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

Quality Assurance / Quality Control Data

March 10, 1993

Prepared by:

McLaren/Hart

ENVIRONMENTAL ENGINEERING CORPORATION

SHEA #86199

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TRIP BLANKS

FIELD BLANK

SUMMARY

FIELD DUPLICATES
AND CORRESPONDING
SAMPLE LOCATIONS

FIELD DUPLICATE IDENTIFIER	ACTUAL SAMPLE LOCATION
BB00001WA	BB18003WA
BB00001WB	BB18003WB
BB00001WC	BB18003WC
BB00001WD	BB18003WD
BB00001WE	BB18003WE
BB00001WF	BB18003WF
BB00001WG	BB18003WG
BB00001WH	BB18003WH
BB00001WI	BB18003WI
BB00003SA	BB14004SA
BB00003SB	BB13024SB
BB00003SC	BB03017SC
BB00003SD	BB13037SD
BB00003SE	BB14079SE
BB00003SF	BB14041SF
BB00004SA	BB01038SA
BB00004SB	BB05003SB
BB00004SC	BB01001SC
BB00004SD	BB13039SD
BB00004SE	BB12006SE
BB00004SF	BB12020SF
BB00005SA	BB09100SA
BB00005SB	BB09070SB
BB00005SC	BB02060SC
BB00005SD	BB11057SD
BB00005SE	BB08034SE
BB00005SF	BB09031SF
BB00006SA	BB16002SA
BB00006SB	BB17004SB
BB00006SC	BB10079SC
BB00006SD	BB10067SD
BB00006SE	BB18003SE
BB00006SF	BB10067SF
BB00007SA	BB15001SA
BB00007SB	BB19004SB
BB00007SC	BB15002SC
BB00007SD	BB15002SD
BB00007SE	BB16003SE
BB00007SF	BB19002SF
BB00009LA	BB12026LA
BG00001SE	BG01100SE
BG00002SA	BG06096SA

FIELD DUPLICATES
AND CORRESPONDING
SAMPLE LOCATIONS

FIELD DUPLICATE IDENTIFIER	ACTUAL SAMPLE LOCATION
BG00002SB	BG06096SB
BG00002SD	BG06089SD
BG00002SF	BG04025SF
SM00001SA	SM04041SA
SM00001SB	SM02032SB
SM00001SD	SM04003SD
SM00001SF	SM04024SF
SM00002SC	SM03014SC
SM00002SE	SM03014SE
SM00003GH	SM05003GH

VOLATILE ORGANIC COMPOUNDS

VOLATILE ORGANICS

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

Lab Project-Sample ID: 5709-12

Project Name: Rocketdyne SSFL
Project Number: 03-0029403.012

Sample Description: BG-00-001 SE
Sample Number: 88494

Matrix: Soil

Date Sampled: 3/10/92
Date Analyzed: 3/14/92

Date Received: 3/11/92
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
[illegible]-Dichloroethene		5
[illegible]hylene 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
[illegible]rachloroethene		5
[illegible]lorobenzene		5
Ethylbenzene		5
m & p-Xylene		5
o-Xylene		5
Styrene		5

VOLATILE ORGANICS

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

Lab Project-Sample ID: 5709- 12

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	100	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.
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: 3/28/92
Cheryl Matterson, Associate Chemist

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

VOLATILE ORGANICS

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

Lab Project-Sample ID: 5727-34

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: SM00002SE
Sample Number: 88331

Matrix: Soil

Date Sampled: 3/11/92
Date Analyzed: 3/19/92

Date Received: 3/14/92
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: 5727- 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	103	70 - 121
Toluene-D8	111	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: 3/31/92
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: 5745-33

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB00003SE
Sample Number: 88432

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- 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	105	70 - 121
Toluene-D8	99	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: 5756-45

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB00004SE
Sample Number: 90081

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- 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	99	70 - 121
Toluene-D8	110	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: 5758-16

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB00005SE
Sample Number: 89381

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		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- 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	99	70 - 121
Toluene-D8	113	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: 5868-38

Project Name: Rocketdyne SSFL
Project Number: 04.0029403.012

Sample Description: **BB00006SE**
Sample Number: 89231

Matrix: Soil

Date Sampled: 4/21/92
Date Analyzed: 5/01/92

Date Received: 4/23/92
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: 5868- 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	95	70 - 121
Toluene-D8	106	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: 5/06/92
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: 5868-86

Project Name: Rocketdyne SSFL
Project Number: 04.0029403.012

Sample Description: BB00007SE
Sample Number: 89882

Matrix: Soil

Date Sampled: 4/22/92
Date Analyzed: 4/30/92

Date Received: 4/23/92
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: 5868- 86

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	92	70 - 121
Toluene-D8	102	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: 5/06/92
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: 5715-39

Project Name: Rocketdyne SSFL
Project Number: 03.0029403.012

Sample Description: SM-00-001-SD
Sample Number: 88532

Matrix: Soil

Date Sampled: 3/11/92
Date Extracted: 3/16/92

Date Received: 3/12/92
Date Analyzed: 3/23/92

Batch Number: 920316-0301

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: 5715-39

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: 5715-39

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	95	25 - 121
Phenol-d5.....	98	24 - 113
Nitrobenzene-d5.....	99	23 - 120
2-Fluorobiphenyl.....	97	30 - 115
2,4,6-Tribromophenol.....	118	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: 3/27/92

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: 5727-25

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BG00002SD
Sample Number: 89619

Matrix: Soil

Date Sampled: 3/12/92
Date Extracted: 3/17/92

Date Received: 3/14/92
Date Analyzed: 3/23/92

Batch Number: 920317-1901

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: 5727-25

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: 5727-25

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	90	25 - 121
Phenol-d5.....	96	24 - 113
Nitrobenzene-d5.....	88	23 - 120
2-Fluorobiphenyl.....	88	30 - 115
2,4,6-Tribromophenol.....	88	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
Cheryl Matterson, Associate Chemist

Date: 3/31/92

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: 5756-13

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB00003SD
Sample Number: 88932

Matrix: Soil

Date Sampled: 3/17/92
Date Extracted: 4/02/92

Date Received: 3/19/92
Date Analyzed: 4/03/92

Batch Number: 920402-0302

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: 5756-13

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: 5756-13

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	95	25 - 121
Phenol-d5.....	100	24 - 113
Nitrobenzene-d5.....	100	23 - 120
2-Fluorobiphenyl.....	93	30 - 115
2,4,6-Tribromophenol.....	102	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: 5756-14

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB00004SD
Sample Number: 88933

Matrix: Soil

Date Sampled: 3/17/92
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: 5756-14

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: 5756-14

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	77	25 - 121
Phenol-d5.....	76	24 - 113
Nitrobenzene-d5.....	81	23 - 120
2-Fluorobiphenyl.....	84	30 - 115
2,4,6-Tribromophenol.....	98	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

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: 5758-111

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB00005SD
Sample Number: 89281

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: 5758-111

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	34	330
Dieldrin {b}		330
4,4'-DDE {b}	360	330
Endosulfan sulfate		330
4,4'-DDT {b}		330
4,4'-DDD {b}	100	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: 5758-111

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	90	25 - 121
Phenol-d5.....	95	24 - 113
Nitrobenzene-d5.....	80	23 - 120
2-Fluorobiphenyl.....	78	30 - 115
2,4,6-Tribromophenol.....	94	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 results for Pyrene 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: 5758-95

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB00006SD
Sample Number: 89690

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: 5758-95

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: 5758-95

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	36	25 - 121
Phenol-d5.....	62	24 - 113
Nitrobenzene-d5.....	61	23 - 120
2-Fluorobiphenyl.....	75	30 - 115
2,4,6-Tribromophenol.....	95	19 - 122
Terphenyl-d14.....	86	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: 5868-66

Project Name: Rocketdyne SSFL
Project Number: 04.0029403.012

Sample Description: BB00007SD
Sample Number: 89582

Matrix: Soil

Date Sampled: 4/22/92
Date Extracted: 4/27/92

Date Received: 4/23/92
Date Analyzed: 4/29/92

Batch Number: 920427-1901

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: 5868-66

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: 5868-66

SURROGATE	PERCENT RECOVERY	ACCEPTANCE LIMITS
2-Fluorophenol.....	78	25 - 121
Phenol-d5.....	75	24 - 113
Nitrobenzene-d5.....	59	23 - 120
2-Fluorobiphenyl.....	62	30 - 115
2,4,6-Tribromophenol.....	73	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.

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

Date: 5/06/92

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: 5715-40

Project Name: Rocketdyne SSFL
Project Number: 03.0029403.012

Sample Description: SM-00-001-SF
Sample Number: 88533

Matrix: Soil

Date Sampled: 3/11/92
Date Digested: 3/17/92 {b}

Date Received: 3/12/92
Batch Number: 920317-1103 {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	3/18/92
Arsenic (As)/7060.....	2.5	1	.50	3/21/92
Beryllium (Be)/6010.....	.74	1	.25	3/18/92
Cadmium (Cd)/6010.....		1	.50	3/18/92
Chromium (Cr)/6010.....	16.	1	1.0	3/18/92
Copper (Cu)/6010.....	20.	1	1.0	3/18/92
Lead (Pb)/6010.....	26.	1	2.5	3/18/92
Mercury (Hg)/7471.....		1	.25	3/18/92
Nickel (Ni)/6010.....	11.	1	1.0	3/18/92
Selenium (Se)/7740.....		1	.25	3/21/92
Silver (Ag)/6010.....		1	1.0	3/18/92
Thallium (Tl)/7841.....		1	.50	3/21/92
Zinc (Zn)/6010.....	60.	1	1.0	3/18/92

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 3/17/92, Batch # 920317-1102; and Hg was digested on 3/17/92, Batch # 920317-1101 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 3/31/92
Cheryl Matterson, Association Chemist

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5727-46

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BG00002SF
Sample Number: 88237

Matrix: Soil

Date Sampled: 3/13/92
Date Digested: 3/18/92 {b}

Date Received: 3/14/92
Batch Number: 920318-1101 {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	3/18/92
Arsenic (As)/7060.....	3.0	1	.50	3/22/92
Beryllium (Be)/6010.....	.67	1	.25	3/18/92
Cadmium (Cd)/6010.....		1	.50	3/18/92
Chromium (Cr)/6010.....	23.	1	1.0	3/18/92
Copper (Cu)/6010.....	17.	1	1.0	3/18/92
Lead (Pb)/6010.....	18.	1	2.5	3/18/92
Mercury (Hg)/7471.....		1	.25	3/21/92
Nickel (Ni)/6010.....	16.	1	1.0	3/18/92
Selenium (Se)/7740.....		1	.25	3/22/92
Silver (Ag)/6010.....		1	1.0	3/18/92
Thallium (Tl)/7841.....		1	.50	3/22/92
Zinc (Zn)/6010.....	68.	1	1.0	3/18/92

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 3/18/92, Batch # 920318-1102; and Hg was digested on 3/18/92, Batch # 920318-1103 .
{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: 3/31/92

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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5745-82

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB00003SF
Sample Number: 88431

Matrix: Soil

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

Date Received: 3/18/92
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.....	1.7	1	.50	3/24/92
Beryllium (Be)/6010.....	.53	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.....	14.	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.....	8.3	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 # 920319-1105; 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
Cheryl Matterson, Association 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 3050 {a}

Lab Project-Sample ID: 5756-46

Project Name: Rocketdyne
Project Number: 03.029403.012

Sample Description: BB00004SF
Sample Number: 90082

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.....	2.7	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.....	16.	1	1.0	3/21/92
Copper (Cu)/6010.....	22.	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.....	11.	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.....	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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PRIORITY POLLUTANT METALS

Preparation Method: EPA 3050 {a}

Lab Project-Sample ID: 5758-50

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB00005SF
Sample Number: 88832

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.....	4.3	1	.50	3/26/92
Beryllium (Be)/6010.....	.78	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.....	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.....	18.	1	1.0	3/26/92
Selenium (Se)/7740.....	2.7	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 sample for Selenium was diluted 4 fold to bring target analyte 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: 5758-96

Project Name: Rocketdyne
Project Number: 03.0029403.012

Sample Description: BB00006SF
Sample Number: 89691

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.....	6.6	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.....	24.	1	1.0	3/26/92
Copper (Cu)/6010.....	21.	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.....	19.	1	1.0	3/26/92
Selenium (Se)/7740.....	.54	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.....	75.	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

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: 5879-25

Project Name: Rocketdyne
Project Number: 040029403012

Sample Description: BB00007SF
Sample Number: 90431

Matrix: Soil

Date Sampled: 4/23/92
Date Digested: 4/27/92 {b}

Date Received: 4/25/92
Batch Number: 920427-1104 {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	5/01/92
Arsenic (As)/7060.....	2.7	1	.50	5/01/92
Beryllium (Be)/6010.....	.39	1	.25	5/04/92
Cadmium (Cd)/6010.....		1	.50	5/01/92
Chromium (Cr)/6010.....	11.	1	1.0	5/01/92
Copper (Cu)/6010.....	6.2	1	1.0	5/01/92
Lead (Pb)/6010.....	13.	1	2.5	5/01/92
Mercury (Hg)/7471.....		1	.25	4/27/92
Nickel (Ni)/6010.....	5.9	1	1.0	5/01/92
Selenium (Se)/7740.....		1	.25	4/30/92
Silver (Ag)/6010.....		1	1.0	5/01/92
Thallium (Tl)/7841.....		1	.50	4/30/92
Zinc (Zn)/6010.....	39.	1	1.0	5/01/92

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 4/27/92, Batch # 920427-1105; and Hg was digested on 4/27/92, Batch # 920427-1106 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 5/12/92
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 twenty-three (23) 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
88451	BG02074SA	03/10/92	SPS-1821	<0.3	04/29	<0.01	04/25
88457	BG02007SA	03/10/92	1822	<0.1	04/29	0.02±0.01	04/25
88464	BG02078SA	03/10/92	1823	<0.1	04/30	0.03±0.01	04/25
88476	BG01100SA	03/10/92	1824	<0.1	04/30	0.05±0.01	04/25
88482	BG01008SA	03/10/92	1825	<0.2	04/30	0.01±0.01	04/25
88501	SM04095SA	03/11/92	1826	<0.3	05/01	0.14±0.02	04/24
88507	SM04003SA	03/11/92	1827	<0.1	05/01	0.04±0.01	04/24
88513	SM04028SA	03/11/92	1828	<0.2	05/01	0.03±0.01	04/24
88519	SM04026SA	03/11/92	1829	<0.3	04/14	0.03±0.01	04/24
88525	SM04024SA	03/11/92	1830	<0.2	04/13	0.10±0.01	04/24
88531	SM00001SA	03/11/92	1831	<0.1	04/13	0.15±0.02	04/24
88488	BG01005SA	03/11/92	1832	<0.2	04/13	0.03±0.01	04/25
88351	SM02044SA	03/11/92	1833	<0.1	05/29	0.02±0.01	04/25
88357	SM02004SA	03/11/92	1834	<0.1	04/14	0.03±0.01	04/25
88363	SM02032SA	03/11/92	1835	<0.2	04/23	0.02±0.01	04/25
88369	SM02021SA	03/11/92	1836	<0.2	05/04	0.03±0.01	04/25
88375	SM02019SA	03/11/92	1837	<0.2	04/24	0.05±0.01	04/30
88301	SM03012SA	03/11/92	1838	<0.1	05/29	0.02±0.01	04/30
88307	SM03015SA	03/11/92	1839	<0.1	04/27	0.05±0.01	04/30
88313	SM03009SA	03/11/92	1840	<0.2	04/28	0.03±0.01	04/30
88319	SM03001SA	03/11/92	1841	<0.2	05/04	0.07±0.01	05/02
88325	SM03014SA	03/11/92	1842	<0.1	05/05	0.02±0.01	05/02
88470	M1SA	03/10/92	1856	<0.1	05/05	0.08±0.02	05/13

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

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.

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	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.

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
89575	BB15005SA	04/22/92	SPS-2158	<0.2	06/30	<0.01	07/11
89581	BB00007SA	04/22/92	SPS-2159	<0.3	06/30	0.02±0.02	07/11
89851	BB16001BSA	04/22/92	SPS-2160	<0.3	06/30	0.03±0.01	07/11
89857	BB16002SA	04/22/92	SPS-2161	<0.3	07/11	0.09±0.01	07/15
89863	BB16003SA	04/22/92	SPS-2162	<0.3	07/20	0.02±0.01	07/16
89869	BB16004SA	04/22/92	SPS-2163	<0.3	07/11	0.15±0.02	07/15
89875	BB16005SA	04/22/92	SPS-2164	<0.3	07/07	0.04±0.01	08/11
89881	BB00006SA	04/22/92	SPS-2165	<0.2	07/07	0.12±0.02	07/15
89892	BB16001ASA	04/22/92	SPS-2166	<0.3	07/07	0.08±0.01	07/16
89301	BB17001SA	04/21/92	SPS-2167	<0.3	07/08	0.01±0.01	07/16
89307	BB17002SA	04/21/92	SPS-2168	<0.3	07/08	0.02±0.01	07/11
89313	BB17003SA	04/21/92	SPS-2169	<0.2	07/08	0.01±0.01	07/16
89319	BB17004SA	04/21/92	SPS-2170	<0.2	07/08	0.03±0.01	08/11
Dup	BB17004SA	04/21/92	SPS-2170D	<0.2	07/08	0.02±0.01	08/11
89551	BB15001SA	04/21/92	SPS-2171	<0.3	07/09	0.01±0.01	08/11
89557	BB15002SA	04/21/92	SPS-2172	<0.3	07/09	<0.01	07/16
89563	BB15003SA	04/21/92	SPS-2173	<0.3	07/10	0.01±0.01	07/15
89569	BB15004SA	04/21/92	SPS-2174	<0.2	07/10	<0.01	07/11
90151	BB18001ASA	04/21/92	SPS-2175	<0.3	07/10	0.02±0.01	07/16
90157	BB18002ASA	04/21/92	SPS-2176	<0.3	07/13	0.02±0.01	08/11
90163	BB18002SA	04/21/92	SPS-2177	<0.3	07/13	<0.01	07/11
90170	BB18003SA	04/21/92	SPS-2178	<0.2	07/13	0.01±0.01	07/15
89219	BB18001SA	04/21/92	SPS-2179	<0.3	07/14	0.02±0.01	08/11
89225	BB18003ASA	04/21/92	SPS-2180	<0.2	07/14	<0.01	07/16
89213	BB18003BSA	04/21/92	SPS-2181	<0.3	07/14	<0.01	07/16
89207	BB18002BSA	04/21/92	SPS-2182	<0.3	07/18	0.02±0.01	08/11
89201	BB18001BSA	04/21/92	SPS-2183	<0.3	07/17	0.01±0.01	08/11
90401	BB19001SA	04/23/92	SPS-2184	<0.3	07/17	0.08±0.02	08/11
90407	BB19002SA	04/23/92	SPS-2185	<0.3	07/18	0.09±0.02	08/11
90413	BB19003SA	04/23/92	SPS-2186	<0.3	07/18	0.02±0.01	08/11
90419	BB19004SA	04/23/92	SPS-2187	<0.3	07/18	0.03±0.01	08/11

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 04/14/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 4
3-0636	04-0029403-012	03/13/92	04/15/92	

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.
69572	88377 SM02-019-SC		03/11	1200			BE-7	L.T. 3. E-01		03/26			4
							K-40	2.46+-0.25E 01		03/26			4
							MN-54	L.T. 3. E-02		03/26			4
							CO-58	L.T. 4. E-02		03/26			4
							FE-59	L.T. 9. E-02		03/26			4
							CO-60	L.T. 4. E-02		03/26			4
							ZN-65	L.T. 9. E-02		03/26			4
							ZR-95	L.T. 5. E-02		03/26			4
							RU-103	L.T. 4. E-02		03/26			4
							RU-106	L.T. 3. E-01		03/26			4
							I-131	L.T. 1. E-01		03/26			4
							CS-134	L.T. 4. E-02		03/26			4
							CS-137	1.20+-0.34E-01		03/26			4
							BA-140	L.T. 8. E-02		03/26			4
							CE-141	L.T. 7. E-02		03/26			4
							CE-144	L.T. 2. E-01		03/26			4
							RA-226	1.58+-0.54E 00		03/26			4
							TH-228	1.15+-0.12E 00		03/26			4
							H-3	L.T. 2. E-02		03/30			5
69573	88381 SM02-001-SB		03/11	1000			PU-238	L.T. 1. E-02		04/06			6
							PU-239	L.T. 4. E-03		04/06			6
69574	88302 SM-03-012 SB		03/11	1300			PU-238	L.T. 2. E-02		04/08			6
							PU-239	L.T. 4. E-03		04/08			6
69575	88303 SM-03-012 SC		03/11	1300			BE-7	L.T. 3. E-01		03/26			4
							K-40	2.19+-0.22E 01		03/26			4
							MN-54	L.T. 3. E-02		03/26			4
							CO-58	L.T. 3. E-02		03/26			4
							FE-59	L.T. 9. E-02		03/26			4
							CO-60	L.T. 3. E-02		03/26			4
							ZN-65	L.T. 8. E-02		03/26			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

