	1913	<0.2	05/22	<0.01	06/09
89151	BB06017SA	03/17/92	1914	<0.2	05/22	0.01±0.01	05/14
89157	BB06007SA	03/17/92	1915	<0.3	06/09	<0.01	05/14
89163	BB06092SA	03/17/92	1916	<0.2	05/26	<0.01	05/14
89169	BB06066SA	03/17/92	1917	<0.2	05/27	<0.01	05/14
89175	BB06013SA	03/17/92	1918	<0.2	05/28	0.01±0.01	05/14
90101	BB03025SA	03/17/92	1919	<0.2	06/01	0.09±0.01	06/09
90107	BB03092SA	03/17/92	1920	<0.2	06/01	0.04±0.01	05/14
90113	BB03079SA	03/17/92	1921	<0.2	06/01	0.03±0.01	06/09
90119	BB03017SA	03/17/92	1922	<0.3	06/09	0.05±0.01	06/09
90125	BB03005SA	03/17/92	1923	<0.2	06/02	0.06±0.01	05/15
90001	BB05003SA	03/18/92	1924	<0.2	06/02	0.02±0.01	06/09
90007	BB05089SA	03/18/92	1925	<0.2	06/02	0.02±0.01	05/22
90013	BB05006SA	03/18/92	1926	<0.2	06/03	0.02±0.01	05/22
90019	BB05057SA	03/18/92	1927	<0.2	06/04	0.03±0.01	05/22
90025	BB05077SA	03/18/92	1928	<0.2	06/04	0.06±0.01	05/22
90051	BB12006SA	03/18/92	1929	<0.2	06/05	0.03±0.01	05/22
90057	BB12019SA	03/18/92	1930	<0.2	06/05	0.04±0.01	05/22
90063	BB12023SA	03/18/92	1931	<0.3	06/05	0.02±0.01	05/22
90069	BB12020SA	03/18/92	1932	<0.2	06/08	0.03±0.01	05/22
90075	BB12003SA	03/18/92	1933	<0.2	06/08	0.01±0.01	05/22
90251	BB01056SA	03/18/92	1934	<0.3	06/08	0.04±0.01	06/03
90263	BB01001SA	03/18/92	1935	<0.3	06/10	<0.01	06/03
90269	BB01027SA	03/18/92	1936	<0.3	06/10	<0.01	06/09
90275	BB01038SA	03/18/92	1937	<0.2	06/10	0.02±0.01	06/03
90282	BB00004SA	03/18/92	1938	<0.3	06/10	0.01±0.01	06/03
89251	BB11018SA	03/18/92	1939	<0.3	06/10	0.02±0.01	06/03
89257	BB11061SA	03/18/92	1940	<0.3	06/11	<0.01	06/03
89263	BB11057SA	03/18/92	1941	<0.2	06/11	0.02±0.01	06/09
89269	BB11032SA	03/18/92	1942	<0.3	04/14	0.02±0.01	06/09

The error given is the probable counting error at 95% confidence level. Less than (<) values are based on 3 sigma counting error for background sample.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/09/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0625	04-0029403-012	03/25/92	04/27/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70848	89177 BB06013SC		03/17	0925			BE-7	L.T. 6. E-01		04/25			4
							K-40	1.99+-0.20E 01		04/25			4
							MN-54	L.T. 5. E-02		04/25			4
							CO-58	L.T. 6. E-02		04/25			4
							FE-59	L.T. 2. E-01		04/25			4
							CO-60	L.T. 5. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4
							ZR-95	L.T. 7. E-02		04/25			4
							RU-103	L.T. 8. E-02		04/25			4
							RU-106	L.T. 4. E-01		04/25			4
							I-131	L.T. 1. E 00		04/25			4
							CS-134	L.T. 6. E-02		04/25			4
							CS-137	L.T. 5. E-02		04/25			4
							BA-140	L.T. 4. E-01		04/25			4
							CE-141	L.T. 2. E-01		04/25			4
							CE-144	L.T. 4. E-01		04/25			4
							RA-226	1.58+-0.73E 00		04/25			4
							TH-228	1.16+-0.12E 00		04/25			4
							H-3	L.T. 2. E-02		06/02			5
70849	88921 BB13011SC		03/17	1550			BE-7	L.T. 5. E-01		04/25			4
							K-40	1.94+-0.19E 01		04/25			4
							MN-54	L.T. 4. E-02		04/25			4
							CO-58	L.T. 5. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 4. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4
							ZR-95	L.T. 7. E-02		04/25			4
							RU-103	L.T. 7. E-02		04/25			4
							RU-106	L.T. 3. E-01		04/25			4
							I-131	L.T. 1. E 00		04/25			4
							CS-134	L.T. 5. E-02		04/25			4
							CS-137	9.81+-3.92E-02		04/25			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

REVISED 09/30/92
RUN DATE 06/08/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 5
3-0625	04-0029403-012	03/25/92	04/27/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70849	88921 BB13011SC		03/17	1550			BA-140	L.T. 4. E-01		04/25			4
							CE-141	L.T. 1. E-01		04/25			4
							CE-144	L.T. 3. E-01		04/25			4
							RA-226	2.21+-0.56E 00		04/25			4
							TH-228	1.43+-0.14E 00		04/25			4
							H-3	4.2 +-0.9 E-02		06/02			5
70850	88926 BB13010SB		03/17	1615			PU-238	L.T. 5. E-02		05/06			6
							PU-239	L.T. 1. E-02		05/06			6
70851	88927 BB13010SC		03/17	1615			BE-7	L.T. 5. E-01		04/25			4
							K-40	1.91+-0.19E 01		04/25			4
							MN-54	L.T. 4. E-02		04/25			4
							CO-58	L.T. 5. E-02		04/25			4
							FE-59	L.T. 2. E-01		04/25			4
							CO-60	L.T. 4. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4
							ZR-95	L.T. 7. E-02		04/25			4
							RU-103	L.T. 7. E-02		04/25			4
							RU-106	L.T. 4. E-01		04/25			4
							I-131	L.T. 1. E 00		04/25			4
							CS-134	L.T. 5. E-02		04/25			4
							CS-137	L.T. 5. E-02		04/25			4
							BA-140	L.T. 3. E-01		04/25			4
							CE-141	L.T. 1. E-01		04/25			4
							CE-144	L.T. 3. E-01		04/25			4
							RA-226	1.85+-0.59E 00		04/25			4
							TH-228	1.41+-0.14E 00		04/25			4
							H-3	L.T. 2. E-02		09/04			5