ADDITIONAL DATA 10/06/92
RUN DATE 05/14/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0598	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.
70149	89603	BG06096SC		03/12	1045			CE-141	L.T. 1. E-01		04/13			4
								CE-144	L.T. 4. E-01		04/13			4
								RA-226	6.12+-0.72E 00		04/13			4
								TH-228	L.T. 1. E-01		04/13			4
								H-3	NOT ANALYZED		04/13			5
70150	89621	BG00002SB		03/12	1045			PU-238	1.2 +-0.2 E-02		05/04	2234		6
								PU-239	L.T. 2. E-04		05/04	2234		6
70151	89608	BG06089SB		03/12	1200			PU-238	L.T. 7. E-02		04/18			6
								PU-239	L.T. 2. E-02		04/18			6
70152	89609	BG06089SC		03/12	1200			BE-7	L.T. 5. E-01		04/06			4
								K-40	9.76+-0.98E 00		04/06			4
								MN-54	L.T. 5. E-02		04/06			4
								CO-58	L.T. 5. E-02		04/06			4
								FE-59	L.T. 1. E-01		04/06			4
								CO-60	L.T. 4. E-02		04/06			4
								ZN-65	L.T. 1. E-01		04/06			4
								ZR-95	L.T. 8. E-02		04/06			4
								RU-103	L.T. 6. E-02		04/06			4
								RU-106	L.T. 4. E-01		04/06			4
								I-131	L.T. 4. E-01		04/06			4
								CS-134	L.T. 5. E-02		04/06			4
								CS-137	L.T. 6. E-02		04/06			4
								BA-140	L.T. 2. E-01		04/06			4
								CE-141	L.T. 1. E-01		04/06			4
								CE-144	L.T. 3. E-01		04/06			4
								RA-226	6.79+-0.91E 00		04/06			4
								TH-228	9.33+-0.93E-01		04/06			4
								H-3	5.8 +-1.2 E-02		05/20			5

The second analysis of TI#70150 for Pu-238 gave the result of L.T. 1. 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.

p Martin 10 6 92

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.
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

TELEDYNE I[illegible]ES

REPORT OF ANALYSIS

RUN DATE 06/1[illegible]/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 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 BB00004SB		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 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
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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.
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

REVISE[illegible]/92
ADDITIONAL DA[illegible]/92
ADDITIONAL DATA 07/01/92
RUN DATE 06/17/92

TELEDYNE [illegible]PES

REPORT OF ANALYSIS

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 6
3-1294	04-0029403-012	04/27/92	05/30/92	

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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	TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
74329	89315	BB17003SC		04/21	1510			CE-144	L.T. 2. E-01		05/26			4
								RA-226	2.52+-0.59E 00		05/26			4
								TH-228	1.57+-0.16E 00		05/26			4
								H-3	3.2 +-0.1 E 00		06/09			5
74330	89320	BB17004SB		04/21	1500			PU-238	L.T. 4. E-02		06/06			6
								PU-239	L.T. 7. E-03		06/06			6
74331	89321	BB17004SC		04/21	1500			BE-7	L.T. 4. E-01		05/22			4
								K-40	2.17+-0.22E 01		05/22			4
								MN-54	L.T. 4. E-02		05/22			4
								CO-58	L.T. 5. E-02		05/22			4
								FE-59	L.T. 1. E-01		05/22			4
								CO-60	L.T. 4. E-02		05/22			4
								ZN-65	L.T. 9. E-02		05/22			4
								ZR-95	L.T. 6. E-02		05/22			4
								RU-103	L.T. 6. E-02		05/22			4
								RU-106	L.T. 3. E-01		05/22			4
								I-131	L.T. 5. E-01		05/22			4
								CS-134	L.T. 5. E-02		05/22			4
								CS-137	2.27+-0.33E-01		05/22			4
								BA-140	L.T. 2. E-01		05/22			4
								CE-141	L.T. 9. E-02		05/22			4
								CE-144	L.T. 2. E-01		05/22			4
								RA-226	3.06+-0.59E 00		05/22			4
								TH-228	1.41+-0.14E 00		05/22			4
								H-3	3.4 +-0.1 E 00		06/10			5
74332	89331	BR00006SB		04/21	1500			PU-238	L.T. 4. E-02		07/19			6
								PU-239	L.T. 1. E-02		06/06			6

LAST PAGE OF REPORT

J Guenther
APPROVED BY J. GUENTHER 06/17/92

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The second H-3 analysis of TI#74329 gave result of 3.4 +-0.1 E 00 pCi/g (1.1 +-0.1 E 04 pCi/l). [illegible] 7/1/93

TI#74331 was analyzed for H-3 a second time on 07/16 with result of 3.2 ± 0.1 E 00 pCi/g (9.3 ± 0.2 E 03 pCi/l).
Both second analyses were by the gas counting method.

A reanalysis of TI#74332 for Pu-238 did not confirm the original result, thus this revision. [illegible] 7-24-92 JDMartin 7-24-9[illegible]

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 07/07/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
3-1313	04-0029403-012	05/04/92	06/06/92	

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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.
75180 90432	BB000075B		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	BB000075C		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

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	

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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.
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

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 04/14/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE
3-0636	04-0029403-012	03/13/92	04/15/92	8

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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.
69583	88327 SM-03-014 SC		03/11	1800			I-131	L.T. 1. E-01		03/27			4
							CS-134	L.T. 3. E-02		03/27			4
							CS-137	1.01+-0.27E-01		03/27			4
							BA-140	L.T. 6. E-02		03/27			4
							CE-141	L.T. 5. E-02		03/27			4
							CE-144	L.T. 2. E-01		03/27			4
							RA-226	1.47+-0.37E 00		03/27			4
							TH-228	8.95+-0.89E-01		03/27			4
							H-3	L.T. 3. E-02		03/30			5
69584	88332 SM-00-002 SC		03/11				BE-7	L.T. 3. E-01		03/27			4
							K-40	2.23+-0.22E 01		03/27			4
							MN-54	L.T. 3. E-02		03/27			4
							CO-58	L.T. 3. E-02		03/27			4
							FE-59	L.T. 8. E-02		03/27			4
							CO-60	L.T. 3. E-02		03/27			4
							ZN-65	L.T. 8. E-02		03/27			4
							ZR-95	L.T. 4. E-02		03/27			4
							RU-103	L.T. 3. E-02		03/27			4
							RU-106	L.T. 2. E-01		03/27			4
							I-131	L.T. 1. E-01		03/27			4
							CS-134	L.T. 4. E-02		03/27			4
							CS-137	8.32+-2.59E-02		03/27			4
							BA-140	L.T. 6. E-02		03/27			4
							CE-141	L.T. 6. E-02		03/27			4
							CE-144	L.T. 2. E-01		03/27			4
							RA-226	1.48+-0.42E 00		03/27			4
							TH-228	9.38+-0.94E-01		03/27			4
							H-3	L.T. 3. E-02		03/30			5

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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

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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.
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	3.2 +-0.3 E-02		06/01			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

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/09/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 5
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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.
70819	90131 BB00003SC		03/17	1130			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	1.57+-0.48E 00		04/25			4
							TH-228	1.45+-0.15E 00		04/25			4
							H-3	L.T. 3. E-02		05/29			5
70820	90141 M4SB	MS	03/17	1100			PU-238	L.T. 6. E-02		05/05			6
							PU-239	3.2 +-0.7 E-01		05/05			6
70821	90142 M4SC	MS	03/17	1100			BE-7	L.T. 7. E-01		05/08			4
							K-40	1.94+-0.19E 01		05/08			4
							MN-54	L.T. 4. E-02		05/08			4
							CO-58	L.T. 6. E-02		05/08			4
							FE-59	L.T. 2. E-01		05/08			4
							CO-60	L.T. 4. E-02		05/08			4
							ZN-65	L.T. 1. E-01		05/08			4
							ZR-95	L.T. 8. E-02		05/08			4
							RU-103	L.T. 1. E-01		05/08			4
							RU-106	L.T. 4. E-01		05/08			4
							I-131	L.T. 3. E 00		05/08			4
							CS-134	L.T. 5. E-02		05/08			4
							CS-137	4.49+-0.52E-01		05/08			4
							BA-140	L.T. 9. E-01		05/08			4
							CE-141	L.T. 2. E-01		05/08			4
							CE-144	L.T. 3. E-01		05/08			4
							RA-226	2.13+-0.53E 00		05/08			4
							TH-228	1.40+-0.14E 00		05/08			4
							H-3	2.0 +-0.2 E-01		05/29			5

TI#70820 was prepared with 0.33 pCi/g of Pu-239.

TI#70821 was prepared with 3.03 E-01 pCi/g of Cs-137 and with 2.2 E-01 pCi/g of H-3.

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	

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

REPORT OF ANALYSIS

RUN DATE 06/19/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
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.
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

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
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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.
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
3-0629	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.
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

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/25/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
3-2088	04-0029403-012	06/12/92	07/15/92	

ERIC SMITH
MCLAREN/HART
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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.
79836	BB00020SC		04/21	1520			H-3	L.T. 1. E-02		06/20			5

LAST PAGE OF REPORT

APPROVED BY J. GUENTHER 06/25/92

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)
79836	L.T. 1. E 02

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 07/07/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
3-1313	04-0029403-012	05/04/92	06/06/92	

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.
75180	90432 BB000075B		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 BB000075C		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 BB140795B		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 BB140795C		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

WATER

VOLATILE ORGANICS

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

Lab Project-Sample ID: 5868-15

Project Name: Rocketdyne SSFL
Project Number: 04.0029403.012

Sample Description: BB00001WH
Sample Number: 197105

Matrix: Water

Date Sampled: 4/21/92
Date Analyzed: 4/27/92

Date Received: 4/23/92
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	16	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: 5868-15

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	101	76 - 114
Toluene-D8	103	88 - 110
4-Bromofluorobenzene	103	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.
{d} Methylene Chloride, a common laboratory contaminant, was detected in the sample. The associated method blank indicated no such contamination.

Approved By: Nancy McDonald for CM Date: 5/06/92
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

Lab Project-Sample ID: 5868-17
Project Name: Rocketdyne SSFL
Project Number: 04.0029403.012

Sample Description: BB00001WF
Sample Number: 197117
Date Sampled: 4/21/92
Date Extracted: 4/28/92
Batch Number: 920428-2601

Matrix: Water
Date Received: 4/23/92
Date Analyzed: 5/01/92
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
Benzo(k)fluoranthene		20
Benzo(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	88	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: 5/06/92
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 3010 {a}

b Project-Sample ID: 5868-22

Project Name: Rocketdyne SSFL
Project Number: 04.0029403.012

Sample Description: BB00001WG
Sample Number: 197137

Matrix: Water

Date Sampled: 4/21/92
Date Digested: 4/29/92 {b}

Date Received: 4/23/92
Batch Number: 920429-1301 {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	5/01/92
Arsenic (As)/7060.....		1	10	5/01/92
Beryllium (Be)/6010.....		1	5	5/01/92
Cadmium (Cd)/6010.....		1	10	5/01/92
Chromium (Cr)/6010.....		1	10	5/01/92
Copper (Cu)/6010.....		1	20	5/01/92
Lead (Pb)/7421.....		1	3	5/01/92
Mercury (Hg)/7470.....		1	.5	4/30/92
Nickel (Ni)/6010.....		1	20	5/01/92
Selenium (Se)/7740.....		1	5	4/30/92
lver (Ag)/6010.....		1	10	5/01/92
allium (Tl)/7841.....		1	10	5/01/92
Zinc (Zn)/6010.....		1	20	5/01/92

COMMENTS:

{a} Applies to all metals except As, Pb, Se, Tl and Hg. EPA Method 3020 used for As, Pb, 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 4/29/92, Batch # 920429-1302 ; and Hg was digested on 4/29/92, Batch # 920429-1303 .
{c} No entry in the "Concentration" means the metal is not detected at all.

Approved by: Nancy McDonald for CM Date: 5/07/92
Cheryl Matterson, Association Chemist

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

McLaren Hart™

recycled paper

Table: Results of the analyses for iodine-129 in three (3) and strontium-90 in fifteen (15) water samples.

Sample ID Number	Sample Description	Collection Date	Lab Code	Concentration pCi/L			
				I-129	Date Analyzed	Sr-90	Date Analyzed
197855	BB16RD30WA	04/23/92	SPW-2139	ND		<0.3	06/06
197874	BB19003WA	04/23/92	2140	ND		<0.4	06/06
197310	BB16001BWA	04/23/92	2141	ND		1.8±0.5	06/06
197317	BB16001AWA	04/23/92	2142	ND		1.1±0.3	06/06
197890	DCWA	04/23/92	2143	ND		<0.4	06/06
197891	Dup. SPW-2143	04/23/92	2144	ND		<0.3	06/06
197311	BB16001BWC	04/23/92	2145	<1.8	06/09	ND	
197893	DCWC	04/23/92	2146	<2.0	06/09	ND	
197894	Dup. SPW-2146	04/23/92	2147	<2.6	06/09	ND	
197122	BB18003WC	04/21/92	2148	<1.6	06/10	ND	
197123	BB00001WC	04/21/92	2149	<1.7	06/11	ND	
197109	BB18003WA	04/21/92	2150	ND		<0.3	06/06
197110	BB00001WA	04/21/92	2151	ND		1.0±0.4	06/06
197130	BB18000RA	04/21/92	2152	ND		<0.3	06/06
171835	7B1WA	04/21/92	2153	ND		<0.4	06/06
171836	Dup. SPW-2153	04/21/92	2154	ND		<0.3	06/06
197135	BB18000RC	04/21/92	2155	<1.7	06/11	ND	
171838	7B1WC	04/21/92	2156	<1.7	06/11	ND	
171839	Dup. SPW-2156	04/21/92	2157	<1.6	06/11	ND	

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

ND - no data, analysis not required.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/09/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 3
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

APPROVED BY J. GUENTHER 06/09/92

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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 06/24/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-1295	04-0029403-012	04/27/92	05/30/92

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.
74343	197111 BB18003WD		04/21	1300			BE-7	L.T. 4. E 01		05/24			4
							K-40	L.T. 5. E 01		05/24			4
							MN-54	L.T. 3. E 00		05/24			4
							CO-58	L.T. 4. E 00		05/24			4
							FE-59	L.T. 9. E 00		05/24			4
							CO-60	L.T. 4. E 00		05/24			4
							ZN-65	L.T. 8. E 00		05/24			4
							ZR-95	L.T. 4. E 00		05/24			4
							RU-103	L.T. 6. E 00		05/24			4
							RU-106	L.T. 3. E 01		05/24			4
							I-131	L.T. 6. E 01		05/24			4
							CS-134	L.T. 4. E 00		05/24			4
							CS-137	L.T. 4. E 00		05/24			4
							BA-140	L.T. 2. E 01		05/24			4
							CE-141	L.T. 1. E 01		05/24			4
							CE-144	L.T. 3. E 01		05/24			4
							RA-226	L.T. 8. E 01		05/24			4
							TH-228	L.T. 7. E 00		05/24			4
74344	197114 BB18003WI		04/21	1300			GR-A	L.T. 2. E 00		05/08			3
							GR-B	L.T. 3. E 00		05/08			3
74345	197113 BB00001WD		04/21	1300			BE-7	L.T. 4. E 01		05/24			4
							K-40	L.T. 7. E 01		05/24			4
							MN-54	L.T. 3. E 00		05/24			4
							CO-58	L.T. 5. E 00		05/24			4
							FE-59	L.T. 1. E 01		05/24			4
							CO-60	L.T. 4. E 00		05/24			4
							ZN-65	L.T. 8. E 00		05/24			4
							ZR-95	L.T. 5. E 00		05/24			4
							RU-103	L.T. 6. E 00		05/24			4
							RU-106	L.T. 3. E 01		05/24			4
							I-131	L.T. 7. E 01		05/24			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/24/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 6
3-1295	04-0029403-012	04/27/92	05/30/92	

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.
74345	197113 BB00001WD		04/21	1300			CS-134	L.T. 4. E 00		05/24			4
							CS-137	L.T. 4. E 00		05/24			4
							BA-140	L.T. 2. E 01		05/24			4
							CE-141	L.T. 1. E 01		05/24			4
							CE-144	L.T. 3. E 01		05/24			4
							RA-226	L.T. 1. E 02		05/24			4
							TH-228	L.T. 8. E 00		05/24			4
74346	197115 BB00001WI		04/21	1310			GR-A	L.T. 2. E 00		05/08			3
							GR-B	4.1 +-2.0 E 00		05/08			3
74347	197118 BB18003WE		04/21	1320			H-3	L.T. 1. E 02		06/20			5
74348	197119 BB1800001WE		04/21	1320			H-3	L.T. 1. E 02		06/20			5
74349	197120 BB18003WB		04/21	1320			PU-238	L.T. 2. E-01		05/19			6
							PU-239	L.T. 8. E-02		05/19			6
74350	197121 BB00001WB		04/21	1320			PU-238	L.T. 2. E-01		06/08			6
							PU-239	L.T. 9. E-02		06/08			6

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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.
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		04/09			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

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/11/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 0
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.
70665	90237 8B00009LA		03/18	1200			RA-226	L.T. 8. E-02		03/28			4
							TH-228	L.T. 7. E-03		03/28			4
							H-3	L.T. 9. E-02		06/07			5
							PU-238	L.T. 3. E-04		04/14			6
							PU-239	L.T. 1. E-04		04/14			6
70666	90250 8G00010A		03/18	2000			SR-90	3.4 +-1.9 E-03		04/14		2.32 *	3
							I-129	L.T. 3. E-02		04/08			3
							BE-7	L.T. 4. E-02		03/28			4
							K-40	1.47+-0.15E 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. 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. 7. E-03		03/28			4
							CE-144	L.T. 2. 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. 9. E-02		06/07			5
							PU-238	L.T. 2. E-03		04/14			6
							PU-239	L.T. 5. E-04		04/14			6

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/11/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 10
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.
70667	90237 8800009LA	DUP	03/18	1200			SR-90	L.T. 3. E-03		04/14		2.47 *	3
							I-129	L.T. 4. E-02		04/08			3
							BE-7	L.T. 6. E-02		03/30			4
							K-40	1.54+-0.15E 00		03/30			4
							MN-54	L.T. 6. E-03		03/30			4
							CO-58	L.T. 7. E-03		03/30			4
							FE-59	L.T. 1. E-02		03/30			4
							CO-60	L.T. 6. E-03		03/30			4
							ZN-65	L.T. 1. E-02		03/30			4
							ZR-95	L.T. 7. E-03		03/30			4
							RU-103	L.T. 7. E-03		03/30			4
							RU-106	L.T. 6. E-02		03/30			4
							I-131	L.T. 2. E-02		03/30			4
							CS-134	L.T. 7. E-03		03/30			4
							CS-137	L.T. 7. E-03		03/30			4
							BA-140	L.T. 1. E-02		03/30			4
							CE-141	L.T. 1. E-02		03/30			4
							CE-144	L.T. 4. E-02		03/30			4
							RA-226	L.T. 1. E-01		03/30			4
							TH-228	L.T. 1. E-02		03/30			4
							H-3	1.1 +-0.6 E-01		06/07			5

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/25/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0701	04-0029403-012	03/30/92	05/02/92

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.
71341	89738	BG08009AA		03/23	0700			RA-226	L.T. 1. E-01		04/02			4
								TH-228	L.T. 1. E-02		04/02			4
								H-3	L.T. 1. E-01		06/22			5
								PU-238	L.T. 5. E-04		06/07			6
								PU-239	L.T. 1. E-04		06/07			6
71342	89739	BG00010AA		03/23	0700			SR-90	L.T. 1. E-01		04/29			3
								I-129	L.T. 2. E-02		04/15			3
								BE-7	L.T. 6. E-02		04/02			4
								K-40	5.92+-0.59E 00		04/02			4
								MN-54	L.T. 7. E-03		04/02			4
								CO-58	L.T. 7. E-03		04/02			4
								FE-59	L.T. 2. E-02		04/02			4
								CO-60	L.T. 7. E-03		04/02			4
								ZN-65	L.T. 2. E-02		04/02			4
								ZR-95	L.T. 7. E-03		04/02			4
								RU-103	L.T. 8. E-03		04/02			4
								RU-106	L.T. 6. E-02		04/02			4
								I-131	L.T. 2. E-02		04/02			4
								CS-134	L.T. 7. E-03		04/02			4
								CS-137	L.T. 7. E-03		04/02			4
								BA-140	L.T. 9. E-03		04/02			4
								CE-141	L.T. 1. E-02		04/02			4
								CE-144	L.T. 4. E-02		04/02			4
								RA-226	L.T. 1. E-01		04/02			4
								TH-228	L.T. 1. E-02		04/02			4
								H-3	L.T. 1. E-01		06/22			5
								PU-238	L.T. 1. E-03		06/10			6
								PU-239	L.T. 4. E-04		06/10			6

VOLATILE ORGANIC COMPOUNDS

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5715

Analyst: TS

Batch #: NA

Date Of Analysis: 03/13/92

Spike Sample ID: LCS/LCSD L37

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS04

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	42.40	84	45.30	90	6	59 - 172	≤22
Trichloroethene	0	50.00	43.70	87	50.10	100	13	62 - 137	≤24
Benzene	0	50.00	46.50	93	52.00	104	11	66 - 142	≤21
Toluene	0	50.00	42.70	85	50.20	100	16	59 - 139	≤21
Chlorobenzene	0	50.00	45.50	91	50.70	101	10	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	53.70	107	51.22	102	70 - 121
Toluene - d8	50.00	48.74	97	50.18	100	81 - 117
Bromofluorobenzene	50.00	53.68	107	53.39	107	74 - 121

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5715) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5727

Analyst: TS

Batch #: NA

Date Of Analysis: 03/18/92

Spike Sample ID: LCSS/LCSDS L39

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS04

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	49.00	98	53.00	106	7	59 - 172	≤22
Trichloroethene	0	50.00	56.00	112	57.70	115	2	62 - 137	≤24
Benzene	0	50.00	56.60	113	58.50	117	3	66 - 142	≤21
Toluene	0	50.00	54.90	110	58.90	117	7	59 - 139	≤21
Chlorobenzene	0	50.00	55.00	110	58.00	116	5	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	49.04	98	50.37	101	70 - 121
Toluene - d8	50.00	49.78	100	51.95	104	81 - 117
Bromofluorobenzene	50.00	50.37	101	50.43	101	74 - 121

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5727) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5727

Analyst: TS

Batch #: NA

Date Of Analysis: 03/18/92

Spike Sample ID: 5727-009 MS/MSD L39

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS04

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	50.60	101	52.00	104	2	59 - 172	≤22
Trichloroethene	0	50.00	51.00	102	52.70	105	2	62 - 137	≤24
Benzene	0	50.00	57.80	116	60.10	120	3	66 - 142	≤21
Toluene	0	50.00	62.70	125	71.30	143[a]	13	59 - 139	≤21
Chlorobenzene	0	50.00	50.00	99	54.40	109	9	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	48.73	97	50.48	101	70 - 121
Toluene - d8	50.00	62.32	125[b]	67.24	134[b]	81 - 117
Bromofluorobenzene	50.00	39.20	78	38.41	77	74 - 121

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

[a] Matrix spike recovery for Toluene is beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

[b] Sample surrogate compounds were beyond quality control limits. All other quality control is acceptable.