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

REVISED 09/30/92
REVISED 07/08/92
RUN DATE 06/08/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0625	04-0029403-012	03/25/92	04/27/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70844	89165 BB06092SC		03/17	0850			TH-228	1.69+-0.17E 00		04/25			4
							H-3	1.3 +-0.7 E-02		06/02			5
70845	89170 BB06066SB		03/17	0905			PU-238	L.T. 1. E-02		05/09			6
							PU-239	L.T. 9. E-03		05/09			6
70846	89171 BB06066SC		03/17	0905			BE-7	L.T. 5. E-01		04/25			4
							K-40	2.39+-0.24E 01		04/25			4
							MN-54	L.T. 4. E-02		04/25			4
							CO-58	L.T. 5. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 4. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4
							ZR-95	L.T. 7. E-02		04/25			4
							RU-103	L.T. 7. E-02		04/25			4
							RU-106	L.T. 3. E-01		04/25			4
							I-131	L.T. 1. E 00		04/25			4
							CS-134	L.T. 5. E-02		04/25			4
							CS-137	L.T. 4. E-02		04/25			4
							BA-140	L.T. 3. E-01		04/25			4
							CE-141	L.T. 1. E-01		04/25			4
							CE-144	L.T. 3. E-01		04/25			4
							RA-226	2.24+-0.55E 00		04/25			4
							TH-228	1.38+-0.14E 00		04/25			4
							H-3	L.T. 3. E-02		09/14			5
70847	89176 BB06013SB		03/17	0925			PU-238	L.T. 2. E-02		05/06			6
							PU-239	L.T. 1. E-02		05/06			6

The H-3 results for TI#70846 and 70851 have been revised based upon reanalysis of the samples using an analytical method considered to be more reliable for soil samples. In units of pCi/l the results are L.T. 3. E 02 and L.T. 2. E 02 respectively. J Martin 9-30-92

The H-3 result for TI#70846 has been revised. The original result was incorrectly calculated. J Martin 7-8-92

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/08/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0623	04-0029403-012	03/25/92	04/27/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70822	88902 BB13024SB		03/17	1430			PU-238	L.T. 9. E-02		05/13			6
							PU-239	L.T. 2. E-02		05/13			6
70823	88903 BB13024SC		03/17	1430			BE-7	L.T. 6. E-01		04/25			4
							K-40	1.74+-0.17E 01		04/25			4
							MN-54	L.T. 5. E-02		04/25			4
							CO-58	L.T. 6. E-02		04/25			4
							FE-59	L.T. 2. E-01		04/25			4
							CO-60	L.T. 4. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4
							ZR-95	L.T. 7. E-02		04/25			4
							RU-103	L.T. 8. E-02		04/25			4
							RU-106	L.T. 4. E-01		04/25			4
							I-131	L.T. 1. E 00		04/25			4
							CS-134	L.T. 5. E-02		04/25			4
							CS-137	L.T. 5. E-02		04/25			4
							BA-140	L.T. 3. E-01		04/25			4
							CE-141	L.T. 1. E-01		04/25			4
							CE-144	L.T. 3. E-01		04/25			4
							RA-226	1.93+-0.71E 00		04/25			4
							TH-228	1.37+-0.14E 00		04/25			4
							H-3	5.3 +-1.4 E-02		05/29			5
70824	88908 BB13037SB		03/17	1510			PU-238	L.T. 3. E-02		05/13			6
							PU-239	L.T. 1. E-02		05/13			6
70825	88909 BB13037SC		03/17	1510			BE-7	L.T. 6. E-01		04/25			4
							K-40	1.86+-0.19E 01		04/25			4
							MN-54	L.T. 5. E-02		04/25			4
							CO-58	L.T. 6. E-02		04/25			4
							FE-59	L.T. 2. E-01		04/25			4
							CO-60	L.T. 5. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/08/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0623	04-0029403-012	03/25/92	04/27/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70825	88909 BB13037SC		03/17	1510			ZR-95	L.T. 6. E-02		04/25			4
							RU-103	L.T. 8. E-02		04/25			4
							RU-106	L.T. 4. E-01		04/25			4
							I-131	L.T. 1. E 00		04/25			4
							CS-134	L.T. 6. E-02		04/25			4
							CS-137	1.03+-0.41E-01		04/25			4
							BA-140	L.T. 4. E-01		04/25			4
							CE-141	L.T. 1. E-01		04/25			4
							CE-144	L.T. 3. E-01		04/25			4
							RA-226	1.94+-0.67E 00		04/25			4
							TH-228	1.67+-0.17E 00		04/25			4
							H-3	4.7 +-1.5 E-02		05/29			5
70826	88914 BB13039SB		03/17	1540			PU-238	L.T. 1. E-01		05/05			6
							PU-239	L.T. 4. E-02		05/05			6
70827	88915 BB13039SC		03/17	1540			BE-7	L.T. 3. E-01		04/13			4
							K-40	1.99+-0.20E 01		04/13			4
							MN-54	L.T. 3. E-02		04/13			4
							CO-58	L.T. 3. E-02		04/13			4
							FE-59	L.T. 7. E-02		04/13			4
							CO-60	L.T. 3. E-02		04/13			4
							ZN-65	L.T. 6. E-02		04/13			4
							ZR-95	L.T. 3. E-02		04/13			4
							RU-103	L.T. 3. E-02		04/13			4
							RU-106	L.T. 2. E-01		04/13			4
							I-131	L.T. 2. E-01		04/13			4
							CS-134	L.T. 3. E-02		04/13			4
							CS-137	7.71+-1.78E-02		04/13			4
							BA-140	L.T. 1. E-01		04/13			4
							CE-141	L.T. 6. E-02		04/13			4
							CE-144	L.T. 2. E-01		04/13			4
							RA-226	1.87+-0.38E 00		04/13			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/09/92

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ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70827	88915 BB13039SC		03/17	1540			TH-228	1.35+-0.14E 00		04/13			4
							H-3	L.T. 2. E-02		05/29			5
70828	88920 BB13011SB		03/17	1550			PU-238	L.T. 5. E-02		05/17			6
							PU-239	L.T. 2. E-02		05/17			6
70829	88915 BB13039SB DUP		03/17	1540			BE-7	L.T. 5. E-01		04/25			4
							K-40	1.96+-0.20E 01		04/25			4
							MN-54	L.T. 4. E-02		04/25			4
							CO-58	L.T. 5. E-02		04/25			4
							FE-59	L.T. 1. E-01		04/25			4
							CO-60	L.T. 4. E-02		04/25			4
							ZN-65	L.T. 1. E-01		04/25			4
							ZR-95	L.T. 6. E-02		04/25			4
							RU-103	L.T. 7. E-02		04/25			4
							RU-106	L.T. 3. E-01		04/25			4
							I-131	L.T. 1. E 00		04/25			4
							CS-134	L.T. 5. E-02		04/25			4
							CS-137	5.89+-3.30E-02		04/25			4
							BA-140	L.T. 4. E-01		04/25			4
							CE-141	L.T. 1. E-01		04/25			4
							CE-144	L.T. 3. E-01		04/25			4
							RA-226	1.71+-0.61E 00		04/25			4
							TH-228	1.35+-0.14E 00		04/25			4
							H-3	L.T. 2. E-02		05/29			5

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 10/07/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
3-3796	04-0029403-012	09/17/92	10/20/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
89782	BB13024SA	88901	03/17	1430			H-3	3.6 +-2.1 E-02		09/29			5
89783	BB15003SA	89563	04/22	1135			H-3	NOT ANALYZED					5
89784	BB06007SA	89157	03/17	0840			H-3	3.9 +-1.4 E-02		09/29			5
89785	BG04025SA	88201	03/13	1030			H-3	2.8 +-1.3 E-02		09/29			5
89786	BG05026SA	88225	03/13	1605			H-3	2.7 +-1.0 E-02		09/29			5
89787	BG02007SA	88457	/				H-3	2.1 +-1.1 E-02		09/29			5
89788	BB02045SA	89807	03/19	1000			H-3	NOT ANALYZED		09/29			5
89789	BB15004SA	89569	04/22	1115			H-3	NOT ANALYZED		09/29			5
89790	BB12020SA	90069	03/18	1055			H-3	L.T. 7. E-03		09/29			5
89791	BB03005SA	90125	03/17	1200			H-3	L.T. 3. E-02		09/24			5
89792	BB16001SA	89892	04/22	1000			H-3	2.0 +-0.2 E-01		09/30			5
89793	BG04029SA	88213	03/13	1145			H-3	4.8 +-1.5 E-02		09/30			5
89794	BB14094SA	88419	03/16	1540			H-3	NOT ANALYZED		09/30			5
89795	BB11006SA	89275	03/18	1640			H-3	2.1 +-1.1 E-02		09/30			5
89796	BG02074SA	88451	03/10				H-3	NOT ANALYZED					5

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 10/07/92

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ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
89797	SM03015SA	88307	03/11				H-3	L.T. 8. E-02		09/30			5
89798	BB03025SA	90101	03/17	1040			H-3	5.1 +-2.5 E-02		09/30			5
89799	BB16001BSA	89851	04/22	0915			H-3	3.6 +-2.0 E-02		09/30			5
89800	BB04097SA	88262	03/16	1115			H-3	NOT ANALYZED					5
89801	BB13039SA	88913	03/17	1540			H-3	2.5 +-1.2 E-02		10/02			5
89802	BB15001SA	89551	04/22	1230			H-3	NOT ANALYZED	*				5
89803	BB04023SA	88256	03/16	1100			H-3	2.2 +-0.8 E-02		10/02			5
89804	BB02071SA	89801	03/19	1000			H-3	NOT ANALYZED	*				5

LAST PAGE OF REPORT

APPROVED BY J. GUENTHER 10/07/92

SEND 1 COPIES TO MC480S ERIC SMITH

2 - GAS LAB. 3 - RADIO CHEMISTRY LAB. 4 - GE(LI) GAMMA SPEC LAB. 5 - TRITIUM GAS/L.S. LAB. 6 - ALPHA SPEC LAB.

	TI#	H-3 (pCi/l)	Water (ml)
13024	89782	120±70	11.2
15003	89784	380±140	8.5
04025	89785	160±70	17.5
05024	89786	200±70	12.6
02001	89787	170±90	17.1
12020	89790	L.T. 200	8.6
03005	89791	L.T. 200	13.2
16001	89792	955±100	13.4
04002	89793	240±70	20.5
11006	89795	160±80	16.1
SM03015	89797	L.T. 200	9.8
03025	89798	240±120	18.4
16001B	89799	220±120	25.3
13039	89801	170±80	15.2
04023	89803	230±90	11.6

The samples listed as not analyzed were samples for which insufficient water was extracted from the soil.