Sample was analyzed on 03/18/92 and exhibited low internal standard recoveries. The sample was reanalyzed on 03/19/92 and again exhibited low internal standard recoveries, indicating the presence of a matrix effect.

8240SDR.S91

McLaren Hart™

(DC1-CN5727) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5727

Analyst: TS

Batch #: NA

Date Of Analysis: 03/20/92

Spike Sample ID: LCSS/LCSDS L40

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS04

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	48.20	96	51.80	104	8	59 - 172	≤22
Trichloroethene	0	50.00	49.80	99	55.20	110	10	62 - 137	≤24
Benzene	0	50.00	50.30	101	56.40	113	11	66 - 142	≤21
Toluene	0	50.00	48.20	96	53.50	107	10	59 - 139	≤21
Chlorobenzene	0	50.00	50.20	100	56.10	112	11	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	51.51	103	51.43	103	70 - 121
Toluene - d8	50.00	49.78	100	49.31	99	81 - 117
Bromofluorobenzene	50.00	51.12	102	50.65	101	74 - 121

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5727) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5727

Analyst: TS

Batch #: NA

Date Of Analysis: 03/20/92

Spike Sample ID: 5727-051 MS/MSD L40

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS04

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	44.60	89	53.60	107	18	59 - 172	≤22
Trichloroethene	0	50.00	48.70	97	56.60	113	15	62 - 137	≤24
Benzene	0	50.00	51.20	102	58.80	118	14	66 - 142	≤21
Toluene	0	50.00	50.60	101	59.40	119	16	59 - 139	≤21
Chlorobenzene	0	50.00	47.90	95	56.30	113	17	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	50.45	101	51.55	103	70 - 121
Toluene - d8	50.00	53.46	107	54.35	109	81 - 117
Bromofluorobenzene	50.00	43.46	87	43.16	86	74 - 121

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5727)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5745

Analyst: TS

Batch #: NA

Date Of Analysis: 03/20/92

Spike Sample ID: LCSS/LCSDS L40

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS04

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	48.20	96	51.80	104	8	59 - 172	≤22
Trichloroethene	0	50.00	49.80	99	55.20	110	10	62 - 137	≤24
Benzene	0	50.00	50.30	101	56.40	113	11	66 - 142	≤21
Toluene	0	50.00	48.20	96	53.50	107	10	59 - 139	≤21
Chlorobenzene	0	50.00	50.20	100	56.10	112	11	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	51.51	103	51.43	103	70 - 121
Toluene - d8	50.00	49.78	100	49.31	99	81 - 117
Bromofluorobenzene	50.00	51.12	102	50.65	101	74 - 121

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5745) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5745

Analyst: TS

Batch #: NA

Date Of Analysis: 03/22/92

Spike Sample ID: LCS/LCSD L41

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS04

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	39.60	79	40.40	80	1	59 - 172	≤22
Trichloroethene	0	50.00	48.80	97	48.60	97	0	62 - 137	≤24
Benzene	0	50.00	50.00	100	49.60	99	1	66 - 142	≤21
Toluene	0	50.00	45.60	91	45.70	91	0	59 - 139	≤21
Chlorobenzene	0	50.00	49.20	98	48.80	97	1	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	52.11	104	51.16	102	70 - 121
Toluene - d8	50.00	47.27	94	47.56	95	81 - 117
Bromofluorobenzene	50.00	49.87	100	49.63	99	74 - 121

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5745) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5745

Analyst: TS

Batch #: NA

Date Of Analysis: 03/21/92

Spike Sample ID: 5745-050 MS/MSD L41

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS04

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	38.50	76	38.00	76	0	59 - 172	≤22
Trichloroethene	0	50.00	47.80	95	45.90	91	4	62 - 137	≤24
Benzene	0	50.00	48.60	97	46.10	92	5	66 - 142	≤21
Toluene	0	50.00	43.40	86	41.90	83	3	59 - 139	≤21
Chlorobenzene	0	50.00	47.10	94	44.70	89	5	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	50.10	100	52.30	105	70 - 121
Toluene - d8	50.00	47.26	94	47.07	94	81 - 117
Bromofluorobenzene	50.00	47.65	95	47.35	95	74 - 121

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5745) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5764

Analyst: TS

Batch #: NA

Date Of Analysis: 03/25/92

Spike Sample ID: LCS/LCSD L44

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	45.60	91	48.10	96	5	59 - 172	≤22
Trichloroethene	0	50.00	47.90	95	49.30	98	3	62 - 137	≤24
Benzene	0	50.00	49.50	99	50.30	101	2	66 - 142	≤21
Toluene	0	50.00	48.90	97	50.40	101	4	59 - 139	≤21
Chlorobenzene	0	50.00	49.00	98	50.40	101	3	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1.2 - Dichloroethane - d4	50.00	48.32	97	46.99	94	70 - 121
Toluene - d8	50.00	50.52	101	49.49	99	81 - 117
Bromofluorobenzene	50.00	49.32	99	49.78	100	74 - 121

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5764) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5709

Analyst: TS

Batch #: NA

Date Of Analysis: 03/13/92

Spike Sample ID: LCS/LCSD L37

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS04

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	42.40	84	45.30	90	6	59 - 172	≤22
Trichloroethene	0	50.00	43.70	87	50.10	100	13	62 - 137	≤24
Benzene	0	50.00	46.50	93	52.00	104	11	66 - 142	≤21
Toluene	0	50.00	42.70	85	50.20	100	16	59 - 139	≤21
Chlorobenzene	0	50.00	45.50	91	50.70	101	10	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	53.70	107	51.22	102	70 - 121
Toluene - d8	50.00	48.74	97	50.18	100	81 - 117
Bromofluorobenzene	50.00	53.68	107	53.39	107	74 - 121

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5709) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5709

Analyst: TS

Batch #: NA

Date Of Analysis: 03/14/92

Spike Sample ID: 5709-001 MS/MSD L37

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS04

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	53.10	106	43.50	86	20	59 - 172	≤22
Trichloroethene	0	50.00	51.60	103	46.10	92	11	62 - 137	≤24
Benzene	0	50.00	53.20	106	49.70	99	6	66 - 142	≤21
Toluene	0	50.00	52.70	105	48.60	96	8	59 - 139	≤21
Chlorobenzene	0	50.00	49.20	98	48.40	96	2	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	49.82	100	49.18	98	70 - 121
Toluene - d8	50.00	53.64	107	51.49	103	81 - 117
Bromofluorobenzene	50.00	49.08	98	52.27	104	74 - 121

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

3240SDR.S91

McLaren Hart™

(DC1-CN5709) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5756

Analyst: TS

Batch #: NA

Date Of Analysis: 03/24/92

Spike Sample ID: LCS/LCSD L42

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS04

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	41.40	82	41.30	82	0	59 - 172	≤22
Trichloroethene	0	50.00	50.40	101	48.30	96	5	62 - 137	≤24
Benzene	0	50.00	52.50	105	50.20	100	4	66 - 142	≤21
Toluene	0	50.00	48.50	97	45.30	90	7	59 - 139	≤21
Chlorobenzene	0	50.00	52.60	105	50.00	100	4	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	53.91	108	54.78	110	70 - 121
Toluene - d8	50.00	47.71	95	47.51	95	81 - 117
Bromofluorobenzene	50.00	53.18	106	53.80	108	74 - 121

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5756) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5756

Analyst: TS

Batch #: NA

Date Of Analysis: 03/24/92

Spike Sample ID: 5756-043 MS/MSD L42

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS04

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	42.60	85	40.50	81	4	59 - 172	≤22
Trichloroethene	0	50.00	47.70	95	47.60	95	0	62 - 137	≤24
Benzene	0	50.00	52.20	104	49.40	98	5	66 - 142	≤21
Toluene	0	50.00	48.70	97	47.80	95	2	59 - 139	≤21
Chlorobenzene	0	50.00	49.30	98	49.50	99	1	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	53.49	107	53.02	106	70 - 121
Toluene - d8	50.00	51.50	103	50.89	102	81 - 117
Bromofluorobenzene	50.00	46.20	92	46.86	94	74 - 121

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5756) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5761

Analyst: TS

Batch #: NA

Date Of Analysis: 03/25/92

Spike Sample ID: LCS/LCSD L44

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	45.60	91	48.10	96	5	59 - 172	≤22
Trichloroethene	0	50.00	47.90	95	49.30	98	3	62 - 137	≤24
Benzene	0	50.00	49.50	99	50.30	101	2	66 - 142	≤21
Toluene	0	50.00	48.90	97	50.40	101	4	59 - 139	≤21
Chlorobenzene	0	50.00	49.00	98	50.40	101	3	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	48.32	97	46.99	94	70 - 121
Toluene - d8	50.00	50.52	101	49.49	99	81 - 117
Bromofluorobenzene	50.00	49.32	99	49.78	100	74 - 121

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5761)

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5756

Analyst: TS

Batch #: NA

Date Of Analysis: 03/24/92

Spike Sample ID: LCS/LCSD L42

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS04

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	41.40	82	41.30	82	0	59 - 172	≤22
Trichloroethene	0	50.00	50.40	101	48.30	96	5	62 - 137	≤24
Benzene	0	50.00	52.50	105	50.20	100	4	66 - 142	≤21
Toluene	0	50.00	48.50	97	45.30	90	7	59 - 139	≤21
Chlorobenzene	0	50.00	52.60	105	50.00	100	4	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	53.91	108	54.78	110	70 - 121
Toluene - d8	50.00	47.71	95	47.51	95	81 - 117
Bromofluorobenzene	50.00	53.18	106	53.80	108	74 - 121

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5756)

recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5756

Analyst: TS

Batch #: NA

Date Of Analysis: 03/24/92

Spike Sample ID: 5756-043 MS/MSD L42

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS04

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	42.60	85	40.50	81	4	59 - 172	≤22
Trichloroethene	0	50.00	47.70	95	47.60	95	0	62 - 137	≤24
Benzene	0	50.00	52.20	104	49.40	98	5	66 - 142	≤21
Toluene	0	50.00	48.70	97	47.80	95	2	59 - 139	≤21
Chlorobenzene	0	50.00	49.30	98	49.50	99	1	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	53.49	107	53.02	106	70 - 121
Toluene - d8	50.00	51.50	103	50.89	102	81 - 117
Bromofluorobenzene	50.00	46.20	92	46.86	94	74 - 121

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5756)

recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5764

Analyst: TS

Batch #: NA

Date Of Analysis: 03/25/92

Spike Sample ID: LCS/LCSD L44

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	45.60	91	48.10	96	5	59 - 172	≤22
Trichloroethene	0	50.00	47.90	95	49.30	98	3	62 - 137	≤24
Benzene	0	50.00	49.50	99	50.30	101	2	66 - 142	≤21
Toluene	0	50.00	48.90	97	50.40	101	4	59 - 139	≤21
Chlorobenzene	0	50.00	49.00	98	50.40	101	3	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	48.32	97	46.99	94	70 - 121
Toluene - d8	50.00	50.52	101	49.49	99	81 - 117
Bromofluorobenzene	50.00	49.32	99	49.78	100	74 - 121

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5764)

recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5758

Analyst: TS

Batch #: NA

Date Of Analysis: 03/25/92

Spike Sample ID: LCS/LCSD L43

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	49.00	98	50.10	100	2	59 - 172	≤22
Trichloroethene	0	50.00	52.40	105	52.20	104	0	62 - 137	≤24
Benzene	0	50.00	51.50	103	51.30	103	0	66 - 142	≤21
Toluene	0	50.00	49.80	99	49.80	99	0	59 - 139	≤21
Chlorobenzene	0	50.00	51.40	103	50.90	102	0	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	51.45	103	52.87	106	70 - 121
Toluene - d8	50.00	48.51	97	49.09	98	81 - 117
Bromofluorobenzene	50.00	49.75	100	49.28	98	74 - 121

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5758)

recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5758

Analyst: TS

Batch #: NA

Date Of Analysis: 03/25/92

Spike Sample ID: LCS/LCSD L44

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	45.60	91	48.10	96	5	59 - 172	≤22
Trichloroethene	0	50.00	47.90	95	49.30	98	3	62 - 137	≤24
Benzene	0	50.00	49.50	99	50.30	101	2	66 - 142	≤21
Toluene	0	50.00	48.90	97	50.40	101	4	59 - 139	≤21
Chlorobenzene	0	50.00	49.00	98	50.40	101	3	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	48.32	97	46.99	94	70 - 121
Toluene - d8	50.00	50.52	101	49.49	99	81 - 117
Bromofluorobenzene	50.00	49.32	99	49.78	100	74 - 121

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5758)

recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5758

Analyst: TS

Batch #: NA

Date Of Analysis: 03/24/92

Spike Sample ID: 5758-042 MS/MSD L43

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	48.40	96	47.40	94	2	59 - 172	≤22
Trichloroethene	0	50.00	50.10	100	50.50	101	0	62 - 137	≤24
Benzene	0	50.00	51.90	104	50.70	101	2	66 - 142	≤21
Toluene	1.00	50.00	57.10	112	52.00	102	9	59 - 139	≤21
Chlorobenzene	0	50.00	49.20	98	49.50	99	1	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	48.59	97	48.97	98	70 - 121
Toluene - d8	50.00	56.53	113	54.63	109	81 - 117
Bromofluorobenzene	50.00	39.61	79	41.87	84	74 - 121

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5758)

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5758

Analyst: TS

Batch #: NA

Date Of Analysis: 03/25/92

Spike Sample ID: 5758-098 MS/MSD L44

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	48.80	97	48.30	96	1	59 - 172	≤22
Trichloroethene	0	50.00	44.50	88	46.90	93	5	62 - 137	≤24
Benzene	0	50.00	46.60	93	47.10	94	1	66 - 142	≤21
Toluene	1.00	50.00	44.70	87	47.30	93	5	59 - 139	≤21
Chlorobenzene	0	50.00	44.60	89	47.00	94	5	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	49.97	100	49.85	100	70 - 121
Toluene - d8	50.00	48.41	97	50.60	101	81 - 117
Bromofluorobenzene	50.00	47.62	95	46.50	93	74 - 121

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5758)

recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5758

Analyst: TS

Batch #: NA

Date Of Analysis: 03/25/92

Spike Sample ID: 5758-098 MS/MSD L44

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	48.80	97	48.30	96	1	59 - 172	≤22
Trichloroethene	0	50.00	44.50	88	46.90	93	5	62 - 137	≤24
Benzene	0	50.00	46.60	93	47.10	94	1	66 - 142	≤21
Toluene	1.08 0	50.00	44.70	87	47.30	93	5	59 - 139	≤21
Chlorobenzene	0	50.00	44.60	89	47.00	94	5	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	49.97	100	49.85	100	70 - 121
Toluene - d8	50.00	48.41	97	50.60	101	81 - 117
Bromofluorobenzene	50.00	47.62	95	46.50	93	74 - 121

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC1-CN5758)

recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5868

Analyst: TS

Batch #: NA

Date Of Analysis: 05/01/92[a]

Spike Sample ID: LCSL/LCSDL L46

Column: Capillary

Spike ID Code: W3-938

Instrument #: MS02

Surrogate ID Code: W3-909

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	51.60	103	49.80	99	3	59 - 172	≤22
Trichloroethene	0	50.00	51.50	103	55.20	110	6	62 - 137	≤24
Benzene	0	50.00	51.70	103	53.40	107	3	66 - 142	≤21
Toluene	0	50.00	54.80	110	52.10	104	5	59 - 139	≤21
Chlorobenzene	0	50.00	56.10	112	55.00	110	1	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	47.05	94	46.70	93	70 - 121
Toluene - d8	50.00	53.65	107	49.79	100	81 - 117
Bromofluorobenzene	50.00	49.89	100	48.54	97	74 - 121

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments: [a] Applies to Laboratory Control Spike analysis. Laboratory Control Spike analysis was performed on 05/04/92.

8240SDR.S91

McLaren Hart™

(DC2-CN5868)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5868

Analyst: TS

Batch #: NA

Date Of Analysis: 04/30/92

Spike Sample ID: LCS/LCSD L47

Column: Capillary

Spike ID Code: W3-938

Instrument #: MS02

Surrogate ID Code: W3-909

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	64.10	128	57.40	115	10	59 - 172	≤22
Trichloroethene	0	50.00	54.70	109	56.80	114	4	62 - 137	≤24
Benzene	0	50.00	55.70	111	55.60	111	0	66 - 142	≤21
Toluene	0	50.00	58.50	117	56.50	113	3	59 - 139	≤21
Chlorobenzene	0	50.00	60.50	121	59.40	119	1	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	50.00	100	50.14	100	70 - 121
Toluene - d8	50.00	53.55	107	50.78	102	81 - 117
Bromofluorobenzene	50.00	50.57	101	50.36	101	74 - 121

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC2-CN5868)

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5868

Analyst: TS

Batch #: NA

Date Of Analysis: 05/01/92

Spike Sample ID: 5868-003MS/MSD L46

Column: Capillary

Spike ID Code: W3-938

Instrument #: MS02

Surrogate ID Code: W3-909

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1.1 - Dichloroethene	0	50.00	49.80	99	55.30	111	11	59 - 172	≤22
Trichloroethene	0	50.00	51.90	104	52.40	105	0	62 - 137	≤24
Benzene	0	50.00	53.10	106	54.20	108	1	66 - 142	≤21
Toluene	0	50.00	55.90	112	58.70	117	4	59 - 139	≤21
Chlorobenzene	0	50.00	54.70	109	56.10	112	2	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1.2 - Dichloroethane - d4	50.00	45.73	91	47.25	94	70 - 121
Toluene - d8	50.00	54.49	109	56.90	114	81 - 117
Bromofluorobenzene	50.00	44.66	89	45.68	91	74 - 121

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.S91

McLaren Hart™

(DC2-CN5868)

recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5868

Analyst: TS

Batch #: NA

Date Of Analysis: 04/30/92[a]

Spike Sample ID: 5868-075MS/MSD L47

Column: Capillary

Spike ID Code: W3-938

Instrument #: MS02

Surrogate ID Code: W3-909

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1.1 - Dichloroethene	0	50.00	62.20	124	52.70	105	16	59 - 172	≤22
Trichloroethene	0	50.00	57.70	115	56.50	113	1	62 - 137	≤24
Benzene	0	50.00	57.20	114	56.20	112	1	66 - 142	≤21
Toluene	0	50.00	61.90	124	59.60	119	4	59 - 139	≤21
Chlorobenzene	0	50.00	60.90	122	56.70	113	7	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1.2 - Dichloroethane - d4	50.00	48.61	97	47.38	95	70 - 121
Toluene - d8	50.00	55.85	112	56.87	114	81 - 117
Bromofluorobenzene	50.00	44.27	88	43.25	86	74 - 121

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments: [a] Applies to matrix spike analysis. Matrix spike duplicate analysis performed on 05/04/92.