FRUIT

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/11/92

PAGE 1

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0621	04-0029403-012	03/24/92	04/26/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

FOOD/GARDEN CROPS-FRUIT

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM WET)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70655	90222 BB13039AA		03/17	1630			SR-90	L.T. 2. E-03		04/10		3.13 *	3
							I-129	L.T. 3. E-02		04/07			3
							BE-7	L.T. 5. E-02		03/27			4
							K-40	3.90+-0.39E 00		03/27			4
							MN-54	L.T. 5. E-03		03/27			4
							CO-58	L.T. 5. E-03		03/27			4
							FE-59	L.T. 1. E-02		03/27			4
							CO-60	L.T. 5. E-03		03/27			4
							ZN-65	L.T. 1. E-02		03/27			4
							ZR-95	L.T. 5. E-03		03/27			4
							RU-103	L.T. 6. E-03		03/27			4
							RU-106	L.T. 4. E-02		03/27			4
							I-131	L.T. 1. E-02		03/27			4
							CS-134	L.T. 5. E-03		03/27			4
							CS-137	L.T. 5. E-03		03/27			4
							BA-140	L.T. 8. E-03		03/27			4
							CE-141	L.T. 8. E-03		03/27			4
							CE-144	L.T. 3. E-02		03/27			4
							RA-226	L.T. 8. E-02		03/27			4
							TH-228	L.T. 8. E-03		03/27			4
							H-3	L.T. 1. E-01		06/04			5
							PU-238	L.T. 5. E-04		04/24			6
							PU-239	L.T. 2. E-04		04/24			6
70656	90214 BB13024AA		03/17	1630			SR-90	L.T. 2. E-03		04/10		2.83 *	3
							I-129	L.T. 3. E-02		04/07			3
							BE-7	L.T. 4. E-02		03/27			4
							K-40	3.45+-0.35E 00		03/27			4
							MN-54	L.T. 4. E-03		03/27			4
							CO-58	L.T. 4. E-03		03/27			4
							FE-59	L.T. 1. E-02		03/27			4
							CO-60	L.T. 4. E-03		03/27			4
							ZN-65	L.T. 1. E-02		03/27			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/11/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 2
3-0621	04-0029403-012	03/24/92	04/26/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

FOOD/GARDEN CROPS-FRUIT

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM WET)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70656	90214 8B13024AA		03/17	1630			ZR-95	L.T. 4. E-03		03/27			4
							RU-103	L.T. 5. E-03		03/27			4
							RU-106	L.T. 4. E-02		03/27			4
							I-131	L.T. 1. E-02		03/27			4
							CS-134	L.T. 4. E-03		03/27			4
							CS-137	L.T. 4. E-03		03/27			4
							BA-140	L.T. 6. E-03		03/27			4
							CE-141	L.T. 7. E-03		03/27			4
							CE-144	L.T. 2. E-02		03/27			4
							RA-226	L.T. 8. E-02		03/27			4
							TH-228	L.T. 7. E-03		03/27			4
							H-3	L.T. 1. E-01		06/04			5
							PU-238	L.T. 4. E-04		04/13			6
							PU-239	L.T. 2. E-04		04/13			6
70657	90216 8B13011AA		03/17	1630			SR-90	L.T. 2. E-03		04/10		2.33 *	3
							I-129	L.T. 3. E-02		04/07			3
							BE-7	L.T. 5. E-02		03/28			4
							K-40	4.50+-0.45E 00		03/28			4
							MN-54	L.T. 5. E-03		03/28			4
							CO-58	L.T. 5. E-03		03/28			4
							FE-59	L.T. 1. E-02		03/28			4
							CO-60	L.T. 6. E-03		03/28			4
							ZN-65	L.T. 1. E-02		03/28			4
							ZR-95	L.T. 5. E-03		03/28			4
							RU-103	L.T. 6. E-03		03/28			4
							RU-106	L.T. 4. E-02		03/28			4
							I-131	L.T. 1. E-02		03/28			4
							CS-134	L.T. 5. E-03		03/28			4
							CS-137	L.T. 5. E-03		03/28			4
							BA-140	L.T. 8. E-03		03/28			4
							CE-141	L.T. 8. E-03		03/28			4
							CE-144	L.T. 3. E-02		03/28			4

VOLATILE ORGANIC COMPOUNDS

VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-38

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB14004SE
Sample Number: 88429

Matrix: Soil

Date Sampled: 3/16/92
Date Analyzed: 3/21/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 38

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	103	70 - 121
Toluene-D8	109	81 - 117
4-Bromofluorobenzene	81	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

The cover letter and the attachments are integral parts of this report.

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-25

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB14037SE
Sample Number: 88405

Matrix: Soil

Date Sampled: 3/16/92
Date Analyzed: 3/21/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 25

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	100	70 - 121
Toluene-D8	96	81 - 117
4-Bromofluorobenzene	97	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

The cover letter and the attachments are integral parts of this report.

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-28

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB14041SE
Sample Number: 88411

Matrix: Soil

Date Sampled: 3/16/92
Date Analyzed: 3/21/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 28

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	103	70 - 121
Toluene-D8	116	81 - 117
4-Bromofluorobenzene	76	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-31

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB14079SE
Sample Number: 88417

Matrix: Soil

Date Sampled: 3/16/92
Date Analyzed: 3/21/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 31

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	100	70 - 121
Toluene-D8	102	81 - 117
4-Bromofluorobenzene	87	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745-35

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB14094SE
Sample Number: 88423

Matrix: Soil

Date Sampled: 3/16/92
Date Analyzed: 3/21/92

Date Received: 3/18/92
Dilution Factor: 1

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Chloromethane		10
Vinyl Chloride		10
Bromomethane		10
Chloroethane		10
Trichlorofluoromethane		10
Acetone		25
1,1-Dichloroethene		5
Methylene Chloride		5
Carbon Disulfide		5
trans-1,2,Dichloroethene		5
1,1-Dichloroethane		5
cis-1,2-Dichloroethene {b}		5
Chloroform		5
1,2-Dichloroethane		5
2-Butanone		25
1,1,1-Trichloroethane		5
Carbon Tetrachloride		5
Benzene		5
Trichloroethene		5
1,2-Dichloropropane		5
Bromodichloromethane		5
2-Chloroethylvinlyether		10
trans-1,3-Dichloropropene		5
cis-1,3-Dichloropropene		5
1,1,2-Trichloroethane		5
Dibromochloromethane		5
Bromoform		5
4-Methyl-2-Pentanone		25
Toluene		5
2-Hexanone		25
Tetrachloroethene		5
Chlorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