8240SDR.S91

McLaren Hart™

(DC2-CN5868)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5879

Analyst: TS

Batch #: NA

Date Of Analysis: 04/30/92

Spike Sample ID: LCS/LCSD L47

Column: Capillary

Spike ID Code: W3-938

Instrument #: MS02

Surrogate ID Code: W3-909

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	64.10	128	57.40	115	10	59 - 172	≤22
Trichloroethene	0	50.00	54.70	109	56.80	114	4	62 - 137	≤24
Benzene	0	50.00	55.70	111	55.60	111	0	66 - 142	≤21
Toluene	0	50.00	58.50	117	56.50	113	3	59 - 139	≤21
Chlorobenzene	0	50.00	60.50	121	59.40	119	1	60 - 133	≤21

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	50.00	100	50.14	100	70 - 121
Toluene - d8	50.00	53.55	107	50.78	102	81 - 117
Bromofluorobenzene	50.00	50.57	101	50.36	101	74 - 121

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5715

Analyst: TS

Batch #: NA

Date Of Analysis: 03/16/92

Spike Sample ID: LCS/LCSD W31R

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	51.80	104	51.00	102	1	61 - 145	≤14
Trichloroethene	0	50.00	53.20	106	55.00	110	3	71 - 120	≤14
Benzene	0	50.00	53.50	107	55.60	111	3	76 - 127	≤11
Toluene	0	50.00	52.80	105	55.60	111	5	76 - 125	≤13
Chlorobenzene	0	50.00	54.20	108	56.40	113	4	75 - 130	≤13

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	50.91	102	50.23	100	76 - 114
Toluene - d8	50.00	48.40	97	48.71	97	88 - 110
Bromofluorobenzene	50.00	50.92	102	53.63	107	86 - 115

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.W91

McLaren Hart™

(DC1-CN5715) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5715

Analyst: TS

Batch #: NA

Date Of Analysis: 03/16/92

Spike Sample ID: 5715-001 MS/MSD W31

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	52.50	105	49.80	99	5	61 - 145	≤14
Trichloroethene	10.20	50.00	67.30	114	68.40	116	1	71 - 120	≤14
Benzene	0	50.00	56.20	112	56.90	114	1	76 - 127	≤11
Toluene	0	50.00	53.60	107	54.20	108	0	76 - 125	≤13
Chlorobenzene	0	50.00	54.30	109	51.90	104	4	75 - 130	≤13

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	51.37	103	53.14	106	76 - 114
Toluene - d8	50.00	48.61	97	48.47	97	88 - 110
Bromofluorobenzene	50.00	51.85	104	51.98	104	86 - 115

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.W91

McLaren Hart™

(DC1-CN5715) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5727

Analyst: TS

Batch #: NA

Date Of Analysis: 03/18/92

Spike Sample ID: LCS/LCSD W31

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	49.57	99	52.22	104	5	61 - 145	≤14
Trichloroethene	0	50.00	47.89	96	49.06	98	2	71 - 120	≤14
Benzene	0	50.00	49.40	98	47.94	96	2	76 - 127	≤11
Toluene	0	50.00	49.42	99	48.54	97	2	76 - 125	≤13
Chlorobenzene	0	50.00	47.93	96	47.35	95	1	75 - 130	≤13

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	48.19	96	51.21	102	76 - 114
Toluene - d8	50.00	51.49	103	51.71	103	88 - 110
Bromofluorobenzene	50.00	49.45	99	51.29	102	86 - 115

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

240SDR.W91

McLaren Hart™

(DC1-CN5727) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5727

Analyst: TS

Batch #: NA

Date Of Analysis: 03/18/92

Spike Sample ID: 5727-007 MS/MSD W31

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	47.31	95	49.73	99	4	61 - 145	≤14
Trichloroethene	0	50.00	47.93	96	50.22	100	4	71 - 120	≤14
Benzene	0	50.00	48.19	96	49.70	99	3	76 - 127	≤11
Toluene	0	50.00	45.51	91	51.49	103	12	76 - 125	≤13
Chlorobenzene	0	50.00	45.71	91	48.55	97	6	75 - 130	≤13

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	49.07	98	49.51	99	76 - 114
Toluene - d8	50.00	48.82	98	51.60	103	88 - 110
Bromofluorobenzene	50.00	51.30	103	49.19	98	86 - 115

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.W91

McLaren Hart™

(DC1-CN5727) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5745

Analyst: TS

Batch #: NA

Date Of Analysis: 03/20/92

Spike Sample ID: LCS/LCSD W32

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	44.80	89	44.90	89	0	61 - 145	≤14
Trichloroethene	0	50.00	48.80	97	50.10	100	3	71 - 120	≤14
Benzene	0	50.00	48.30	96	50.10	100	4	76 - 127	≤11
Toluene	0	50.00	45.90	91	47.80	95	4	76 - 125	≤13
Chlorobenzene	0	50.00	48.50	96	50.00	100	4	75 - 130	≤13

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	54.52	109	54.73	109	76 - 114
Toluene - d8	50.00	48.30	97	48.75	98	88 - 110
Bromofluorobenzene	50.00	51.25	102	49.29	98	86 - 115

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.W91

McLaren Hart™

(DC1-CN5745) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5745

Analyst: TS

Batch #: NA

Date Of Analysis: 03/20/92

Spike Sample ID: 5745-042 MS/MSD W32

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	44.80	89	46.30	92	3	61 - 145	≤14
Trichloroethene	0	50.00	49.20	98	49.80	99	1	71 - 120	≤14
Benzene	0	50.00	47.40	94	48.20	96	2	76 - 127	≤11
Toluene	0	50.00	45.80	91	46.00	92	1	76 - 125	≤13
Chlorobenzene	0	50.00	48.20	96	48.80	97	1	75 - 130	≤13

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	51.22	102	51.49	103	76 - 114
Toluene - d8	50.00	49.85	100	47.37	95	88 - 110
Bromofluorobenzene	50.00	49.80	100	48.58	97	86 - 115

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.W91

McLaren Hart™

(DC1-CN5745) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5709

Analyst: TS

Batch #: NA

Date Of Analysis: 03/16/92

Spike Sample ID: LCS/LCSD W31R

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	51.80	104	51.00	102	1	61 - 145	≤14
Trichloroethene	0	50.00	53.20	106	55.00	110	3	71 - 120	≤14
Benzene	0	50.00	53.50	107	55.60	111	3	76 - 127	≤11
Toluene	0	50.00	52.80	105	55.60	111	5	76 - 125	≤13
Chlorobenzene	0	50.00	54.20	108	56.40	113	4	75 - 130	≤13

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	50.91	102	50.23	100	76 - 114
Toluene - d8	50.00	48.40	97	48.71	97	88 - 110
Bromofluorobenzene	50.00	50.92	102	53.63	107	86 - 115

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.W91

McLaren Hart™

(DC1-CN5709) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5752

Analyst: TS

Batch #: NA

Date Of Analysis: 03/20/92

Spike Sample ID: LCS/LCSD W32

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	44.80	89	44.90	89	0	61 - 145	≤14
Trichloroethene	0	50.00	48.80	97	50.10	100	3	71 - 120	≤14
Benzene	0	50.00	48.30	96	50.10	100	4	76 - 127	≤11
Toluene	0	50.00	45.90	91	47.80	95	4	76 - 125	≤13
Chlorobenzene	0	50.00	48.50	96	50.00	100	4	75 - 130	≤13

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	54.52	109	54.73	109	76 - 114
Toluene - d8	50.00	48.30	97	48.75	98	88 - 110
Bromofluorobenzene	50.00	51.25	103	49.29	99	86 - 115

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

McLaren Hart™

(DC4-CN5752)

recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5756

Analyst: TS

Batch #: NA

Date Of Analysis: 03/20/92

Spike Sample ID: LCS/LCSD W32

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	44.80	89	44.90	89	0	61 - 145	≤14
Trichloroethene	0	50.00	48.80	97	50.10	100	3	71 - 120	≤14
Benzene	0	50.00	48.30	96	50.10	100	4	76 - 127	≤11
Toluene	0	50.00	45.90	91	47.80	95	4	76 - 125	≤13
Chlorobenzene	0	50.00	48.50	96	50.00	100	4	75 - 130	≤13

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	54.52	109	54.73	109	76 - 114
Toluene - d8	50.00	48.30	97	48.75	98	88 - 110
Bromofluorobenzene	50.00	51.25	102	49.29	98	86 - 115

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

240SDR.W91

McLaren Hart™

(DC1-CN5756)

recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5761

Analyst: TS

Batch #: NA

Date Of Analysis: 03/31/92

Spike Sample ID: 5761-017 MS/MSD W33

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	44.50	88	45.20	90	2	61 - 145	≤14
Trichloroethene	0	50.00	50.20	100	53.20	106	5	71 - 120	≤14
Benzene	0	50.00	49.30	98	51.70	103	4	76 - 127	≤11
Toluene	0	50.00	46.30	92	48.20	96	4	76 - 125	≤13
Chlorobenzene	0	50.00	52.80	106	53.90	108	1	75 - 130	≤13

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	54.36	109	56.65	113	76 - 114
Toluene - d8	50.00	49.62	99	49.18	98	88 - 110
Bromofluorobenzene	50.00	50.80	102	50.89	102	86 - 115

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.W91

McLaren Hart™

(DC1-CN5761)

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5761

Analyst: TS

Batch #: NA

Date Of Analysis: 03/31/92

Spike Sample ID: LCS/LCSD W33

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-909

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	44.40	88	46.60	93	5	61 - 145	≤14
Trichloroethene	0	50.00	50.40	101	51.50	103	1	71 - 120	≤14
Benzene	0	50.00	47.70	95	49.50	99	4	76 - 127	≤11
Toluene	0	50.00	44.30	88	46.80	93	5	76 - 125	≤13
Chlorobenzene	0	50.00	50.50	101	50.10	100	0	75 - 130	≤13

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1.2 - Dichloroethane - d4	50.00	56.46	113	54.60	109	76 - 114
Toluene - d8	50.00	49.05	98	50.10	100	88 - 110
Bromofluorobenzene	50.00	50.85	102	52.79	106	86 - 115

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.W91

McLaren Hart™

(DC1-CN5761)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5756

Analyst: TS

Batch #: NA

Date Of Analysis: 03/20/92

Spike Sample ID: LCS/LCSD W32

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-852

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	44.80	89	44.90	89	0	61 - 145	≤14
Trichloroethene	0	50.00	48.80	97	50.10	100	3	71 - 120	≤14
Benzene	0	50.00	48.30	96	50.10	100	4	76 - 127	≤11
Toluene	0	50.00	45.90	91	47.80	95	4	76 - 125	≤13
Chlorobenzene	0	50.00	48.50	96	50.00	100	4	75 - 130	≤13

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	54.52	109	54.73	109	76 - 114
Toluene - d8	50.00	48.30	97	48.75	98	88 - 110
Bromofluorobenzene	50.00	51.25	102	49.29	98	86 - 115

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.W91

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(DC1-CN5756)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5758

Analyst: TS

Batch #: NA

Date Of Analysis: 03/31/92

Spike Sample ID: LCS/LCSD W33

Column: Capillary

Spike ID Code: W3-774

Instrument #: MS02

Surrogate ID Code: W3-909

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	44.40	88	46.60	93	5	61 - 145	≤14
Trichloroethene	0	50.00	50.40	101	51.50	103	1	71 - 120	≤14
Benzene	0	50.00	47.70	95	49.50	99	4	76 - 127	≤11
Toluene	0	50.00	44.30	88	46.80	93	5	76 - 125	≤13
Chlorobenzene	0	50.00	50.50	101	50.10	100	0	75 - 130	≤13

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	56.46	113	54.60	109	76 - 114
Toluene - d8	50.00	49.05	98	50.10	100	88 - 110
Bromofluorobenzene	50.00	50.85	102	52.79	106	86 - 115

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.W91

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(DC1-CN5758)

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McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5868

Analyst: TS

Batch #: NA

Date Of Analysis: 04/27/92

Spike Sample ID: LCS/LCSD W36

Column: Capillary

Spike ID Code: W3-938

Instrument #: MS04

Surrogate ID Code: W3-909

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1.1 - Dichloroethene	0	50.00	53.60	107	52.70	105	1	61 - 145	≤14
Trichloroethene	0	50.00	54.90	110	54.90	110	0	71 - 120	≤14
Benzene	0	50.00	56.90	114	56.50	113	0	76 - 127	≤11
Toluene	0	50.00	56.80	114	56.10	112	1	76 - 125	≤13
Chlorobenzene	0	50.00	57.80	116	57.60	115	0	75 - 130	≤13

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1.2 - Dichloroethane - d4	50.00	50.96	102	50.96	102	76 - 114
Toluene - d8	50.00	49.49	99	49.80	100	88 - 110
Bromofluorobenzene	50.00	50.48	101	49.64	99	86 - 115

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.W91

McLaren Hart™

(DC2-CN5868)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5868

Analyst: TS

Batch #: NA

Date Of Analysis: 04/27/92

Spike Sample ID: 5868-090 MS/MSD W36

Column: Capillary

Spike ID Code: W3-938

Instrument #: MS04

Surrogate ID Code: W3-909

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1.1 - Dichloroethene	0	50.00	52.10	104	50.40	101	2	61 - 145	≤14
Trichloroethene	0	50.00	55.90	112	54.20	108	3	71 - 120	≤14
Benzene	0	50.00	57.80	116	57.10	114	1	76 - 127	≤11
Toluene	0	50.00	56.70	113	56.60	113	0	76 - 125	≤13
Chlorobenzene	0	50.00	58.50	117	57.00	114	2	75 - 130	≤13

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1.2 - Dichloroethane - d4	50.00	49.42	99	49.14	98	76 - 114
Toluene - d8	50.00	49.51	99	50.39	101	88 - 110
Bromofluorobenzene	50.00	49.98	100	50.58	101	86 - 115

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.W91

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(DC2-CN5868)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8240

LP#: 5879

Analyst: TS

Batch #: NA

Date Of Analysis: 04/27/92

Spike Sample ID: LCS/LCSD W36

Column: Capillary

Spike ID Code: W3-938

Instrument #: MS04

Surrogate ID Code: W3-909

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
1,1 - Dichloroethene	0	50.00	53.60	107	52.70	105	1	61 - 145	≤14
Trichloroethene	0	50.00	54.90	110	54.90	110	0	71 - 120	≤14
Benzene	0	50.00	56.90	114	56.50	113	0	76 - 127	≤11
Toluene	0	50.00	56.80	114	56.10	112	1	76 - 125	≤13
Chlorobenzene	0	50.00	57.80	116	57.60	115	0	75 - 130	≤13

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(j) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
1,2 - Dichloroethane - d4	50.00	50.96	102	50.96	102	76 - 114
Toluene - d8	50.00	49.49	99	49.80	100	88 - 110
Bromofluorobenzene	50.00	50.48	101	49.64	99	86 - 115

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8240SDR.W91

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(DC2-CN5879)

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SEMI-VOLATILE ORGANIC COMPOUNDS

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5715

Analyst: ED

Batch #: 920312-1901

Date Of Analysis: 03-20/03-22-92[a]

Spike Sample ID: LCSS 24/LCSDS 24

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS01

Surrogate ID Code: W3-887

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	1519.00	60	1981.00	79	27	26 - 90	≤35
2 - Chlorophenol	0	2500.00	1459.00	58	1790.00	71	20	25 - 102	≤50
1.4-Dichlorobenzene	0	1667.00	869.00	52	1072.00	64	20	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	856.00	51	1118.00	67	27	41 - 126	≤38
1.2.4-Trichlorobenzene	0	1667.00	864.00	51	1050.00	63	21	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	1582.00	63	2059.00	82	26	26 - 103	≤33
Acenaphthene	0	1667.00	941.00	56	1145.00	68	19	31 - 137	≤19
4-Nitrophenol	0	2500.00	1976.00	79	2487.00	99	22	11 - 114	≤50
2.4-Dinitrotoluene	0	1667.00	927.00	55	1241.00	74	29	28 - 89	≤47
Pentachlorophenol	0	2500.00	2362.00	94	2693.00	108	13	17 - 109	≤47
Pyrene	0	1667.00	1042.00	62	1182.00	70	12	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	55.11	73	61.68	82	25 - 121
Phenol - d6	75.00	51.96	69	61.67	82	24 - 113
Nitrobenzene - d5	50.00	34.10	68	37.96	76	23 - 120
2-Fluorobiphenyl	50.00	34.79	70	38.04	76	30 - 115
2.4.6 - Tribromophenol	75.00	54.28	72	77.02	103	19 - 122
Terphenyl - d14	50.00	41.31	83	44.80	90	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments: [a] LCS was analyzed on 03/20/92. LCSD was analyzed on 03/22/92.

8270BNA.S91

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5727

Analyst: ED

Batch #: 920317-1901

Date Of Analysis: 03/20/92

Spike Sample ID: LCSS 25/LCSDS S25

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS03

Surrogate ID Code: W3-902

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	2131.00	85	2189.00	87	2	26 - 90	≤35
2 - Chlorophenol	0	2500.00	2045.00	81	1927.00	77	5	25 - 102	≤50
1,4-Dichlorobenzene	0	1667.00	1334.00	80	1298.00	77	3	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1765.00	106	1842.00	111	4	41 - 126	≤38
1,2,4-Trichlorobenzene	0	1667.00	1439.00	86	1373.00	82	4	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	2461.00	98	2358.00	94	4	26 - 103	≤33
Acenaphthene	0	1667.00	1465.00	87	1422.00	85	2	31 - 137	≤19
4-Nitrophenol	0	2500.00	2128.00	85	2011.00	80	6	11 - 114	≤50
2,4-Dinitrotoluene	0	1667.00	1403.00	84	1383.00	83	1	28 - 89	≤47
Pentachlorophenol	0	2500.00	2564.00	103	2600.00	104	0	17 - 109	≤47
Pyrene	0	1667.00	1372.00	82	1290.00	77	6	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	70.33	94	66.21	88	25 - 121
Phenol - d6	75.00	74.08	99	71.36	95	24 - 113
Nitrobenzene - d5	50.00	49.19	98	47.85	96	23 - 120
2-Fluorobiphenyl	50.00	48.00	96	47.34	95	30 - 115
2,4,6 - Tribromophenol	75.00	75.78	101	72.18	96	19 - 122
Terphenyl - d14	50.00	49.71	99	46.98	94	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8270BNA.S91

McLaren Hart™

(DC1-CN5727) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5727

Analyst: ED

Batch #: 920317-1901

Date Of Analysis: 03/20/92

Spike Sample ID: 5727-008 MS/MSD MSS 30

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS03

Surrogate ID Code: W3-902

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	2106.00	84	2050.00	82	2	26 - 90	≤35
2 - Chlorophenol	0	2500.00	1914.00	76	1962.00	78	2	25 - 102	≤50
1.4-Dichlorobenzene	0	1667.00	1207.00	72	1228.00	73	1	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1776.00	107	1794.00	108	0	41 - 126	≤38
1.2.4-Trichlorobenzene	0	1667.00	1263.00	75	1333.00	80	6	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	2205.00	88	2266.00	90	2	26 - 103	≤33
Acenaphthene	0	1667.00	1321.00	79	1373.00	82	3	31 - 137	≤19
4-Nitrophenol	0	2500.00	2192.00	87	2335.00	93	6	11 - 114	≤50
2.4-Dinitrotoluene	0	1667.00	1284.00	77	1313.00	78	1	28 - 89	≤47
Pentachlorophenol	0	2500.00	2508.00	100	2670.00	107	6	17 - 109	≤47
Pyrene	0	1667.00	1214.00	72	1211.00	72	0	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	65.67	88	63.70	85	25 - 121
Phenol - d6	75.00	67.15	90	68.23	91	24 - 113
Nitrobenzene - d5	50.00	43.36	87	45.77	92	23 - 120
2-Fluorobiphenyl	50.00	42.70	85	45.54	91	30 - 115
2.4.6 - Tribromophenol	75.00	70.66	94	76.96	103	19 - 122
Terphenyl - d14	50.00	42.98	86	43.40	87	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

70BNA.S91

McLaren Hart™

(DC1-CN5727)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5745

Analyst: ED

Date Of Analysis: 03/25/92

Column: Capillary

Instrument #: MS01

Batch #: 920320-0301

Spike Sample ID: LCSS 26/LCSDS 26

Spike ID Code: W3-867

Surrogate ID Code: W3-902

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	1923.00	76	1960.00	78	2	26 - 90	≤35
2 - Chlorophenol	0	2500.00	2120.00	84	2063.00	82	2	25 - 102	≤50
1,4-Dichlorobenzene	0	1667.00	1291.00	77	1224.00	73	5	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1235.00	74	1198.00	71	4	41 - 126	≤38
1,2,4-Trichlorobenzene	0	1667.00	1424.00	85	1359.00	81	4	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	2040.00	81	2162.00	86	5	26 - 103	≤33
Acenaphthene	0	1667.00	1208.00	72	1185.00	71	1	31 - 137	≤19
4-Nitrophenol	0	2500.00	2232.00	89	2262.00	90	1	11 - 114	≤50
2,4-Dinitrotoluene	0	1667.00	1352.00	81	1320.00	79	2	28 - 89	≤47
Pentachlorophenol	0	2500.00	3588.00	144[a]	3267.00	131[a]	9	17 - 109	≤47
Pyrene	0	1667.00	1278.00	76	1157.00	69	9	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

Comments:

[a] The laboratory control sample recoveries are beyond advisory control limits. The calibration data associated with this lab project were within QC acceptance limits.

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McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5745

Analyst: ED

Batch #: 920320-0301

Date Of Analysis: 03/25/92

Spike Sample ID: LCSS 26/LCSDS 26

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS01

Surrogate ID Code: W3-902

Matrix: Soil Units: ug/Kg

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	72.77	97	67.32	90	25 - 121
Phenol - d6	75.00	61.99	83	62.79	84	24 - 113
Nitrobenzene - d5	50.00	41.21	82	39.04	78	23 - 120
2-Fluorobiphenyl	50.00	46.10	92	45.54	91	30 - 115
2.4.6 - Tribromophenol	75.00	97.79	130[a]	95.80	127[a]	19 - 122
Terphenyl - d14	50.00	46.04	92	43.14	86	18 - 137

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

[a] Surrogate recoveries are beyond quality control limits. Sample meets all QC acceptance criteria specified in SW846 and EPA SOW 2/88.

8270BNA.S91

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5745

Analyst: ED

Batch #: 920320-0301

Date Of Analysis: 03/25/92

Spike Sample ID: 5745-001 MSS 31/MSDS 31

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS01

Surrogate ID Code: W3-902

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	2148.00	85	1866.00	74	13	26 - 90	≤35
2 - Chlorophenol	0	2500.00	2271.00	90	1964.00	78	14	25 - 102	≤50
1,4-Dichlorobenzene	0	1667.00	1353.00	81	1169.00	70	14	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1370.00	82	1180.00	70	15	41 - 126	≤38
1,2,4-Trichlorobenzene	0	1667.00	1537.00	92	1363.00	81	12	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	2376.00	95	2066.00	82	14	26 - 103	≤33
Acenaphthene	0	1667.00	1379.00	82	1238.00	74	10	31 - 137	≤19
4-Nitrophenol	0	2500.00	2542.00	102	2320.00	92	10	11 - 114	≤50
2,4-Dinitrotoluene	0	1667.00	1438.00	86	1329.00	79	8	28 - 89	≤47
Pentachlorophenol	0	2500.00	4253.00	170[a]	3862.00	154[a]	9	17 - 109	≤47
Pyrene	0	1667.00	1428.00	85	1247.00	74	13	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

Comments:

[a] Matrix spike recoveries for Pentachlorophenol are beyond advisory control limits. Additionally, the laboratory control sample recovery is beyond advisory control. Calibration data associated with this lab project were within QC limits. limits.

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McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5745

Analyst: ED

Batch #: 920320-0301

Date Of Analysis: 03/25/92

Spike Sample ID: 5745-001 MSS 31/MSDS 31

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS01

Surrogate ID Code: W3-902

Matrix: Soil Units: ug/Kg

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	74.00	99	63.11	84	25 - 121
Phenol - d6	75.00	68.57	91	58.97	79	24 - 113
Nitrobenzene - d5	50.00	44.78	90	39.39	79	23 - 120
2-Fluorobiphenyl	50.00	52.14	104	46.66	93	30 - 115
2,4,6 - Tribromophenol	75.00	114.48	153[a]	101.73	136[a]	19 - 122
Terphenyl - d14	50.00	53.16	106	42.56	85	18 - 137

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

[a] Surrogate recoveries are beyond quality control limits. Sample meets all QC acceptance criteria specified in SW846 and EPA SOW 2/88.

8270BNA.S91

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5751

Analyst: ED

Date Of Analysis: 03/26/92

Column: Capillary

Instrument #: MS03

Batch #: 920320-2001

Spike Sample ID: 5751-002 MSS 32/MSDS 32

Spike ID Code: W3-867

Surrogate ID Code: W3-902

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	1785.00	71	1914.00	76	6	26 - 90	≤35
2 - Chlorophenol	0	2500.00	1732.00	69	1877.00	75	8	25 - 102	≤50
1,4-Dichlorobenzene	0	1667.00	750.00	45	798.00	47	4	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1019.00	61	1079.00	64	4	41 - 126	≤38
1,2,4-Trichlorobenzene	0	1667.00	883.00	53	949.00	56	5	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	1906.00	76	2072.00	82	7	26 - 103	≤33
Acenaphthene	0	1667.00	1059.00	63	1145.00	68	7	31 - 137	≤19
4-Nitrophenol	0	2500.00	2130.00	85	2225.00	89	4	11 - 114	≤50
2,4-Dinitrotoluene	0	1667.00	1240.00	74	1280.00	76	2	28 - 89	≤47
Pentachlorophenol	0	2500.00	2168.00	86	2304.00	92	6	17 - 109	≤47
Pyrene	0	1667.00	1193.00	71	1250.00	75	5	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	64.70	86	73.72	98	25 - 121
Phenol - d6	75.00	64.29	86	69.77	93	24 - 113
Nitrobenzene - d5	50.00	38.53	77	40.75	82	23 - 120
2-Fluorobiphenyl	50.00	42.72	85	41.87	84	30 - 115
2,4,6 - Tribromophenol	75.00	63.12	84	66.50	89	19 - 122
Terphenyl - d14	50.00	45.14	90	48.25	96	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8270BNA.S91

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5751

Analyst: ED

Batch #: 920321-2001

Date Of Analysis: 03/26/92

Spike Sample ID: LCSS 27/LCSDS 27

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS03

Surrogate ID Code: W3-902

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	1938.00	77	2058.00	82	6	26 - 90	≤35
2 - Chlorophenol	0	2500.00	1850.00	74	2000.00	80	7	25 - 102	≤50
1.4-Dichlorobenzene	0	1667.00	1152.00	69	1181.00	70	1	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1120.00	67	1182.00	71	5	41 - 126	≤38
1.2.4-Trichlorobenzene	0	1667.00	1201.00	72	1189.00	71	1	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	2055.00	82	2162.00	86	4	26 - 103	≤33
Acenaphthene	0	1667.00	1253.00	75	1254.00	75	0	31 - 137	≤19
4-Nitrophenol	0	2500.00	2188.00	87	2362.00	94	7	11 - 114	≤50
2.4-Dinitrotoluene	0	1667.00	1329.00	79	1384.00	83	4	28 - 89	≤47
Pentachlorophenol	0	2500.00	2251.00	90	2337.00	93	3	17 - 109	≤47
Pyrene	0	1667.00	1248.00	74	1321.00	79	6	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	65.86	88	70.01	93	25 - 121
Phenol - d6	75.00	66.59	89	69.32	92	24 - 113
Nitrobenzene - d5	50.00	43.43	87	43.29	86	23 - 120
2-Fluorobiphenyl	50.00	42.34	85	42.44	85	30 - 115
2.4.6 - Tribromophenol	75.00	57.50	77	59.56	79	19 - 122
Terphenyl - d14	50.00	48.24	96	47.86	96	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

270BNA.S91

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5764

Analyst: ED

Batch #: 920324-2001

Date Of Analysis: 03/30/92

Spike Sample ID: LCSS 30/LCSDS 30

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS03

Surrogate ID Code: W3-902

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	2490.00	99[a]	2185.00	87	12	26 - 90	≤35
2 - Chlorophenol	0	2500.00	2175.00	87	2082.00	83	4	25 - 102	≤50
1,4-Dichlorobenzene	0	1667.00	1454.00	87	1367.00	82	5	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1774.00	106	1489.00	89	17	41 - 126	≤38
1,2,4-Trichlorobenzene	0	1667.00	1485.00	89	1396.00	83	6	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	2577.00	103	2506.00	100	2	26 - 103	≤33
Acenaphthene	0	1667.00	1573.00	94	1441.00	86	8	31 - 137	≤19
4-Nitrophenol	0	2500.00	2517.00	101	2295.00	91	10	11 - 114	≤50
2,4-Dinitrotoluene	0	1667.00	1498.00	89	1338.00	80	10	28 - 89	≤47
Pentachlorophenol	0	2500.00	2657.00	106	2438.00	97	8	17 - 109	≤47
Pyrene	0	1667.00	1725.00	103	1553.00	93	10	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	75.60	101	73.02	97	25 - 121
Phenol - d6	75.00	76.76	102	73.28	98	24 - 113
Nitrobenzene - d5	50.00	52.64	105	49.02	98	23 - 120
2-Fluorobiphenyl	50.00	54.58	109	49.51	99	30 - 115
2,4,6 - Tribromophenol	75.00	75.35	100	69.65	93	19 - 122
Terphenyl - d14	50.00	58.80	118	54.79	110	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments: [a] The laboratory control sample recovery is beyond advisory control limits. Continuing calibration, internal standard recoveries and surrogate recoveries meet QC acceptance criteria specified in SW-846 and EPA SOW 2/88 and 3/90.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5709

Analyst: ED

Batch #: 920312-1901

Date Of Analysis: 03-20/03-22-92[a]

Spike Sample ID: LCSS 24/LCSDS 24

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS01

Surrogate ID Code: W3-887

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	1519.00	60	1981.00	79	27	26 - 90	≤35
2 - Chlorophenol	0	2500.00	1459.00	58	1790.00	71	20	25 - 102	≤50
1,4-Dichlorobenzene	0	1667.00	869.00	52	1072.00	64	20	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	856.00	51	1118.00	67	27	41 - 126	≤38
1,2,4-Trichlorobenzene	0	1667.00	864.00	51	1050.00	63	21	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	1582.00	63	2059.00	82	26	26 - 103	≤33
Acenaphthene	0	1667.00	941.00	56	1145.00	68	19	31 - 137	≤19
4-Nitrophenol	0	2500.00	1976.00	79	2487.00	99	22	11 - 114	≤50
2,4-Dinitrotoluene	0	1667.00	927.00	55	1241.00	74	29	28 - 89	≤47
Pentachlorophenol	0	2500.00	2362.00	94	2693.00	108	13	17 - 109	≤47
Pyrene	0	1667.00	1042.00	62	1182.00	70	12	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	55.11	73	61.68	82	25 - 121
Phenol - d6	75.00	51.96	69	61.67	82	24 - 113
Nitrobenzene - d5	50.00	34.10	68	37.96	76	23 - 120
2-Fluorobiphenyl	50.00	34.79	70	38.04	76	30 - 115
2,4,6 - Tribromophenol	75.00	54.28	72	77.02	103	19 - 122
Terphenyl - d14	50.00	41.31	83	44.80	90	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments: [a] LCS was analyzed on 03/20/92. LCSD was analyzed on 03/22/92.

70BNA.S91

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5709

Analyst: ED

Batch #: 920312-1901

Date Of Analysis: 03-20/03-22-92 [a]

Spike Sample ID: 5709-014-MS/MSD

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS01

Surrogate ID Code: W3-887

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	1630.00	65	1712.00	68	4	26 - 90	≤35
2 - Chlorophenol	0	2500.00	1573.00	62	1610.00	64	3	25 - 102	≤50
1.4-Dichlorobenzene	0	1667.00	833.00	50	887.00	53	5	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	926.00	55	1003.00	60	8	41 - 126	≤38
1.2.4-Trichlorobenzene	0	1667.00	893.00	53	982.00	58	9	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	1699.00	68	1785.00	71	4	26 - 103	≤33
Acenaphthene	0	1667.00	994.00	59	1017.00	61	3	31 - 137	≤19
4-Nitrophenol	0	2500.00	2186.00	87	2041.00	81	7	11 - 114	≤50
2.4-Dinitrotoluene	0	1667.00	869.00	52	976.00	58	10	28 - 89	≤47
Pentachlorophenol	0	2500.00	2556.00	102	2598.00	104	1	17 - 109	≤47
Pyrene	0	1667.00	1005.00	60	1074.00	64	6	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	56.92	76	55.88	74	25 - 121
Phenol - d6	75.00	50.53	67	53.34	71	24 - 113
Nitrobenzene - d5	50.00	31.88	64	32.62	65	23 - 120
2-Fluorobiphenyl	50.00	33.22	66	35.57	71	30 - 115
2.4.6 - Tribromophenol	75.00	57.81	77	70.00	93	19 - 122
Terphenyl - d14	50.00	38.71	77	40.12	80	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

[a] MS was analyzed on 03/20/92. MSD was analyzed on 03/22/92.

8270BNA.S91

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5756

Analyst: ED

Batch #: 920323-2602

Date Of Analysis: 04/01/92

Spike Sample ID: LCSS 28/LCSDS 28

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS01

Surrogate ID Code: W3-902

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	2082.00	83	2098.00	83	0	26 - 90	≤35
2 - Chlorophenol	0	2500.00	2062.00	82	2023.00	80	2	25 - 102	≤50
1.4-Dichlorobenzene	0	1667.00	1253.00	75	1188.00	71	5	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1298.00	77	1319.00	79	2	41 - 126	≤38
1.2.4-Trichlorobenzene	0	1667.00	1298.00	77	1237.00	74	3	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	2297.00	91	2443.00	97	6	26 - 103	≤33
Acenaphthene	0	1667.00	1331.00	79	1409.00	84	6	31 - 137	≤19
4-Nitrophenol	0	2500.00	2336.00	93	2551.00	102	9	11 - 114	≤50
2.4-Dinitrotoluene	0	1667.00	1408.00	84	1479.00	88	4	28 - 89	≤47
Pentachlorophenol	0	2500.00	2459.00	98	2685.00	107	8	17 - 109	≤47
Pyrene	0	1667.00	1354.00	81	1562.00	93	13	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	66.97	89	65.84	88	25 - 121
Phenol - d6	75.00	67.68	90	66.01	88	24 - 113
Nitrobenzene - d5	50.00	39.50	79	35.12	70	23 - 120
2-Fluorobiphenyl	50.00	43.65	87	43.50	87	30 - 115
2.4.6 - Tribromophenol	75.00	77.72	104	86.39	115	19 - 122
Terphenyl - d14	50.00	45.50	91	52.65	105	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8270BNA.S91

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5756

Analyst: ED

Batch #: 920323-2001

Date Of Analysis: 03/30/92

Spike Sample ID: LCSS 29/LCSDS 29

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS01

Surrogate ID Code: W3-887

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	2051.00	82	2265.00	90	9	26 - 90	≤35
2 - Chlorophenol	0	2500.00	2006.00	80	2244.00	89	10	25 - 102	≤50
1,4-Dichlorobenzene	0	1667.00	1128.00	67	1275.00	76	12	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1220.00	73	1307.00	78	6	41 - 126	≤38
1,2,4-Trichlorobenzene	0	1667.00	1276.00	76	1374.00	82	7	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	2134.00	85	2300.00	92	7	26 - 103	≤33
Acenaphthene	0	1667.00	1273.00	76	1399.00	84	10	31 - 137	≤19
4-Nitrophenol	0	2500.00	2430.00	97	2685.00	107	9	11 - 114	≤50
2,4-Dinitrotoluene	0	1667.00	1389.00	83	1485.00	89	6	28 - 89	≤47
Pentachlorophenol	0	2500.00	2634.00	105	2721.00	109	3	17 - 109	≤47
Pyrene	0	1667.00	1419.00	85	1397.00	83	2	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	61.55	82	76.69	102	25 - 121
Phenol - d6	75.00	64.31	86	72.19	96	24 - 113
Nitrobenzene - d5	50.00	47.74	95	51.11	102	23 - 120
2-Fluorobiphenyl	50.00	47.76	96	52.18	104	30 - 115
2,4,6 - Tribromophenol	75.00	69.29	92	76.54	102	19 - 122
Terphenyl - d14	50.00	56.11	112	53.92	108	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8270BNA.S91

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5756

Analyst: ED

Batch #: 920323-2001

Date Of Analysis: 03/30/92

Spike Sample ID: 5756-013-MS/MSD

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS03

Surrogate ID Code: W3-887

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	1619.00	64	1798.00	71	10	26 - 90	≤35
2 - Chlorophenol	0	2500.00	1511.00	60	1658.00	66	9	25 - 102	≤50
1.4-Dichlorobenzene	0	1667.00	928.00	55	982.00	58	5	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1006.00	60	1111.00	66	9	41 - 126	≤38
1.2.4-Trichlorobenzene	0	1667.00	997.00	59	1037.00	62	4	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	1703.00	68	1806.00	72	5	26 - 103	≤33
Acenaphthene	0	1667.00	1097.00	65	1134.00	68	4	31 - 137	≤19
4-Nitrophenol	0	2500.00	1842.00	73	1836.00	73	0	11 - 114	≤50
2.4-Dinitrotoluene	0	1667.00	998.00	59	993.00	59	0	28 - 89	≤47
Pentachlorophenol	0	2500.00	1841.00	73	1781.00	71	2	17 - 109	≤47
Pyrene	0	1667.00	1145.00	68	1118.00	67	1	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	52.49	70	56.29	75	25 - 121
Phenol - d6	75.00	54.49	73	56.93	76	24 - 113
Nitrobenzene - d5	50.00	37.70	75	38.29	76	23 - 120
2-Fluorobiphenyl	50.00	41.69	83	42.33	85	30 - 115
2.4.6 - Tribromophenol	75.00	61.57	82	59.46	79	19 - 122
Terphenyl - d14	50.00	45.40	91	43.67	87	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8270BNA.S91

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5761

Analyst: ED

Batch #: 920324-2001

Date Of Analysis: 03/31/92 and 04/01/92

Spike Sample ID: 5761-001-MS/MSD

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS03

Surrogate ID Code: W3-902

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	2098.00	83	1551.00	62	28	26 - 90	≤35
2 - Chlorophenol	0	2500.00	1828.00	73	1403.00	56	26	25 - 102	≤50
1,4-Dichlorobenzene	0	1667.00	1073.00	64	590.00	35	58[a]	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1385.00	83	916.00	54	41[a]	41 - 126	≤38
1,2,4-Trichlorobenzene	0	1667.00	1156.00	69	724.00	43	46[a]	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	2179.00	87	1931.00	77	12	26 - 103	≤33
Acenaphthene	0	1667.00	1221.00	73	1059.00	63	14	31 - 137	≤19
4-Nitrophenol	0	2500.00	2322.00	92	2024.00	81	12	11 - 114	≤50
2,4-Dinitrotoluene	0	1667.00	1161.00	69	1102.00	66	4	28 - 89	≤47
Pentachlorophenol	0	2500.00	2535.00	101	2132.00	85	17	17 - 109	≤47
Pyrene	0	1667.00	1367.00	82	1190.00	71	14	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	61.23	82	43.86	58	25 - 121
Phenol - d6	75.00	64.88	86	50.98	68	24 - 113
Nitrobenzene - d5	50.00	40.87	82	24.02	48	23 - 120
2-Fluorobiphenyl	50.00	41.48	83	32.89	66	30 - 115
2,4,6 - Tribromophenol	75.00	78.49	105	68.65	92	19 - 122
Terphenyl - d14	50.00	47.44	95	42.46	85	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments: [a] Matrix spike relative percent differences are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5756

Analyst: ED

Date Of Analysis: 04/01/92

Column: Capillary

Instrument #: MS01

Batch #: 920323-2602

Spike Sample ID: LCSS 28/LCSDS 28

Spike ID Code: W3-867

Surrogate ID Code: W3-902

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	2082.00	83	2098.00	83	0	26 - 90	≤35
2 - Chlorophenol	0	2500.00	2062.00	82	2023.00	80	2	25 - 102	≤50
1.4-Dichlorobenzene	0	1667.00	1253.00	75	1188.00	71	5	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1298.00	77	1319.00	79	2	41 - 126	≤38
1.2.4-Trichlorobenzene	0	1667.00	1298.00	77	1237.00	74	3	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	2297.00	91	2443.00	97	6	26 - 103	≤33
Acenaphthene	0	1667.00	1331.00	79	1409.00	84	6	31 - 137	≤19
4-Nitrophenol	0	2500.00	2336.00	93	2551.00	102	9	11 - 114	≤50
2.4-Dinitrotoluene	0	1667.00	1408.00	84	1479.00	88	4	28 - 89	≤47
Pentachlorophenol	0	2500.00	2459.00	98	2685.00	107	8	17 - 109	≤47
Pyrene	0	1667.00	1354.00	81	1562.00	93	13	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	66.97	89	65.84	88	25 - 121
Phenol - d6	75.00	67.68	90	66.01	88	24 - 113
Nitrobenzene - d5	50.00	39.50	79	35.12	70	23 - 120
2-Fluorobiphenyl	50.00	43.65	87	43.50	87	30 - 115
2.4.6 - Tribromophenol	75.00	77.72	104	86.39	115	19 - 122
Terphenyl - d14	50.00	45.50	91	52.65	105	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8270BNA.S91

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5756

Analyst: ED

Date Of Analysis: 03/30/92

Column: Capillary

Instrument #: MS01

Batch #: 920323-2001

Spike Sample ID: LCSS 29/LCSDS 29

Spike ID Code: W3-867

Surrogate ID Code: W3-887

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	2051.00	82	2265.00	90	9	26 - 90	≤35
2 - Chlorophenol	0	2500.00	2006.00	80	2244.00	89	10	25 - 102	≤50
1.4-Dichlorobenzene	0	1667.00	1128.00	67	1275.00	76	12	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1220.00	73	1307.00	78	6	41 - 126	≤38
1.2.4-Trichlorobenzene	0	1667.00	1276.00	76	1374.00	82	7	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	2134.00	85	2300.00	92	7	26 - 103	≤33
Acenaphthene	0	1667.00	1273.00	76	1399.00	84	10	31 - 137	≤19
4-Nitrophenol	0	2500.00	2430.00	97	2685.00	107	9	11 - 114	≤50
2.4-Dinitrotoluene	0	1667.00	1389.00	83	1485.00	89	6	28 - 89	≤47
Pentachlorophenol	0	2500.00	2634.00	105	2721.00	109	3	17 - 109	≤47
Pyrene	0	1667.00	1419.00	85	1397.00	83	2	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	61.55	82	76.69	102	25 - 121
Phenol - d6	75.00	64.31	86	72.19	96	24 - 113
Nitrobenzene - d5	50.00	47.74	95	51.11	102	23 - 120
2-Fluorobiphenyl	50.00	47.76	96	52.18	104	30 - 115
2.4.6 - Tribromophenol	75.00	69.29	92	76.54	102	19 - 122
Terphenyl - d14	50.00	56.11	112	53.92	108	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8270BNA.S91

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5756

Analyst: ED

Date Of Analysis: 03/30/92

Column: Capillary

Instrument #: MS03

Batch #: 920323-2001

Spike Sample ID: 5756-013-MS/MSD

Spike ID Code: W3-867

Surrogate ID Code: W3-887

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	1619.00	64	1798.00	71	10	26 - 90	≤35
2 - Chlorophenol	0	2500.00	1511.00	60	1658.00	66	9	25 - 102	≤50
1,4-Dichlorobenzene	0	1667.00	928.00	55	982.00	58	5	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1006.00	60	1111.00	66	9	41 - 126	≤38
1,2,4-Trichlorobenzene	0	1667.00	997.00	59	1037.00	62	4	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	1703.00	68	1806.00	72	5	26 - 103	≤33
Acenaphthene	0	1667.00	1097.00	65	1134.00	68	4	31 - 137	≤19
4-Nitrophenol	0	2500.00	1842.00	73	1836.00	73	0	11 - 114	≤50
2,4-Dinitrotoluene	0	1667.00	998.00	59	993.00	59	0	28 - 89	≤47
Pentachlorophenol	0	2500.00	1841.00	73	1781.00	71	2	17 - 109	≤47
Pyrene	0	1667.00	1145.00	68	1118.00	67	1	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	52.49	70	56.29	75	25 - 121
Phenol - d6	75.00	54.49	73	56.93	76	24 - 113
Nitrobenzene - d5	50.00	37.70	75	38.29	76	23 - 120
2-Fluorobiphenyl	50.00	41.69	83	42.33	85	30 - 115
2,4,6 - Tribromophenol	75.00	61.57	82	59.46	79	19 - 122
Terphenyl - d14	50.00	45.40	91	43.67	87	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8270BNA.S91