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VOLATILE ORGANICS

Analytical Method: EPA 8240 - Low Level Modified {a}
Preparation Method: EPA 5030

Lab Project-Sample ID: 5745- 35

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
1,1,2,2-Tetrachloroethane.....		5
1,3-Dichlorobenzene {b}.....		5
1,4-Dichlorobenzene {b}.....		5
1,2-Dichlorobenzene {b}.....		5

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
1,2-Dichloroethane-D4	101	70 - 121
Toluene-D8	99	81 - 117
4-Bromofluorobenzene	89	74 - 121

COMMENTS:

{a} Includes all compounds as listed in Table 2 of SW-846, 3rd Edition for Method 8240.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the compound is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

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SEMI-VOLATILE ORGANIC COMPOUNDS

SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-37

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB14004SD
Sample Number: 88428

Matrix: Soil

Date Sampled: 3/16/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/26/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-37

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-37

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	61	25 - 121
Phenol-d5.....	85	24 - 113
Nitrobenzene-d5.....	89	23 - 120
2-Fluorobiphenyl.....	97	30 - 115
2,4,6-Tribromophenol.....	129	19 - 122
Terphenyl-d14.....	113	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.
{d} Surrogate recovery for 2,4,6-Tribromophenol is beyond quality control limits. Sample meets all QC acceptance criteria specified in SW846 and EPA SOW 2/88.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/01/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-24

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB14037SD
Sample Number: 88404

Matrix: Soil

Date Sampled: 3/16/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/26/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-24

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-24

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	94	25 - 121
Phenol-d5.....	91	24 - 113
Nitrobenzene-d5.....	84	23 - 120
2-Fluorobiphenyl.....	88	30 - 115
2,4,6-Tribromophenol.....	119	19 - 122
Terphenyl-d14.....	108	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/01/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-27

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB14041SD
Sample Number: 88410

Matrix: Soil

Date Sampled: 3/16/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/26/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-27

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-27

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	54	25 - 121
Phenol-d5.....	72	24 - 113
Nitrobenzene-d5.....	83	23 - 120
2-Fluorobiphenyl.....	93	30 - 115
2,4,6-Tribromophenol.....	122	19 - 122
Terphenyl-d14.....	103	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/01/92

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-30

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB14079SD
Sample Number: 88416

Matrix: Soil

Date Sampled: 3/16/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/27/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-30

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-30

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	111	25 - 121
Phenol-d5.....	103	24 - 113
Nitrobenzene-d5.....	94	23 - 120
2-Fluorobiphenyl.....	104	30 - 115
2,4,6-Tribromophenol.....	149	19 - 122
Terphenyl-d14.....	113	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.
{d} Surrogate recovery for 2,4,6-Tribromophenol is beyond quality control limits. Sample meets all QC acceptance criteria specified in SW846 and EPA SOW 2/88.

Approved By: Nancy McDonald for CM
Cheryl Matterson, Associate Chemist

Date: 4/01/92

The cover letter and attachments are integral parts of this report.

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-34

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB14094SD
Sample Number: 88422

Matrix: Soil

Date Sampled: 3/16/92
Date Extracted: 3/20/92

Date Received: 3/18/92
Date Analyzed: 3/26/92

Batch Number: 920320-0301

Dilution Factor: 1

	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Phenol		330
Bis(2-chloroethyl)ether		330
2-Chlorophenol		330
1,3-Dichlorobenzene		330
1,4-Dichlorobenzene		330
Benzyl alcohol		330
2-Methylphenol		330
1,2-Dichlorobenzene		330
Bis(2-Chloroisopropyl)ether		330
4-Methylphenol		330
N-Nitroso-di-n-propylamine		330
Hexachloroethane		330
Nitrobenzene		330
Isophorone		330
2,4-Dimethylphenol		330
1,2,4-Trichlorobenzene		330
2-Nitrophenol		330
Benzoic acid		1600
Bis(2-Chloroethoxy)methane		330
2,4-Dichlorophenol		330
Naphthalene		330
4-Chloroaniline		330
Hexachlorobutadiene		330
4-Chloro-3-methylphenol		330
2-Methylnaphthalene		330
Hexachlorocyclopentadiene		330
2,4,6-Trichlorophenol		330
2,4,5-Trichlorophenol		330
2-Chloronaphthalene		330
3-Nitroaniline		1600
Dimethylphthalate		330
2,6-Dinitrotoluene		330
Acenaphthylene		330
2-Nitroaniline		1600

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-34

COMPOUND	ANALYTE CONCENTRATION {c} ug/Kg (ppb)	REPORTING LIMIT ug/Kg (ppb)
Acenaphthene		330
2,4-Dinitrophenol		1600
4-Nitrophenol		1600
2,4-Dinitrotoluene		330
Dibenzofuran		330
Diethylphthalate		330
alpha-BHC {b}		330
4-Chlorophenyl phenyl ether		330
Fluorene		330
4-Nitroaniline		1600
4,6-Dinitro-2-methylphenol		1600
N-Nitrosodiphenylamine		330
4-Bromophenyl phenyl ether		330
beta-BHC {b}		330
Lindane {b}		330
Hexachlorobenzene		330
Pentachlorophenol		1600
Phenanthrene		330
Anthracene		330
Delta-BHC {b}		330
Heptachlor {b}		330
Aldrin {b}		330
Endrin {b}		330
Butyl benzyl phthalate		330
Fluoranthene		330
Heptachlor Epoxide		330
Pyrene		330
Dieldrin {b}		330
4,4'-DDE {b}		330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}		330
Di-n-butylphthalate		330
3,3'-Dichlorobenzidine		660
Benzo(a)anthracene		330
Bis(2-Ethylhexyl)phthalate		330
Chrysene		330
Di-n-octylphthalate		330
Benzo(b)fluoranthene		330
Benzo(k)fluoranthene		330
Benzo(a)pyrene		330
Indeno(1,2,3-c,d)pyrene		330
Dibenzo(a,h)anthracene		330
Benzo(g,h,i)perylene		330