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5758

Analyst: ED

Batch #: 920321-2001

Date Of Analysis: 03/26/92

Spike Sample ID: LCSS 27/LCSDS 27

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS03

Surrogate ID Code: W3-902

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	1938.00	77	2058.00	82	6	26 - 90	≤35
2 - Chlorophenol	0	2500.00	1850.00	74	2000.00	80	7	25 - 102	≤50
1,4-Dichlorobenzene	0	1667.00	1152.00	69	1181.00	70	1	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1120.00	67	1182.00	71	5	41 - 126	≤38
1,2,4-Trichlorobenzene	0	1667.00	1201.00	72	1189.00	71	1	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	2055.00	82	2162.00	86	4	26 - 103	≤33
Acenaphthene	0	1667.00	1253.00	75	1254.00	75	0	31 - 137	≤19
4-Nitrophenol	0	2500.00	2188.00	87	2362.00	94	7	11 - 114	≤50
2,4-Dinitrotoluene	0	1667.00	1329.00	79	1384.00	83	4	28 - 89	≤47
Pentachlorophenol	0	2500.00	2251.00	90	2337.00	93	3	17 - 109	≤47
Pyrene	0	1667.00	1248.00	74	1321.00	79	6	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	65.86	88	70.01	93	25 - 121
Phenol - d6	75.00	66.59	89	69.32	92	24 - 113
Nitrobenzene - d5	50.00	43.43	87	43.29	86	23 - 120
2-Fluorobiphenyl	50.00	42.34	85	42.44	85	30 - 115
2,4,6 - Tribromophenol	75.00	57.50	77	59.56	79	19 - 122
Terphenyl - d14	50.00	48.24	96	47.86	96	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8270BNA.S91

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5758

Analyst: ED

Batch #: 920323-2602

Date Of Analysis: 04/01/92

Spike Sample ID: LCSS 28/LCSDS 28

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS01

Surrogate ID Code: W3-902

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	2082.00	83	2098.00	83	0	26 - 90	≤35
2 - Chlorophenol	0	2500.00	2062.00	82	2023.00	80	2	25 - 102	≤50
1,4-Dichlorobenzene	0	1667.00	1253.00	75	1188.00	71	5	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1298.00	77	1319.00	79	2	41 - 126	≤38
1,2,4-Trichlorobenzene	0	1667.00	1298.00	77	1237.00	74	3	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	2297.00	91	2443.00	97	6	26 - 103	≤33
Acenaphthene	0	1667.00	1331.00	79	1409.00	84	6	31 - 137	≤19
4-Nitrophenol	0	2500.00	2336.00	93	2551.00	102	9	11 - 114	≤50
2,4-Dinitrotoluene	0	1667.00	1408.00	84	1479.00	88	4	28 - 89	≤47
Pentachlorophenol	0	2500.00	2459.00	98	2685.00	107	8	17 - 109	≤47
Pyrene	0	1667.00	1354.00	81	1562.00	93	13	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	66.97	89	65.84	88	25 - 121
Phenol - d6	75.00	67.68	90	66.01	88	24 - 113
Nitrobenzene - d5	50.00	39.50	79	35.12	70	23 - 120
2-Fluorobiphenyl	50.00	43.65	87	43.50	87	30 - 115
2,4,6 - Tribromophenol	75.00	77.72	104	86.39	115	19 - 122
Terphenyl - d14	50.00	45.50	91	52.65	105	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

270BNA.S91

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(DC1-CN5758) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5758

Analyst: ED

Date Of Analysis: 04/01/92

Column: Capillary

Instrument #: MS01

Batch #: 920323-2602

Spike Sample ID: 5758-057 MS/MSD S33

Spike ID Code: W3-867

Surrogate ID Code: W3-902

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	1855.00	74	1982.00	79	6	26 - 90	≤35
2 - Chlorophenol	0	2500.00	1662.00	66	1939.00	77	15	25 - 102	≤50
1,4-Dichlorobenzene	0	1667.00	1087.00	65	1165.00	69	5	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1091.00	65	1220.00	73	11	41 - 126	≤38
1,2,4-Trichlorobenzene	0	1667.00	1170.00	70	1249.00	75	6	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	1954.00	78	2098.00	83	6	26 - 103	≤33
Acenaphthene	0	1667.00	1199.00	71	1295.00	77	8	31 - 137	≤19
4-Nitrophenol	0	2500.00	2137.00	85	2245.00	89	4	11 - 114	≤50
2,4-Dinitrotoluene	0	1667.00	1109.00	66	1171.00	70	5	28 - 89	≤47
Pentachlorophenol	0	2500.00	2585.00	103	2653.00	106	2	17 - 109	≤47
Pyrene	0	1667.00	1181.00	70	1370.00	82	15	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	55.89	74	60.80	81	25 - 121
Phenol - d6	75.00	59.58	79	63.61	85	24 - 113
Nitrobenzene - d5	50.00	34.05	68	36.31	73	23 - 120
2-Fluorobiphenyl	50.00	39.32	79	42.64	85	30 - 115
2,4,6 - Tribromophenol	75.00	70.74	94	74.26	99	19 - 122
Terphenyl - d14	50.00	39.18	78	44.96	90	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8270BNA.S91

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(DC1-CN5758)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5868

Analyst: DLA

Date Of Analysis: 04/27/92

Column: Capillary

Instrument #: MS01

Batch #: 920427-1901

Spike Sample ID: LCSS/LCSDS S32

Spike ID Code: W3-921

Surrogate ID Code: W3-920

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	1540.00	61	1566.00	62	1	26 - 90	≤35
2 - Chlorophenol	0	2500.00	1572.00	62	1507.00	60	3	25 - 102	≤50
1,4-Dichlorobenzene	0	1667.00	987.00	59	914.00	54	8	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1074.00	64	971.00	58	9	41 - 126	≤38
1,2,4-Trichlorobenzene	0	1667.00	1130.00	67	975.00	58	14	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	1846.00	73	1887.00	75	2	26 - 103	≤33
Acenaphthene	0	1667.00	1104.00	66	1054.00	63	4	31 - 137	≤19
4-Nitrophenol	0	2500.00	2089.00	83	2107.00	84	1	11 - 114	≤50
2,4-Dinitrotoluene	0	1667.00	1176.00	70	1186.00	71	1	28 - 89	≤47
Pentachlorophenol	0	2500.00	2603.00	104	2387.00	95	9	17 - 109	≤47
Pyrene	0	1667.00	1275.00	76	1204.00	72	5	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	45.52	61	49.96	67	25 - 121
Phenol - d6	75.00	46.30	62	46.66	62	24 - 113
Nitrobenzene - d5	50.00	31.28	62	28.56	57	23 - 120
2-Fluorobiphenyl	50.00	33.15	66	29.67	59	30 - 115
2,4,6 - Tribromophenol	75.00	63.55	85	60.95	81	19 - 122
Terphenyl - d14	50.00	39.59	79	39.10	78	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

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McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5868

Analyst: DLA

Batch #: 920427-1901

Date Of Analysis: 04/27/92

Spike Sample ID: 5868-002 MS/MSDS S37

Column: Capillary

Spike ID Code: W3-921

Instrument #: MS01

Surrogate ID Code: W3-920

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	1505.00	60	1618.00	64	6	26 - 90	≤35
2 - Chlorophenol	0	2500.00	1426.00	57	1525.00	61	6	25 - 102	≤50
1,4-Dichlorobenzene	0	1667.00	605.00	36	627.00	37	2	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	858.00	51	887.00	53	3	41 - 126	≤38
1,2,4-Trichlorobenzene	0	1667.00	801.00	48	798.00	47	2	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	1785.00	71	1893.00	75	5	26 - 103	≤33
Acenaphthene	0	1667.00	919.00	55	1035.00	62	11	31 - 137	≤19
4-Nitrophenol	0	2500.00	2104.00	84	2253.00	90	6	11 - 114	≤50
2,4-Dinitrotoluene	0	1667.00	1077.00	64	1187.00	71	10	28 - 89	≤47
Pentachlorophenol	0	2500.00	2516.00	101	2823.00	113[a]	11	17 - 109	≤47
Pyrene	0	1667.00	1140.00	68	1291.00	77	12	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	47.39	63	46.76	62	25 - 121
Phenol - d6	75.00	47.22	63	49.51	66	24 - 113
Nitrobenzene - d5	50.00	29.89	60	27.44	55	23 - 120
2-Fluorobiphenyl	50.00	28.52	57	31.19	62	30 - 115
2,4,6 - Tribromophenol	75.00	59.26	79	63.96	85	19 - 122
Terphenyl - d14	50.00	39.98	80	43.24	86	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments: [a] Matrix spike recovery for Pentachlorophenol is beyond advisory quality control limits; however, laboratory control sample data are acceptable.

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(DC2-CN5868)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5879

Analyst: DLA

Date Of Analysis: 05/01/92

Column: Capillary

Instrument #: MS01

Batch #: 920429-2601

Spike Sample ID: LCSS/LCSDS S33

Spike ID Code: W3-921

Surrogate ID Code: W3-920

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	1717.00	68	1920.00	76	11	26 - 90	≤35
2 - Chlorophenol	0	2500.00	1781.00	71	1987.00	79	10	25 - 102	≤50
1.4-Dichlorobenzene	0	1667.00	1108.00	66	1173.00	70	5	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1151.00	69	1225.00	73	5	41 - 126	≤38
1.2.4-Trichlorobenzene	0	1667.00	1215.00	72	1292.00	77	6	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	1951.00	78	2041.00	81	3	26 - 103	≤33
Acenaphthene	0	1667.00	1198.00	71	1205.00	72	1	31 - 137	≤19
4-Nitrophenol	0	2500.00	1764.00	70	1814.00	72	2	11 - 114	≤50
2.4-Dinitrotoluene	0	1667.00	1025.00	61	1140.00	68	10	28 - 89	≤47
Pentachlorophenol	0	2500.00	2423.00	96	2635.00	105	8	17 - 109	≤47
Pyrene	0	1667.00	1071.00	64	1049.00	63	1	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	51.89	69	60.24	80	25 - 121
Phenol - d6	75.00	55.87	74	60.28	80	24 - 113
Nitrobenzene - d5	50.00	35.17	70	33.75	68	23 - 120
2-Fluorobiphenyl	50.00	36.65	73	36.65	73	30 - 115
2.4.6 - Tribromophenol	75.00	82.37	110	79.34	106	19 - 122
Terphenyl - d14	50.00	39.24	78	35.69	71	18 - 137

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5879

Analyst: DLA

Batch #: 920429-2601

Date Of Analysis: 05/06/92

Spike Sample ID: 5879-019 MSS/MSDS 38

Column: Capillary

Spike ID Code: W3-921

Instrument #: MS01

Surrogate ID Code: W3-920

Matrix: Soil Units: ug/Kg

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	2500.00	1981.00	79	1791.00	71	10	26 - 90	≤35
2 - Chlorophenol	0	2500.00	1877.00	75	1734.00	69	8	25 - 102	≤50
1,4-Dichlorobenzene	0	1667.00	928.00	55	863.00	51	7	28 - 104	≤27
N-Nitroso-di-n-prop.(1)	0	1667.00	1015.00	60	946.00	56	6	41 - 126	≤38
1,2,4-Trichlorobenzene	0	1667.00	985.00	59	947.00	56	5	38 - 107	≤23
4-Chloro-3-methylphenol	0	2500.00	1757.00	70	1709.00	68	2	26 - 103	≤33
Acenaphthene	0	1667.00	1024.00	61	989.00	59	3	31 - 137	≤19
4-Nitrophenol	0	2500.00	2088.00	83	2015.00	80	3	11 - 114	≤50
2,4-Dinitrotoluene	0	1667.00	1001.00	60	1032.00	61	1	28 - 89	≤47
Pentachlorophenol	0	2500.00	2053.00	82	1949.00	77	6	17 - 109	≤47
Pyrene	0	1667.00	990.00	59	940.00	56	5	35 - 142	≤36

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	65.26	87	56.49	75	25 - 121
Phenol - d6	75.00	61.76	82	55.27	74	24 - 113
Nitrobenzene - d5	50.00	31.32	63	29.36	59	23 - 120
2-Fluorobiphenyl	50.00	31.54	63	30.45	61	30 - 115
2,4,6 - Tribromophenol	75.00	53.95	72	51.89	69	19 - 122
Terphenyl - d14	50.00	35.01	70	34.91	70	18 - 137

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

McLaren Hart™

(DC2-CN5879)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 610

LP#: 5745

Analyst: JM

Batch #: 920320-2003

Date Of Analysis: 03/24/92

Spike Sample ID: LCSW/LCSDW #16

Column: DB-5

Spike ID Code: W2-1003

Instrument #: PGC#1

Surrogate ID Code: W2-910

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Naphthalene	0	50.0	42.9	86	42.5	85	1	10 - 122	≤25
Acenaphthene	0	50.0	47.2	94	46.3	93	2	46 - 118	≤31
Fluorene	0	50.0	48.9	98	47.4	95	3	10 - 142	≤25
Fluoranthene	0	50.0	47.4	95	49.8	100	5	14 - 123	≤25
Benzo(a)Pyrene	0	50.0	28.7	57	38.8	78	30	20 - 128	≤30

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE REC. %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP. RECOVERY %	ACCEPTANCE LIMITS %REC.
2-Fluorobiphenyl	500.	558.	112	545.	109	43 - 116

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dupe % Recovery = l = (k/h) x 100

Comments:

610SDR.W91

McLaren Hart™

(DC1-CN5745) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 610

LP#: 5745

Analyst: JM

Batch #: 920320-2003

Date Of Analysis: 03/25/92

Spike Sample ID: 5745-041 MSW/MSDW

Column: DB-5

Spike ID Code: W2-1003

Instrument #: PGC#1

Surrogate ID Code: W2-910

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Naphthalene	0	50.	38.	76	40.	80	5	10 - 122	≤25
Acenaphthene	0	50.	41.	82	45.	90	9	46 - 118	≤31
Fluorene	0	50.	42.	84	46.	92	9	10 - 142	≤25
Fluoranthene	0	50.	42.	84	44.	88	5	14 - 123	≤25
Benzo(a)Pyrene	0	50.	26.	52	25.	50	4	20 - 128	≤30

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE REC. %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP. RECOVERY %	ACCEPTANCE LIMITS %REC.
2-Fluorobiphenyl	500.	508.	102	556.	111	43 - 116

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dupe % Recovery = l = (k/h) x 100

Comments:

610SDR.W91

McLaren Hart™

(DC1-CN5745) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 610

LP#: 5752

Analyst: JM

Batch #: 920320-2003

Date Of Analysis: 03/24/92

Spike Sample ID: LCSW/LCSDW #16

Column: DB-5

Spike ID Code: W2-1003

Instrument #: PGC#1

Surrogate ID Code: W2-910

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Naphthalene	0	50.0	42.9	86	42.5	85	1	10 - 122	≤25
Acenaphthene	0	50.0	47.2	94	46.3	93	2	46 - 118	≤31
Fluorene	0	50.0	48.9	98	47.4	95	3	10 - 142	≤25
Fluoranthene	0	50.0	47.4	95	49.8	100	5	14 - 123	≤25
Benzo(a)Pyrene	0	50.0	28.7	57	38.8	78	30	20 - 128	≤30

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE REC. %	(k) SAMPLE DUP. + SURROGATE SPIKE CONC.	(l) SURROGATE DUP. RECOVERY %	ACCEPTANCE LIMITS % REC.
2-Fluorobiphenyl	500.	558.	112	545.	109	43 - 116

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dupe % Recovery = l = (k/h) x 100

Comments:

610sdr.91

McLaren Hart™

(DC4-CN5752)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 610

LP#: 5868

Analyst: JM

Batch #: 920428-2601

Date Of Analysis: 04/30/92

Spike Sample ID: LCSW/LCSDW #18

Column: RTX-200

Spike ID Code: W2-1003

Instrument #: PGC #1

Surrogate ID Code: W2-938

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Naphthalene	0	50.0	39.6	79	39.9	80	1	10 - 122	≤25
Acenaphthene	0	50.0	44.0	88	44.7	89	2	46 - 118	≤31
Fluorene	0	50.0	48.8	98	49.0	98	0	10 - 142	≤25
Fluoranthene	0	50.0	51.2	102	51.9	104	1	14 - 123	≤25
Benzo(a)Pyrene	0	50.0	44.8	90	44.4	89	1	20 - 128	≤30

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE REC. %	(k) SAMPLE DUP. + SURROGATE SPIKE CONC.	(l) SURROGATE DUP. RECOVERY %	ACCEPTANCE LIMITS % REC.
2-Fluorobiphenyl	500.	436.	87	448.	90	43 - 116

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dupe % Recovery = l = (k/h) x 100

Comments:

610sdr.91

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(DC2-CN5868)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 610

LP#: 5879

Analyst: JM

Batch #: 920428-2601

Date Of Analysis: 04/30/92

Spike Sample ID: LCSW/LCSDW #18

Column: RTX-200

Spike ID Code: W2-1003

Instrument #: PGC #1

Surrogate ID Code: W2-938

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Naphthalene	0	50.0	39.6	79	39.9	80	1	10 - 122	≤25
Acenaphthene	0	50.0	44.0	88	44.7	89	2	46 - 118	≤31
Fluorene	0	50.0	48.8	98	49.0	98	0	10 - 142	≤25
Fluoranthene	0	50.0	51.2	102	51.9	104	1	14 - 123	≤25
Benzo(a)Pyrene	0	50.0	44.8	90	44.4	89	1	20 - 128	≤30

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE REC. %	(k) SAMPLE DUP. + SURROGATE SPIKE CONC.	(l) SURROGATE DUP. RECOVERY %	ACCEPTANCE LIMITS % REC.
2-Fluorobiphenyl	500.	436.	87	448.	90	43 - 116

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dupe % Recovery = l = (k/h) x 100

Comments:

0sdr.91

McLaren Hart™

(DC2-CN5879)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 610

LP#: 5879

Analyst: JM

Batch #: 920429-1902

Date Of Analysis: 05/01/92

Spike Sample ID: 5879-004 MSW6/MSDW6

Column: RTX-200

Spike ID Code: W2-1003

Instrument #: PGC #1

Surrogate ID Code: W2-938

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Naphthalene	0	50.	37.	74	37.	74	0	10 - 122	≤25
Acenaphthene	0	50.	43.	86	44.	88	2	46 - 118	≤31
Fluorene	0	50.	48.	96	48.	96	0	10 - 142	≤25
Fluoranthene	0	50.	49.	98	51.	102	4	14 - 123	≤25
Benzo(a)Pyrene	0	50.	41.	82	42.	84	2	20 - 128	≤30

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE REC. %	(k) SAMPLE DUP. + SURROGATE SPIKE CONC.	(l) SURROGATE DUP. RECOVERY %	ACCEPTANCE LIMITS % REC.
2-Fluorobiphenyl	500.	425.	85	433.	87	43 - 116

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dupe % Recovery = l = (k/h) x 100

Comments:

610sdr.91

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(DC2-CN5879)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5715

Analyst: ED

Batch #: 920316-2001

Date Of Analysis: 03/22/92

Spike Sample ID: LCSW 30/LCSDW 30

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS01

Surrogate ID Code: W3-887

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	75.00	24.70	32	27.20	36	11	12 - 89	≤42
2 - Chlorophenol	0	75.00	49.20	65	52.10	69	5	27 - 123	≤40
1.4-Dichlorobenzene	0	50.00	31.80	63	31.70	63	0	36 - 97	≤28
N-Nitroso-di-n-prop.(1)	0	50.00	35.30	70	39.20	78	10	41 - 116	≤38
1.2.4-Trichlorobenzene	0	50.00	30.50	61	29.80	59	3	39 - 98	≤28
4-Chloro-3-methylphenol	0	75.00	56.10	74	60.60	80	7	23 - 97	≤42
Acenaphthene	0	50.00	33.70	67	32.60	65	3	46 - 118	≤31
4-Nitrophenol	0	75.00	26.70	35	28.10	37	5	10 - 80	≤50
2.4-Dinitrotoluene	0	50.00	35.20	70	37.10	74	5	24 - 96	≤38
Pentachlorophenol	0	75.00	75.50	101	72.10	96	5	9 - 103	≤50
Pyrene	0	50.00	37.70	75	35.10	70	6	26 - 127	≤31

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	40.77	54	41.95	56	21 - 100
Phenol - d6	75.00	26.13	35	29.13	39	10 - 94
Nitrobenzene - d5	50.00	43.51	87	44.93	90	35 - 114
2-Fluorobiphenyl	50.00	41.57	83	41.48	83	43 - 116
2.4.6 - Tribromophenol	75.00	79.30	106	79.41	106	10 - 123
Terphenyl - d14	50.00	52.24	104	46.06	92	33 - 141

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8270BNA.W91

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(DC1-CN5715) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5715

Analyst: ED

Date Of Analysis: 03/22/92

Column: Capillary

Instrument #: MS01

Batch #: 920316-2001

Spike Sample ID: 5715-022 MS/MSD

Spike ID Code: W3-867

Surrogate ID Code: W3-887

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	75.00	25.50	34	26.10	34	0	12 - 89	≤42
2 - Chlorophenol	0	75.00	54.20	72	56.10	74	2	27 - 123	≤40
1,4-Dichlorobenzene	0	50.00	35.20	70	34.40	68	2	36 - 97	≤28
N-Nitroso-di-n-prop.(1)	0	50.00	40.80	81	43.30	86	5	41 - 116	≤38
1,2,4-Trichlorobenzene	0	50.00	34.20	68	33.30	66	2	39 - 98	≤28
4-Chloro-3-methylphenol	0	75.00	58.20	77	62.60	83	7	23 - 97	≤42
Acenaphthene	0	50.00	36.10	72	37.70	75	4	46 - 118	≤31
4-Nitrophenol	0	75.00	27.40	36	27.20	36	0	10 - 80	≤50
2,4-Dinitrotoluene	0	50.00	37.60	75	39.50	79	5	24 - 96	≤38
Pentachlorophenol	0	75.00	69.50	92	73.20	97	5	9 - 103	≤50
Pyrene	0	50.00	40.70	81	37.60	75	7	26 - 127	≤31