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SEMI-VOLATILE ORGANICS

Analytical Method: EPA 8270 - Modified {a}
Preparation Method: EPA 3550

Lab Project-Sample ID: 5745-34

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	90	25 - 121
Phenol-d5.....	93	24 - 113
Nitrobenzene-d5.....	89	23 - 120
2-Fluorobiphenyl.....	95	30 - 115
2,4,6-Tribromophenol.....	111	19 - 122
Terphenyl-d14.....	108	18 - 137

COMMENTS:

{a} Includes all analytes as listed in Table 2 of Method 8270, SW-846, 3rd Edition.
{b} Additional compounds.
{c} Concentrations lower than the Reporting Limits are estimated values. No entry in "Analyte Concentration" means the analyte is not detected at all.

Approved By: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Associate Chemist

The cover letter and attachments are integral parts of this report.

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METALS

PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-39

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB14004SF
Sample Number: 88430 Matrix: Soil

Date Sampled: 3/16/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1106 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	1.2	1	.50	3/24/92
Beryllium (Be)/6010.....	.43	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	11.	1	1.0	3/20/92
Copper (Cu)/6010.....	8.9	1	1.0	3/20/92
Lead (Pb)/6010.....	11.	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	6.2	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	41.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1104; and Hg was digested on 3/19/92, Batch # 920319-1102 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-26

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB14037SF
Sample Number: 88406 Matrix: Soil

Date Sampled: 3/16/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1106 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	2.2	1	.50	3/24/92
Beryllium (Be)/6010.....	.43	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	15.	1	1.0	3/20/92
Copper (Cu)/6010.....	11.	1	1.0	3/20/92
Lead (Pb)/6010.....	9.0	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	7.9	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	42.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1104; and Hg was digested on 3/19/92, Batch # 920319-1102 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-29

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB14041SF
Sample Number: 88412 Matrix: Soil

Date Sampled: 3/16/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1106 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	2.4	1	.50	3/24/92
Beryllium (Be)/6010.....	.40	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	8.7	1	1.0	3/20/92
Copper (Cu)/6010.....	6.0	1	1.0	3/20/92
Lead (Pb)/6010.....	10.	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	5.2	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	37.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1104; and Hg was digested on 3/19/92, Batch # 920319-1102 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-32

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB14079SF
Sample Number: 88418 Matrix: Soil

Date Sampled: 3/16/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1106 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	1.0	1	.50	3/24/92
Beryllium (Be)/6010.....	.51	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	14.	1	1.0	3/20/92
Copper (Cu)/6010.....	9.2	1	1.0	3/20/92
Lead (Pb)/6010.....	7.4	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	8.5	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	40.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1104; and Hg was digested on 3/19/92, Batch # 920319-1102 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-36

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB14094SF
Sample Number: 88424 Matrix: Soil

Date Sampled: 3/16/92 Date Received: 3/18/92
Date Digested: 3/19/92 {b} Batch Number: 920319-1106 {b}

METAL (SYMBOL)/EPA METHOD	ANALYTE CONCENTRATION {c} mg/Kg (ppm)	DILUTION FACTOR	REPORTING LIMIT mg/Kg (ppm)	DATE ANALYZED
Antimony (Sb)/6010.....		1	2.5	3/20/92
Arsenic (As)/7060.....	2.6	5	2.5	3/24/92
Beryllium (Be)/6010.....	.46	1	.25	3/20/92
Cadmium (Cd)/6010.....		1	.50	3/20/92
Chromium (Cr)/6010.....	12.	1	1.0	3/20/92
Copper (Cu)/6010.....	9.4	1	1.0	3/20/92
Lead (Pb)/6010.....	9.4	1	2.5	3/20/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	6.8	1	1.0	3/20/92
Selenium (Se)/7740.....		1	.25	3/23/92
Silver (Ag)/6010.....		1	1.0	3/20/92
Thallium (Tl)/7841.....		1	.50	3/23/92
Zinc (Zn)/6010.....	43.	1	1.0	3/20/92

COMMENTS:

{a} Applies to all metals except As, Se, Tl and Hg. EPA Method 3050 Nitric used for As, Se and Tl digestion. EPA Method 7471 used for Hg digestion.
{b} Applies to all metals except As, Se, Tl and Hg. As, Se and Tl were digested on 3/19/92, Batch # 920319-1104; and Hg was digested on 3/19/92, Batch # 920319-1102 .
{c} No entry in the "Concentration" means the metal is not detected at all.
{d} The sample for Arsenic was diluted 5 fold to bring target analyte within linear working range.