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	43.67	58	41.62	55	21 - 100
Phenol - d6	75.00	26.35	35	27.52	37	10 - 94
Nitrobenzene - d5	50.00	51.01	102	50.40	101	35 - 114
2-Fluorobiphenyl	50.00	45.29	90	46.87	94	43 - 116
2,4,6 - Tribromophenol	75.00	81.43	108	83.29	111	10 - 123
Terphenyl - d14	50.00	50.13	100	49.18	98	33 - 141

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8270BNA.W91

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(DC1-CN5715) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5727

Analyst: ED

Batch #: 920316-2001

Date Of Analysis: 03/22/92

Spike Sample ID: LCSW 30/LCSDW 30

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS01

Surrogate ID Code: W3-887

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	75.00	24.70	32	27.20	36	11	12 - 89	≤42
2 - Chlorophenol	0	75.00	49.20	65	52.10	69	5	27 - 123	≤40
1.4-Dichlorobenzene	0	50.00	31.80	63	31.70	63	0	36 - 97	≤28
N-Nitroso-di-n-prop.(1)	0	50.00	35.30	70	39.20	78	10	41 - 116	≤38
1.2.4-Trichlorobenzene	0	50.00	30.50	61	29.80	59	3	39 - 98	≤28
4-Chloro-3-methylphenol	0	75.00	56.10	74	60.60	80	7	23 - 97	≤42
Acenaphthene	0	50.00	33.70	67	32.60	65	3	46 - 118	≤31
4-Nitrophenol	0	75.00	26.70	35	28.10	37	5	10 - 80	≤50
2.4-Dinitrotoluene	0	50.00	35.20	70	37.10	74	5	24 - 96	≤38
Pentachlorophenol	0	75.00	75.50	101	72.10	96	5	9 - 103	≤50
Pyrene	0	50.00	37.70	75	35.10	70	6	26 - 127	≤31

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	40.77	54	41.95	56	21 - 100
Phenol - d6	75.00	26.13	35	29.13	39	10 - 94
Nitrobenzene - d5	50.00	43.51	87	44.93	90	35 - 114
2-Fluorobiphenyl	50.00	41.57	83	41.48	83	43 - 116
2.4.6 - Tribromophenol	75.00	79.30	106	79.41	106	10 - 123
Terphenyl - d14	50.00	52.24	104	46.06	92	33 - 141

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8270BNA.W91

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(DC1-CN5727)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5745

Analyst: ED

Batch #: 920316-2001

Date Of Analysis: 03/22/92

Spike Sample ID: LCSW 30/LCSDW 30

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS01

Surrogate ID Code: W3-887

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	75.00	24.70	32	27.20	36	11	12 - 89	≤42
2 - Chlorophenol	0	75.00	49.20	65	52.10	69	5	27 - 123	≤40
1.4-Dichlorobenzene	0	50.00	31.80	63	31.70	63	0	36 - 97	≤28
N-Nitroso-di-n-prop.(1)	0	50.00	35.30	70	39.20	78	10	41 - 116	≤38
1.2.4-Trichlorobenzene	0	50.00	30.50	61	29.80	59	3	39 - 98	≤28
4-Chloro-3-methylphenol	0	75.00	56.10	74	60.60	80	7	23 - 97	≤42
Acenaphthene	0	50.00	33.70	67	32.60	65	3	46 - 118	≤31
4-Nitrophenol	0	75.00	26.70	35	28.10	37	5	10 - 80	≤50
2.4-Dinitrotoluene	0	50.00	35.20	70	37.10	74	5	24 - 96	≤38
Pentachlorophenol	0	75.00	75.50	101	72.10	96	5	9 - 103	≤50
Pyrene	0	50.00	37.70	75	35.10	70	6	26 - 127	≤31

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	40.77	54	41.95	56	21 - 100
Phenol - d6	75.00	26.13	35	29.13	39	10 - 94
Nitrobenzene - d5	50.00	43.51	87	44.93	90	35 - 114
2-Fluorobiphenyl	50.00	41.57	83	41.48	83	43 - 116
2.4.6 - Tribromophenol	75.00	79.30	106	79.41	106	10 - 123
Terphenyl - d14	50.00	52.24	104	46.06	92	33 - 141

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8270BNA.W91

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5756

Analyst: ED

Batch #: 920316-2001

Date Of Analysis: 03/22/92

Spike Sample ID: LCSW 30/LCSDW 30

Column: Capillary

Spike ID Code: W3-867

Instrument #: MS01

Surrogate ID Code: W3-887

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	75.00	24.70	32	27.20	36	11	12 - 89	≤42
2 - Chlorophenol	0	75.00	49.20	65	52.10	69	5	27 - 123	≤40
1,4-Dichlorobenzene	0	50.00	31.80	63	31.70	63	0	36 - 97	≤28
N-Nitroso-di-n-prop.(1)	0	50.00	35.30	70	39.20	78	10	41 - 116	≤38
1,2,4-Trichlorobenzene	0	50.00	30.50	61	29.80	59	3	39 - 98	≤28
4-Chloro-3-methylphenol	0	75.00	56.10	74	60.60	80	7	23 - 97	≤42
Acenaphthene	0	50.00	33.70	67	32.60	65	3	46 - 118	≤31
4-Nitrophenol	0	75.00	26.70	35	28.10	37	5	10 - 80	≤50
2,4-Dinitrotoluene	0	50.00	35.20	70	37.10	74	5	24 - 96	≤38
Pentachlorophenol	0	75.00	75.50	101	72.10	96	5	9 - 103	≤50
Pyrene	0	50.00	37.70	75	35.10	70	6	26 - 127	≤31

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	40.77	54	41.95	56	21 - 100
Phenol - d6	75.00	26.13	35	29.13	39	10 - 94
Nitrobenzene - d5	50.00	43.51	87	44.93	90	35 - 114
2-Fluorobiphenyl	50.00	41.57	83	41.48	83	43 - 116
2,4,6 - Tribromophenol	75.00	79.30	106	79.41	106	10 - 123
Terphenyl - d14	50.00	52.24	104	46.06	92	33 - 141

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

270BNA.W91

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(DC1-CN5756)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5756

Analyst: ED

Date Of Analysis: 03/22/92

Column: Capillary

Instrument #: MS01

Batch #: 920316-2001

Spike Sample ID: LCSW 30/LCSDW 30

Spike ID Code: W3-867

Surrogate ID Code: W3-887

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	75.00	24.70	32	27.20	36	11	12 - 89	≤42
2 - Chlorophenol	0	75.00	49.20	65	52.10	69	5	27 - 123	≤40
1,4-Dichlorobenzene	0	50.00	31.80	63	31.70	63	0	36 - 97	≤28
N-Nitroso-di-n-prop.(1)	0	50.00	35.30	70	39.20	78	10	41 - 116	≤38
1,2,4-Trichlorobenzene	0	50.00	30.50	61	29.80	59	3	39 - 98	≤28
4-Chloro-3-methylphenol	0	75.00	56.10	74	60.60	80	7	23 - 97	≤42
Acenaphthene	0	50.00	33.70	67	32.60	65	3	46 - 118	≤31
4-Nitrophenol	0	75.00	26.70	35	28.10	37	5	10 - 80	≤50
2,4-Dinitrotoluene	0	50.00	35.20	70	37.10	74	5	24 - 96	≤38
Pentachlorophenol	0	75.00	75.50	101	72.10	96	5	9 - 103	≤50
Pyrene	0	50.00	37.70	75	35.10	70	6	26 - 127	≤31

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	40.77	54	41.95	56	21 - 100
Phenol - d6	75.00	26.13	35	29.13	39	10 - 94
Nitrobenzene - d5	50.00	43.51	87	44.93	90	35 - 114
2-Fluorobiphenyl	50.00	41.57	83	41.48	83	43 - 116
2,4,6 - Tribromophenol	75.00	79.30	106	79.41	106	10 - 123
Terphenyl - d14	50.00	52.24	104	46.06	92	33 - 141

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

270BNA.W91

McLaren Hart™

(DC1-CN5756)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5758

Analyst: ED

Date Of Analysis: 03/22/92

Column: Capillary

Instrument #: MS01

Batch #: 920316-2001

Spike Sample ID: LCSW 30/LCSDW 30

Spike ID Code: W3-867

Surrogate ID Code: W3-887

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	75.00	24.70	32	27.20	36	11	12 - 89	≤42
2 - Chlorophenol	0	75.00	49.20	65	52.10	69	5	27 - 123	≤40
1,4-Dichlorobenzene	0	50.00	31.80	63	31.70	63	0	36 - 97	≤28
N-Nitroso-di-n-prop.(1)	0	50.00	35.30	70	39.20	78	10	41 - 116	≤38
1,2,4-Trichlorobenzene	0	50.00	30.50	61	29.80	59	3	39 - 98	≤28
4-Chloro-3-methylphenol	0	75.00	56.10	74	60.60	80	7	23 - 97	≤42
Acenaphthene	0	50.00	33.70	67	32.60	65	3	46 - 118	≤31
4-Nitrophenol	0	75.00	26.70	35	28.10	37	5	10 - 80	≤50
2,4-Dinitrotoluene	0	50.00	35.20	70	37.10	74	5	24 - 96	≤38
Pentachlorophenol	0	75.00	75.50	101	72.10	96	5	9 - 103	≤50
Pyrene	0	50.00	37.70	75	35.10	70	6	26 - 127	≤31

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	40.77	54	41.95	56	21 - 100
Phenol - d6	75.00	26.13	35	29.13	39	10 - 94
Nitrobenzene - d5	50.00	43.51	87	44.93	90	35 - 114
2-Fluorobiphenyl	50.00	41.57	83	41.48	83	43 - 116
2,4,6 - Tribromophenol	75.00	79.30	106	79.41	106	10 - 123
Terphenyl - d14	50.00	52.24	104	46.06	92	33 - 141

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

Comments:

8270BNA.W91

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5868

Analyst: DLA

Date Of Analysis: 04/30/92

Column: Capillary

Instrument #: MS01

Batch #: 920427-2601

Spike Sample ID: LCSW/LCSDW W34

Spike ID Code: W3-921

Surrogate ID Code: W3-920

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	75.00	25.10	33	27.90	37	11	12 - 89	≤42
2 - Chlorophenol	0	75.00	46.10	61	49.20	65	6	27 - 123	≤40
1,4-Dichlorobenzene	0	50.00	29.10	58	30.90	61	5	36 - 97	≤28
N-Nitroso-di-n-prop.(1)	0	50.00	29.70	59	32.60	65	9	41 - 116	≤38
1,2,4-Trichlorobenzene	0	50.00	31.00	62	32.20	64	3	39 - 98	≤28
4-Chloro-3-methylphenol	0	75.00	48.50	64	51.50	68	6	23 - 97	≤42
Acenaphthene	0	50.00	32.50	65	35.50	71	8	46 - 118	≤31
4-Nitrophenol	0	75.00	29.70	39	33.00	44	12	10 - 80	≤50
2,4-Dinitrotoluene	0	50.00	40.10	80	39.90	79	1	24 - 96	≤38
Pentachlorophenol	0	75.00	67.30	89	68.20	90	1	9 - 103	≤50
Pyrene	0	50.00	35.50	71	36.00	72	1	26 - 127	≤31

Spike Recovery = d = ((c-a)/b) x 100

Spike Duplicate Recovery = f = ((e-a)/b) x 100

Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	32.43	43	37.63	50	21 - 100
Phenol - d6	75.00	25.65	34	27.36	36	10 - 94
Nitrobenzene - d5	50.00	31.87	64	32.82	66	35 - 114
2-Fluorobiphenyl	50.00	32.04	64	34.49	69	43 - 116
2,4,6 - Tribromophenol	75.00	65.75	88	70.45	94	10 - 123
Terphenyl - d14	50.00	42.66	85	42.39	85	33 - 141

Surrogate % Recovery = j = (i/h) x 100

Surrogate Dup % Recovery = l = (k/h) x 100

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5868

Analyst: DLA

Batch #: 920427-2601

Date Of Analysis: 04/30/92

Spike Sample ID: 5868-069 MSW/MSDW W6

Column: Capillary

Spike ID Code: W3-921

Instrument #: MS01

Surrogate ID Code: W3-920

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	75.00	23.80	31	23.40	31	0	12 - 89	≤42
2 - Chlorophenol	0	75.00	45.40	60	46.90	62	3	27 - 123	≤40
1,4-Dichlorobenzene	0	50.00	28.70	57	30.20	60	5	36 - 97	≤28
N-Nitroso-di-n-prop.(1)	0	50.00	30.60	61	31.60	63	3	41 - 116	≤38
1,2,4-Trichlorobenzene	0	50.00	30.40	60	31.60	63	4	39 - 98	≤28
4-Chloro-3-methylphenol	0	75.00	49.40	65	50.00	66	1	23 - 97	≤42
Acenaphthene	0	50.00	33.80	67	33.60	67	0	46 - 118	≤31
4-Nitrophenol	0	75.00	30.00	39	28.80	38	2	10 - 80	≤50
2,4-Dinitrotoluene	0	50.00	41.50	83	39.70	79	4	24 - 96	≤38
Pentachlorophenol	0	75.00	66.30	88	63.30	84	4	9 - 103	≤50
Pyrene	0	50.00	36.80	73	39.00	78	6	26 - 127	≤31

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	30.74	41	31.08	41	21 - 100
Phenol - d6	75.00	22.86	30	22.74	30	10 - 94
Nitrobenzene - d5	50.00	30.00	60	26.97	54	35 - 114
2-Fluorobiphenyl	50.00	28.78	58	33.70	67	43 - 116
2,4,6 - Tribromophenol	75.00	65.31	87	66.26	88	10 - 123
Terphenyl - d14	50.00	39.29	78	43.01	86	33 - 141

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Method 8270 - BNA

LP#: 5879

Analyst: DLA

Batch #: 920427-2601

Date Of Analysis: 04/30/92

Spike Sample ID: LCSW/LCSDW W34

Column: Capillary

Spike ID Code: W3-921

Instrument #: MS01

Surrogate ID Code: W3-920

Matrix: Water Units: ug/L

COMPOUNDS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS % REC	ACCEPTANCE LIMITS RPD
Phenol	0	75.00	25.10	33	27.90	37	11	12 - 89	≤42
2 - Chlorophenol	0	75.00	46.10	61	49.20	65	6	27 - 123	≤40
1,4-Dichlorobenzene	0	50.00	29.10	58	30.90	61	5	36 - 97	≤28
N-Nitroso-di-n-prop.(1)	0	50.00	29.70	59	32.60	65	9	41 - 116	≤38
1,2,4-Trichlorobenzene	0	50.00	31.00	62	32.20	64	3	39 - 98	≤28
4-Chloro-3-methylphenol	0	75.00	48.50	64	51.50	68	6	23 - 97	≤42
Acenaphthene	0	50.00	32.50	65	35.50	71	8	46 - 118	≤31
4-Nitrophenol	0	75.00	29.70	39	33.00	44	12	10 - 80	≤50
2,4-Dinitrotoluene	0	50.00	40.10	80	39.90	79	1	24 - 96	≤38
Pentachlorophenol	0	75.00	67.30	89	68.20	90	1	9 - 103	≤50
Pyrene	0	50.00	35.50	71	36.00	72	1	26 - 127	≤31

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|d-f|)/((d+f) x .5) x 100

SURROGATE COMPOUNDS	(h) SURROGATE SPIKE CONC.	(i) SAMPLE + SURROGATE SPIKE CONC.	(j) SURROGATE RECOVERY %	(k) SAMPLE DUP + SURROGATE SPIKE CONC.	(l) SURROGATE DUP RECOVERY %	ACCEPTANCE LIMITS % REC
2 - Fluorophenol	75.00	32.43	43	37.63	50	21 - 100
Phenol - d6	75.00	25.65	34	27.36	36	10 - 94
Nitrobenzene - d5	50.00	31.87	64	32.82	66	35 - 114
2-Fluorobiphenyl	50.00	32.04	64	34.49	69	43 - 116
2,4,6 - Tribromophenol	75.00	65.75	88	70.45	94	10 - 123
Terphenyl - d14	50.00	42.66	85	42.39	85	33 - 141

Surrogate % Recovery = j = (i/h) x 100
Surrogate Dup % Recovery = l = (k/h) x 100

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METALS

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5715

Instrument #: ICP #1

Analyst: RJ

Batch #: 920316-1104

Date Of Analysis: 03/17/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/16/92

Spike ID Code: 4-1392

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	500.	519.	104	519.	104	0	80 - 120	≤20
Be	0	50.	53.	106	52.	104	2	80 - 120	≤20
Cd	0	50.	47.	94	51.	102	8	80 - 120	≤20
Cr	0	200.	210.	105	208.	104	1	80 - 120	≤20
Cu	0	250.	253.	101	258.	103	2	80 - 120	≤20
Ni	0	500.	506.	101	507.	101	0	80 - 120	≤20
Ag	0	50.	50.	100	53.	106	6	80 - 120	≤20
Zn	0	500.	517.	103	547.	109	6	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5715

Instrument #: PE5100

Analyst: SP

Batch #: 920316-1103

Date Of Analysis: 03/18/92[a]

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/16/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	40.0	41.9	105	44.6	112	6	80 - 120	≤20
Pb	0	20.0	21.2	106	20.8	104	2	80 - 120	≤20
Se	0	10.0	11.7	117	11.5	115	2	80 - 120	≤20
Tl	0	50.0	51.7	103	52.9	106	3	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a]Applies to all metals except As and Tl. As was analyzed on 03/17/92 and Tl was analyzed on 03/19/92.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5715

Instrument #: PE2380

Analyst: SP

Batch #: 920316-1102

Date Of Analysis: 03/16/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/16/92

Spike ID Code: W4-2328

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	1.00	1.08	108	1.08	108	0	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5715

Instrument #: ICP #1

Analyst: RJ

Batch #: 920316-1104

Date Of Analysis: 03/17/92

Spike Sample ID: 5715-041 MS MSD

Date of Digestion: 03/16/92

Spike ID Code: 4-1392

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	500.	516.	103	527.	105	2	80 - 120	≤20
Be	0	50.	53.	106	54.	108	2	80 - 120	≤20
Cd	0	50.	50.	100	44.	88	13	80 - 120	≤20
Cr	0	200.	209.	104	216.	108	3	80 - 120	≤20
Cu	0	250.	264.	106	273.	109	3	80 - 120	≤20
Ni	0	500.	516.	103	537.	107	4	80 - 120	≤20
Ag	0	50.	52.	104	54.	108	4	80 - 120	≤20
Zn	0	500.	524.	105	535.	107	2	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5715

Instrument #: PE5100

Analyst: SP

Batch #: 920316-1103

Date Of Analysis: 03/18/92[a]

Spike Sample ID: 5715-041 MS/MSD

Date of Digestion: 03/16/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	40.0	41.0	102	42.6	106	4	80 - 120	≤20
Pb	0	20.0	21.7	108	21.0	105	3	80 - 120	≤20
Se	0	10.0	10.3	103	11.5	115	11	80 - 120	≤20
Tl	0	50.0	19.8	40[b]	20.5	41[b]	2	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Applies to all metals except As and Tl. As was analyzed on 03/17/92 and Tl was analyzed on 03/19/92.

[a] Matrix spike recoveries for Tl are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5715

Instrument #: PE2380

Analyst: SP

Batch #: 920316-1102

Date Of Analysis: 03/16/92

Spike Sample ID: 5715-041 MS/MSD

Date of Digestion: 03/16/92

Spike ID Code: W4-2328

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	1.00	2.28	228[a]	2.28	228[a]	0	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Matrix spike recoveries for Hg are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5727

Instrument #: ICP #1

Analyst: RJ

Batch #: 920321-0502

Date Of Analysis: 03/24/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: 4-1392

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	500.	503.	101	514.	103	2	80 - 120	≤20
Be	0	50.	53.	106	54.	108	2	80 - 120	≤20
Cd	0	50.	43.	86	47.	94	9	80 - 120	≤20
Cr	0	200.	210.	105	214.	107	2	80 - 120	≤20
Cu	0	250.	259.	104	259.	104	0	80 - 120	≤20
Ni	0	500.	502.	100	510.	102	2	80 - 120	≤20
Ag	0	50.	42.	84	43.	86	2	80 - 120	≤20
Zn	0	500.	512.	102	520.	104	2	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5727

Instrument #: PE5100

Analyst: SP

Batch #: 920321-0503

Date Of Analysis: 03/25/92[a]

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	40.0	35.3	88	37.7	94	6	80 - 120	≤20
Pb	0	20.0	21.2	106	17.7	88	19	80 - 120	≤20
Se	0	10.0	9.7	97	10.1	101	4	80 - 120	≤20
Tl	0	50.0	59.8	120	59.3	119	0	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Applies to all metals except As, which was analyzed on 03/24/92.

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(DC1-CN5727) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5727

Instrument #: PE2380

Analyst: SP

Batch #: 920321-0504

Date Of Analysis: 03/23/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: W4-2420

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	2.00	2.15	108	2.11	106	2	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5727

Instrument #: ICP #1

Analyst: RJ

Batch #: 920321-0502

Date Of Analysis: 03/24/92

Spike Sample ID: 5727-003 MS/MSD

Date of Digestion: 03/21/92

Spike ID Code: 4-1392

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	500.	500.	100	489.	98	2	80 - 120	≤20
Be	0	50.	53.	106	52.	104	2	80 - 120	≤20
Cd	0	50.	44.	88	38.	76[a]	15	80 - 120	≤20
Cr	0	200.	203.	102	200.	100	1	80 - 120	≤20
Cu	0	250.	256.	102	255.	102	0	80 - 120	≤20
Ni	0	500.	490.	98	477.	95	3	80 - 120	≤20
Ag	0	50.	44.	88	45.	90	2	80 - 120	≤20
Zn	29.	500.	516.	97	496.	93	4	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Matrix spike recovery for Cd is beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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(DC1-CN5727)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5727

Instrument #: PE5100

Analyst: SP

Batch #: 920321-0503

Date Of Analysis: 03/25/92[a]

Spike Sample ID: 5727-003 MS/MSD

Date of Digestion: 03/21/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	40.0	36.1	90	37.0	92	2	80 - 120	≤20
Pb	0	20.0	27.0	135[b]	26.6	133[b]	1	80 - 120	≤20
Se	0	10.0	6.9	69[b]	6.1	61[b]	12	80 - 120	≤20
Tl	0	50.0	52.7	105	53.9	108	3	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Applies to all metals except As, which was analyzed on 03/24/92.