Approved by: Nancy McDonald for CM Date: 4/01/92
Cheryl Matterson, Association Chemist

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RADIONUCLIDES

Table: Results of the analyses for iodine-129 and strontium-90 in nineteen (19) soil samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Conc. pci/gwet I-129	Date Analyzed	Conc. pci/gdry Sr-90	Date Analyzed
88201	BG04025SA	03/13/92	SPS-1872	<0.3	05/05	0.02±0.01	05/02
88207	BG04090SA	03/13/92	1873	<0.3	05/05	0.05±0.01	05/02
88213	BG04029SA	03/13/92	1874	<0.2	05/07	0.02±0.01	05/02
88219	BG05074SA	03/13/92	1875	<0.3	05/07	0.05±0.01	05/13
88225	BG05026SA	03/13/92	1876	<0.2	05/07	0.08±0.02	05/13
88231	BG05016SA	03/13/92	1877	<0.2	05/08	0.05±0.01	05/13
88244	M35A	03/13/92	1878	<0.2	05/11	0.05±0.02	05/15
88251	BB04021SA	03/16/92	1879	<0.2	05/11	0.03±0.01	06/03
88256	BB04023SA	03/16/92	1880	<0.3	05/12	0.02±0.01	06/03
88262	BB04097SA	03/16/92	1881	<0.3	05/12	0.01±0.01	06/09
88265	BB04082SA	03/16/92	1882	<0.3	05/13	0.01±0.01	05/13
88274	BB04026SA	03/16/92	1883	<0.2	05/13	0.03±0.01	05/13
88401	BB14037SA	03/16/92	1884	<0.2	05/14	0.02±0.01	05/15
88407	BB14041SA	03/16/92	1885	<0.2	05/14	0.06±0.01	05/13
88413	BB14079SA	03/16/92	1886	<0.3	05/14	0.03±0.01	05/13
88419	BB14094SA	03/16/92	1887	<0.2	05/14	0.02±0.01	05/13
88425	BB14004SA	03/16/92	1888	<0.3	05/15	0.05±0.01	05/13
88293	BB00003SA	03/16/92	1889	<0.3	05/15	0.04±0.01	05/13
88433	BB00003SA	03/16/92	1898	<0.2	05/19	0.06±0.01	06/03

The error given is the probable counting error at 95% confidence level. Less than (<) values are based on 3 sigma counting error for background sample.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

ADDITIONAL DATA 10/06/92
RUN DATE 07/07/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-1313	04-0029403-012	05/04/92	06/06/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER		CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
75180	90432	BB00007SB		04/23	0930			PU-238	3.0 +-1.9 E-02		05/26			6
								PU-239	L.T. 5. E-03		05/26			6
75181	89583	BB00007SC		04/22	1155			BE-7	L.T. 5. E-01		06/08			4
								K-40	2.32+-0.23E 01		06/08			4
								MN-54	L.T. 4. E-02		06/08			4
								CO-58	L.T. 4. E-02		06/08			4
								FE-59	L.T. 1. E-01		06/08			4
								CO-60	L.T. 4. E-02		06/08			4
								ZN-65	L.T. 9. E-02		06/08			4
								ZR-95	L.T. 5. E-02		06/08			4
								RU-103	L.T. 6. E-02		06/08			4
								RU-106	L.T. 3. E-01		06/08			4
								I-131	L.T. 2. E 00		06/08			4
								CS-134	L.T. 4. E-02		06/08			4
								CS-137	L.T. 4. E-02		06/08			4
								BA-140	L.T. 4. E-01		06/08			4
								CE-141	L.T. 1. E-01		06/08			4
								CE-144	L.T. 2. E-01		06/08			4
								RA-226	1.20+-0.42E 00		06/08			4
								TH-228	7.78+-0.78E-01		06/08			4
								H-3	L.T. 1. E-02		06/22			5
75183	88435	BB14079SB		03/16	1515			PU-238	1.2 +-0.3 E-01		06/06			6
								PU-239	L.T. 6. E-03		06/06			6
75184	88436	BB14079SC		03/16	1515			BE-7	L.T. 5. E-01		06/08			4
								K-40	2.27+-0.23E 01		06/08			4
								MN-54	L.T. 4. E-02		06/08			4
								CO-58	L.T. 5. E-02		06/08			4
								FE-59	L.T. 2. E-01		06/08			4
								CO-60	L.T. 4. E-02		06/08			4
								ZN-65	L.T. 1. E-01		06/08			4

The second analysis of TI#75183 for Pu-238 gave the result of L.T. 8. E-02 pCi/g. Statistical variations in the sample count rate and the background rate probably caused the small, positive first results which had relatively large counting errors.

J. Martin 10-6 92

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 07/07/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 2
3-1313	04-0029403-012	05/04/92	06/06/92	

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
75184 88436	BB14079SC		03/16	1515			ZR-95	L.T. 6. E-02		06/08			4
							RU-103	L.T. 7. E-02		06/08			4
							RU-106	L.T. 3. E-01		06/08			4
							I-131	L.T. 2. E 00		06/08			4
							CS-134	L.T. 5. E-02		06/08			4
							CS-137	L.T. 4. E-02		06/08			4
							BA-140	L.T. 6. E-01		06/08			4
							CE-141	L.T. 1. E-01		06/08			4
							CE-144	L.T. 3. E-01		06/08			4
							RA-226	2.15+-0.57E 00		06/08			4
							TH-228	1.26+-0.13E 00		06/08			4
							H-3	1.7 +-1.0 E-02		06/24			5
75185 90244	BG00001SC		03/13	1445			BE-7	L.T. 5. E-01		06/08			4
							K-40	2.10+-0.21E 01		06/08			4
							MN-54	L.T. 4. E-02		06/08			4
							CO-58	L.T. 5. E-02		06/08			4
							FE-59	L.T. 1. E-01		06/08			4
							CO-60	L.T. 3. E-02		06/08			4
							ZN-65	L.T. 9. E-02		06/08			4
							ZR-95	L.T. 6. E-02		06/08			4
							RU-103	L.T. 7. E-02		06/08			4
							RU-106	L.T. 3. E-01		06/08			4
							I-131	L.T. 2. E 00		06/08			4
							CS-134	L.T. 4. E-02		06/08			4
							CS-137	7.28+-2.63E-02		06/08			4
							BA-140	L.T. 4. E-01		06/08			4
							CE-141	L.T. 1. E-01		06/08			4
							CE-144	L.T. 2. E-01		06/08			4
							RA-226	2.72+-0.50E 00		06/08			4
							TH-228	7.58+-0.76E-01		06/08			4
							H-3	1.5 +-0.9 E-02		06/24			5

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TELEDYNE ISOTOPES

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ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70181	88403	BB14037SC	03/16	1440			BE-7	L.T. 3. E-01		04/07			4
							K-40	2.10+-0.21E 01		04/07			4
							MN-54	L.T. 3. E-02		04/07			4
							CO-58	L.T. 4. E-02		04/07			4
							FE-59	L.T. 1. E-01		04/07			4
							CO-60	L.T. 3. E-02		04/07			4
							ZN-65	L.T. 8. E-02		04/07			4
							ZR-95	L.T. 4. E-02		04/07			4
							RU-103	L.T. 5. E-02		04/07			4
							RU-106	L.T. 3. E-01		04/07			4
							I-131	L.T. 2. E-01		04/07			4
							CS-134	L.T. 4. E-02		04/07			4
							CS-137	1.66+-0.35E-01		04/07			4
							BA-140	L.T. 1. E-01		04/07			4
							CE-141	L.T. 8. E-02		04/07			4
							CE-144	L.T. 2. E-01		04/07			4
							RA-226	1.41+-0.52E 00		04/07			4
							TH-228	1.26+-0.13E 00		04/07			4
							H-3	NOT ANALYZED					5
70182	88408	BB14041SB	03/16	1500			PU-238	L.T. 6. E-02		06/04			6
							PU-239	L.T. 8. E-03		06/04			6
70183	88409	BB14041SC	03/16	1500			BE-7	L.T. 5. E-01		04/07			4
							K-40	2.21+-0.22E 01		04/07			4
							MN-54	L.T. 4. E-02		04/07			4
							CO-58	L.T. 5. E-02		04/07			4
							FE-59	L.T. 1. E-01		04/07			4
							CO-60	L.T. 5. E-02		04/07			4
							ZN-65	L.T. 1. E-01		04/07			4
							ZR-95	L.T. 6. E-02		04/07			4
							RU-103	L.T. 6. E-02		04/07			4
							RU-106	L.T. 4. E-01		04/07			4

TI#70181 and 70183 were probably dried in their entirety by the gamma lab before an aliquot was removed for the tritium lab.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/09/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 2
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ERIC SMITH
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IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70183	88409 BB14041SC		03/16	1500			I-131	L.T. 3. E-01		04/07			4
							CS-134	L.T. 6. E-02		04/07			4
							CS-137	2.69+-0.50E-01		04/07			4
							BA-140	L.T. 1. E-01		04/07			4
							CE-141	L.T. 1. E-01		04/07			4
							CE-144	L.T. 4. E-01		04/07			4
							RA-226	L.T. 1. E 00		04/07			4
							TH-228	1.15+-0.12E 00		04/07			4
							H-3	NOT ANALYZED					5
70185			/				TO BE REPORTED AS TI 75184						4
70186	88420 BB14094SB		03/16	1540			PU-238	L.T. 5. E-02		06/04			6
							PU-239	L.T. 1. E-02		06/04			6
70187	88421 BB14094SC		03/16	1540			BE-7	L.T. 3. E-01		04/07			4
							K-40	2.27+-0.23E 01		04/07			4
							MN-54	L.T. 4. E-02		04/07			4
							CO-58	L.T. 4. E-02		04/07			4
							FE-59	L.T. 9. E-02		04/07			4
							CO-60	L.T. 3. E-02		04/07			4
							ZN-65	L.T. 8. E-02		04/07			4
							ZR-95	L.T. 4. E-02		04/07			4
							RU-103	L.T. 4. E-02		04/07			4
							RU-106	L.T. 3. E-01		04/07			4
							I-131	L.T. 2. E-01		04/07			4
							CS-134	L.T. 4. E-02		04/07			4
							CS-137	L.T. 4. E-02		04/07			4
							BA-140	L.T. 1. E-01		04/07			4
							CE-141	L.T. 6. E-02		04/07			4
							CE-144	L.T. 2. E-01		04/07			4
							RA-226	1.53+-0.44E 00		04/07			4
							TH-228	1.39+-0.14E 00		04/07			4

TI#	H-3 (pCi/l)
70189	L.T. 2. E 02

The H-3 result for TI#70187 has been withdrawn. The H-3 results of several samples analyzed by the same analytical method were not confirmed by an alternate method.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/08/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0601	04-0029403-012	03/18/92	04/20/92

ERIC SMITH
MCLAREN/HART
16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION		STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70187	88421	88140945C		03/16	1540									
70188	88426	88140048B		03/16	1600			PU-238	L.T. 7. E-02		06/04			6
								PU-239	L.T. 2. E-02		06/04			6
70189	88427	88140045C		03/16	1600			BE-7	L.T. 4. E-01		04/07			4
								K-40	2.28+-0.23E 01		04/07			4
								MN-54	L.T. 4. E-02		04/07			4
								CO-58	L.T. 4. E-02		04/07			4
								FE-59	L.T. 1. E-01		04/07			4
								CO-60	L.T. 4. E-02		04/07			4
								ZN-65	L.T. 9. E-02		04/07			4
								ZR-95	L.T. 5. E-02		04/07			4
								RU-103	L.T. 5. E-02		04/07			4
								RU-106	L.T. 3. E-01		04/07			4
								I-131	L.T. 2. E-01		04/07			4
								CS-134	L.T. 5. E-02		04/07			4
								CS-137	2.04+-0.38E-01		04/07			4
								BA-140	L.T. 1. E-01		04/07			4
								CE-141	L.T. 8. E-02		04/07			4
								CE-144	L.T. 2. E-01		04/07			4
								RA-226	2.08+-0.57E 00		04/07			4
								TH-228	1.41+-0.14E 00		04/07			4
								H-3	L.T. 2. E-02		05/27			5

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 05/15/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE
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ERIC SMITH
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16755 VON KARMAN AVE
IRVINE CA 92714

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70180	88402 BB14037SB		03/16	1440			PU-238	L.T. 1. E-02		04/09			6
							PU-239	L.T. 9. E-03		04/09			6