[b] Matrix spike recoveries for Pb and Se are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

McLaren Hart™

(DC1-CN5727) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5727

Instrument #: PE2380

Analyst: SP

Batch #: 920321-0504

Date Of Analysis: 03/23/92

Spike Sample ID: 5727-003 MS/MSD

Date of Digestion: 03/21/92

Spike ID Code: W4-2420

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	2.00	2.20	110	2.11	106	4	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5745

Instrument #: ICP #1

Analyst: RJ

Batch #: 920321-0502

Date Of Analysis: 03/24/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: 4-1392

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	500.	503.	101	514.	103	2	80 - 120	≤20
Be	0	50.	53.	106	54.	108	2	80 - 120	≤20
Cd	0	50.	43.	86	47.	94	9	80 - 120	≤20
Cr	0	200.	210.	105	214.	107	2	80 - 120	≤20
Cu	0	250.	259.	104	259.	104	0	80 - 120	≤20
Ni	0	500.	502.	100	510.	102	2	80 - 120	≤20
Ag	0	50.	42.	84	43.	86	2	80 - 120	≤20
Zn	0	500.	512.	102	520.	104	2	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

McLaren Hart™

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5745

Instrument #: PE5100

Analyst: SP

Batch #: 920321-0503

Date Of Analysis: 03/25/92[a]

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	40.0	35.3	88	37.7	94	6	80 - 120	≤20
Se	0	10.0	9.7	97	10.1	101	4	80 - 120	≤20
Tl	0	50.0	59.8	120	59.3	119	0	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Applies to all metals except As, which was analyzed on 03/24/92.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5745

Instrument #: TSA 4000

Analyst: SP

Batch #: 920321-0503

Date Of Analysis: 03/26/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	20.0	22.9	114	21.8	109	4	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

McLaren Hart™

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5745

Instrument #: PE2380

Analyst: SP

Batch #: 920321-0504

Date Of Analysis: 03/23/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: W4-2420

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	2.00	2.15	108	2.11	106	2	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

McLaren Hart™

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5752

Instrument #: ICP #1

Analyst: RJ

Batch #: 920321-0502

Date Of Analysis: 03/24/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: 4-1392

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	500.	503.	101	514.	103	2	80 - 120	≤20
Be	0	50.	53.	106	54.	108	2	80 - 120	≤20
Cd	0	50.	43.	86	47.	94	9	80 - 120	≤20
Cr	0	200.	210.	105	214.	107	2	80 - 120	≤20
Cu	0	250.	259.	104	259.	104	0	80 - 120	≤20
Ni	0	500.	502.	100	510.	102	2	80 - 120	≤20
Ag	0	50.	42.	84	43.	86	2	80 - 120	≤20
Zn	0	500.	512.	102	520.	104	2	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

McLaren Hart™

(DC4-CN5752)

recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5752

Instrument #: PE5100

Analyst: SP

Batch #: 920321-0503

Date Of Analysis: 03/25/92[a]

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	40.0	35.3	88	37.7	94	6	80 - 120	≤20
Se	0	10.0	9.7	97	10.1	101	4	80 - 120	≤20
Tl	0	50.0	59.8	120	59.3	119	0	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Applies to all metals except As, which was analyzed on 03/24/92.

McLaren Hart™

(DC4-CN5752)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5752

Instrument #: PE2380

Analyst: SP

Batch #: 920321-0504

Date Of Analysis: 03/23/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: W4-2420

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	2.00	2.15	108	2.11	106	2	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5752

Instrument #: TSA4000

Analyst: SP

Batch #: 920321-0503

Date Of Analysis: 03/26/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Pb	0	20.0	22.9	114	21.8	109	4	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5756

Instrument #: ICP #1

Analyst: RJ

Batch #: 920321-0502

Date Of Analysis: 03/24/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: 4-1392

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	500.	503.	101	514.	103	2	80 - 120	≤20
Be	0	50.	53.	106	54.	108	2	80 - 120	≤20
Cd	0	50.	43.	86	47.	94	9	80 - 120	≤20
Cr	0	200.	210.	105	214.	107	2	80 - 120	≤20
Cu	0	250.	259.	104	259.	104	0	80 - 120	≤20
Ni	0	500.	502.	100	510.	102	2	80 - 120	≤20
Ag	0	50.	42.	84	43.	86	2	80 - 120	≤20
Zn	0	500.	512.	102	520.	104	2	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

McLaren Hart™

(DC1-CN5756) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5756

Instrument #: PE5100

Analyst: SP

Batch #: 920321-0503

Date Of Analysis: 03/25/92[a]

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	40.0	35.3	88	37.7	94	6	80 - 120	≤20
Se	0	10.0	9.7	97	10.1	101	4	80 - 120	≤20
Tl	0	50.0	59.8	120	59.3	119	0	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Applies to all metals except As, which was analyzed on 03/24/92.

McLaren Hart™

(DC1-CN5756) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5756

Instrument #: TJA 4000

Analyst: SP

Batch #: 920321-0503

Date Of Analysis: 03/26/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Pb	0	20.0	22.9	114	21.8	109	4	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5756

Instrument #: PE2380

Analyst: SP

Batch #: 920321-0504

Date Of Analysis: 03/23/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: W4-2420

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	2.00	2.15	108	2.11	106	2	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5761

Instrument #: ICP #1

Analyst: RJ

Batch #: 920327-1103

Date Of Analysis: 03/31/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/27/92

Spike ID Code: 4-1397

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	500.	482.	96	493.	99	2	80 - 120	≤20
Be	0	50.	50.	100	50.	100	0	80 - 120	≤20
Cd	0	50.	48.	96	45.	90	6	80 - 120	≤20
Cr	0	200.	190.	95	197.	98	4	80 - 120	≤20
Cu	0	250.	240.	96	244.	98	2	80 - 120	≤20
Ni	0	500.	482.	96	485.	97	1	80 - 120	≤20
Ag	0	50.	50.	100	51.	102	2	80 - 120	≤20
Zn	0	500.	490.	98	494.	99	1	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

McLaren Hart™

(DC1-CN5761) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5761

Instrument #: PE5100

Analyst: SP

Batch #: 920327-1102

Date Of Analysis: 03/30/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/27/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	40.0	36.5	91	40.7	102	11	80 - 120	≤20
Pb	0	20.0	17.1	86	18.2	91	6	80 - 120	≤20
Se	0	10.0	10.0	100	10.7	107	7	80 - 120	≤20
Tl	0	50.0	53.8	108	57.7	115	6	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

McLaren Hart™

(DC1-CN5761)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5761

Instrument #: PE 2380

Analyst: BM

Batch #: 920327-1104

Date Of Analysis: 03/30/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/27/92

Spike ID Code: W4-2420

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	1.00	.0.91	91	1.00	100	9	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

McLaren Hart™

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5761

Instrument #: ICP #1

Analyst: RJ

Batch #: 920327-1103

Date Of Analysis: 03/31/92

Spike Sample ID: 5761-016 MS/MSD

Date of Digestion: 03/27/92

Spike ID Code: 4-1397

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	500.	.484.	97	501.	100	3	80 - 120	≤20
Be	0	50.	50.	100	50.	100	0	80 - 120	≤20
Cd	0	50.	43.	86	42.	84	2	80 - 120	≤20
Cr	11.	200.	213.	101	222.	106	4	80 - 120	≤20
Cu	33.	250.	282.	100	281.	99	0	80 - 120	≤20
Ni	0	500.	483.	97	493.	99	2	80 - 120	≤20
Ag	0	50.	52.	104	51.	102	2	80 - 120	≤20
Zn	0	500.	506.	101	498.	100	2	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

McLaren Hart™

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5761

Instrument #: PE5100

Analyst: SP

Batch #: 920327-1102

Date Of Analysis: 03/30/92

Spike Sample ID: 5761-016 MS/MSD

Date of Digestion: 03/27/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	40.0	.38.8	97	40.3	101	4	80 - 120	≤20
Pb	8.	20.0	21.7	68[a]	22.8	74[a]	8	80 - 120	≤20
Se	0	10.0	9.5	95	10.4	104	9	80 - 120	≤20
Tl	0	50.0	54.4	109	54.9	110	0	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Matrix spike recoveries for Lead are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5761

Instrument #: PE 2380

Analyst: BM

Batch #: 920327-1104

Date Of Analysis: 03/30/92

Spike Sample ID: 5761-016 MS/MSD

Date of Digestion: 03/27/92

Spike ID Code: W4-2420

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	1.00	1.00	100	0.96	96	4	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

McLaren Hart™

(DC1-CN5761) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5756

Instrument #: ICP #1

Batch #: 920321-0502

Spike Sample ID: LCSW/LCSDW

Spike ID Code: 4-1392

Matrix: Water Units: ug/L

Analyst: RJ

Date Of Analysis: 03/24/92

Date of Digestion: 03/21/92

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	500.	503.	101	514.	103	2	80 - 120	≤20
Be	0	50.	53.	106	54.	108	2	80 - 120	≤20
Cd	0	50.	43.	86	47.	94	9	80 - 120	≤20
Cr	0	200.	210.	105	214.	107	2	80 - 120	≤20
Cu	0	250.	259.	104	259.	104	0	80 - 120	≤20
Ni	0	500.	502.	100	510.	102	2	80 - 120	≤20
Ag	0	50.	42.	84	43.	86	2	80 - 120	≤20
Zn	0	500.	512.	102	520.	104	2	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

McLaren Hart™

(DC1-CN5756) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5756

Instrument #: PE5100

Analyst: SP

Batch #: 920321-0503

Date Of Analysis: 03/25/92[a]

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	40.0	35.3	88	37.7	94	6	80 - 120	≤20
Se	0	10.0	9.7	97	10.1	101	4	80 - 120	≤20
Tl	0	50.0	59.8	120	59.3	119	0	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Applies to all metals except As, which was analyzed on 03/24/92.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5756

Instrument #: TJA 4000

Analyst: SP

Batch #: 920321-0503

Date Of Analysis: 03/26/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Pb	0	20.0	22.9	114	21.8	109	4	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

McLaren Hart™

(DC1-CN5756)

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5756

Instrument #: PE2380

Analyst: SP

Batch #: 920321-0504

Date Of Analysis: 03/23/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: W4-2420

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	2.00	2.15	108	2.11	106	2	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

McLaren Hart™

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5758

Instrument #: ICP #1

Analyst: RJ

Batch #: 920321-0502

Date Of Analysis: 03/24/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: 4-1392

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	500.	503.	101	514.	103	2	80 - 120	≤20
Be	0	50.	53.	106	54.	108	2	80 - 120	≤20
Cd	0	50.	43.	86	47.	94	9	80 - 120	≤20
Cr	0	200.	210.	105	214.	107	2	80 - 120	≤20
Cu	0	250.	259.	104	259.	104	0	80 - 120	≤20
Ni	0	500.	502.	100	510.	102	2	80 - 120	≤20
Ag	0	50.	42.	84	43.	86	2	80 - 120	≤20
Zn	0	500.	512.	102	520.	104	2	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

McLaren Hart™

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5758

Instrument #: PE5100

Analyst: SP

Batch #: 920321-0503

Date Of Analysis: 03/25/92[a]

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	40.0	35.3	88	37.7	94	6	80 - 120	≤20
Se	0	10.0	9.7	97	10.1	101	4	80 - 120	≤20
Tl	0	50.0	59.8	120	59.3	119	0	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Applies to all metals except As, which was analyzed on 03/24/92.

McLaren Hart™

(DC1-CN5758)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5758

Instrument #: PE2380

Analyst: SP

Batch #: 920321-0504

Date Of Analysis: 03/23/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: W4-2420

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Pb	0	2.00	2.15	108	2.11	106	2	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

McLaren Hart™

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5758

Instrument #: TJA 4000

Analyst: SP

Batch #: 920321-0503

Date Of Analysis: 03/26/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 03/21/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Pb	0	20.0	22.9	114	21.8	109	4	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

McLaren Hart™

(DC1-CN5758)

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5868

Instrument #: ICP #1

Analyst: FR

Batch #: 920429-1301

Date Of Analysis: 05/01/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 04/29/92

Spike ID Code: 4-1411, W4-2561

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	500.	476.	95	480.	96	1	80 - 120	≤20
Be	0	50.	49.	98	48.	96	2	80 - 120	≤20
Cd	0	50.	41.	82	45.	90	9	80 - 120	≤20
Cr	0	200.	194.	97	194.	97	0	80 - 120	≤20
Cu	0	250.	246.	98	242.	97	1	80 - 120	≤20
Ni	0	500.	479.	96	479.	96	0	80 - 120	≤20
Ag	0	50.	49.	98	50.	100	2	80 - 120	≤20
Zn	0	500.	480.	96	475.	95	1	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5868

Instrument #: PE5100/TJA4000

Analyst: SP

Batch #: 920429-1302

Date Of Analysis: 05/01/92 [a]

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 04/29/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	40.0	46.8	117	40.2	100	16	80 - 120	≤20
Pb	0	20.0	20.3	102	19.6	98	4	80 - 120	≤20
Se	0	10.0	9.0	90	8.4	84	13	80 - 120	≤20
Tl	0	50.0	47.8	96	46.9	94	2	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

[a] Applies to As and Pb only. Se and Tl were analyzed on 04/30/92.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5868

Instrument #: PE2380

Analyst: BM

Batch #: 920429-1303

Date Of Analysis: 04/30/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 04/29/92

Spike ID Code: W4-2600

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.0010	0.00090	90	0.00090	90	0	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5868

Instrument #: ICP #1

Analyst: FR

Batch #: 920429-1301

Date Of Analysis: 05/01/92

Spike Sample ID: 5868-018 MS/MSD

Date of Digestion: 04/29/92

Spike ID Code: 4-1411, W4-2561

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	500.	463.	93	477.	95	2	80 - 120	≤20
Be	0	50.	47.	94	49.	98	4	80 - 120	≤20
Cd	0	50.	40.	80	42.	84	4	80 - 120	≤20
Cr	0	200.	183.	92	189.	94	2	80 - 120	≤20
Cu	0	250.	233.	93	244.	98	5	80 - 120	≤20
Ni	0	500.	461.	92	472.	94	2	80 - 120	≤20
Ag	0	50.	51.	102	50.	100	2	80 - 120	≤20
Zn	0	500.	466.	93	473.	95	2	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5868

Instrument #: PE5100/TJA4000

Analyst: SP

Batch #: 920429-1302

Date Of Analysis: 05/01/92 [a]

Spike Sample ID: 5868-018 MS/MSD

Date of Digestion: 04/29/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	40.0	57.2	143[b]	56.2	140[b]	2	80 - 120	≤20
Pb	0	20.0	19.7	98	20.2	101	3	80 - 120	≤20
Se	0	10.0	7.4	74[b]	8.2	82	10	80 - 120	≤20
Tl	0	50.0	81.5	163[b]	78.	156[b]	4	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

[a] Applies to As and Pb only. Se and Tl were analyzed on 04/30/92.

[b] Matrix spike recoveries for As, Se, and Tl are beyond advisory quality control limits; however, LCS QC data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5868

Instrument #: PE2380

Analyst: BM

Batch #: 920429-1303

Date Of Analysis: 04/30/92

Spike Sample ID: 5868-018 MS/MSD

Date of Digestion: 04/29/92

Spike ID Code: W4-2600

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.0010	0.00099	99	0.00090	90	10	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5879

Instrument #: ICP #1

Analyst: FR

Batch #: 920429-1301

Date Of Analysis: 05/01/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 04/29/92

Spike ID Code: 4-1411, W4-2561

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	500.	476.	95	480.	96	1	80 - 120	≤20
Be	0	50.	49.	98	48.	96	2	80 - 120	≤20
Cd	0	50.	41.	82	45.	90	9	80 - 120	≤20
Cr	0	200.	194.	97	194.	97	0	80 - 120	≤20
Cu	0	250.	246.	98	242.	97	1	80 - 120	≤20
Ni	0	500.	479.	96	479.	96	0	80 - 120	≤20
Ag	0	50.	49.	98	50.	100	2	80 - 120	≤20
Zn	0	500.	477.	95	475.	95	0	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

McLaren™ Hart

(DC2-CN5879)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5879

Instrument #: PE5100/TJA4000

Analyst: SP

Batch #: 920429-1302

Date Of Analysis: 05/01/92 [a]

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 04/29/92

Spike ID Code: W4-838

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	40.0	46.8	117	40.2	100	16	80 - 120	≤20
Pb	0	20.0	20.3	102	19.6	98	4	80 - 120	≤20
Se	0	10.0	9.6	96	8.4	84	13	80 - 120	≤20
Tl	0	50.0	47.8	96	46.9	94	2	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

[a] Applies to As and Pb only. Se and Tl were analyzed on 04/30/92.

McLaren Hart™

(DC2-CN5879)

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5879

Instrument #: PE2380

Analyst: BM

Batch #: 920429-1303

Date Of Analysis: 04/30/92

Spike Sample ID: LCSW/LCSDW

Date of Digestion: 04/29/92

Spike ID Code: W4-2600

Matrix: Water Units: ug/L

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.0010	0.00090	90	0.00090	90	0	80 - 120	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

McLaren Hart™

(DC2-CN5879)

recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5715

Instrument #: ICP#1

Analyst: RJ

Batch #: 920317-1103

Date Of Analysis: 03/18/92

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/17/92

Spike ID Code: 4-1392

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	25.	26.8	107	26.6	106	1	75 -125	≤20
Be	0	2.5	2.6	104	2.6	104	0	75 - 125	≤20
Cd	0	2.5	2.6	104	2.3	92	12	75 - 125	≤20
Cr	0	10.	11.6	116	11.3	113	3	75 - 125	≤20
Cu	0	12.5	14.0	112	12.8	102	9	75 - 125	≤20
Pb	0	25.	26.3	105	26.8	107	2	75 - 125	≤20
Ni	0	25.	26.1	104	26.6	106	2	75 - 125	≤20
Ag	0	2.5	2.7	108	2.8	112	4	75 - 125	≤20
Zn	0	25.	26.8	107	25.8	103	4	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

McLaren Hart™

(DC1-CN5715) recycled paper

QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5715

Instrument #: PE5100

Analyst: SP

Batch #: 920317-1102

Date Of Analysis: 03/21/92

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/17/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	2.00	2.07	104	2.04	102	2	75 -125	≤20
Se	0	0.50	0.54	108	0.53	106	2	75 - 125	≤20
Tl	0	2.50	2.83	113	2.86	114	0	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5715

Instrument #: PE2380

Analyst: SP

Batch #: 920317-1101

Date Of Analysis: 03/18/92

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/17/92

Spike ID Code: W4-2328

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.25	100	0.23	92	8	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5727

Instrument #: ICP#1

Analyst: RJ

Batch #: 920318-1101

Date Of Analysis: 03/18/92

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/18/92

Spike ID Code: 4-1392

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	25.	24.0	96	23.7	95	1	75 -125	≤20
Be	0	2.5	2.3	92	2.3	92	0	75 - 125	≤20
Cd	0	2.5	2.2	88	2.3	92	4	75 - 125	≤20
Cr	0	10.	9.8	98	10.0	100	2	75 - 125	≤20
Cu	0	12.5	12.4	99	12.5	100	1	75 - 125	≤20
Pb	0	25.	24.9	100	23.5	94	6	75 - 125	≤20
Ni	0	25.	24.1	96	23.6	94	2	75 - 125	≤20
Ag	0	2.5	2.4	96	2.5	100	4	75 - 125	≤20
Zn	0	25.	23.3	93	23.3	93	0	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5727

Instrument #: PE5100

Analyst: RJ

Batch #: 920318-1102

Date Of Analysis: 03/22/92

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/18/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	2.	2.04	102	2.12	106	4	75 -125	≤20
Se	0	0.5	0.54	108	0.51	102	6	75 - 125	≤20
Tl	0	2.5	2.84	114	2.86	114	1	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5727

Instrument #: PE2380

Analyst: SP

Batch #: 920318-1103

Date Of Analysis: 03/21/92

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/18/92

Spike ID Code: W4-2420

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.28	112	0.26	104	7	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5727

Instrument #: ICP#1

Analyst: RJ

Batch #: 920318-1101

Date Of Analysis: 03/18/92

Spike Sample ID: 5727-012 MS/MSD

Date of Digestion: 03/18/92

Spike ID Code: 4-1392

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	25.	7.6	30[a]	6.4	26[a]	17	75 -125	≤20
Be	0.37	2.5	2.8	97	2.8	97	0	75 - 125	≤20
Cd	0	2.5	2.2	88	2.1	84	5	75 - 125	≤20
Cr	11.	10.	21.2	102	21.0	100	1	75 - 125	≤20
Cu	8.3	12.5	21.4	105	19.9	93	7	75 - 125	≤20
Pb	59.	25.	81.2	89	72.7	55[a]	11	75 - 125	≤20
Ni	7.2	25.	31.6	98	31.3	96	1	75 - 125	≤20
Ag	0	2.5	2.4	96	2.3	92	4	75 - 125	≤20
Zn	37.	25.	62.4	102	59.8	91	4	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Matrix spike recoveries for Sb and Pb are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5727

Instrument #: PE5100

Analyst: RJ

Batch #: 920318-1102

Date Of Analysis: 03/22/92

Spike Sample ID: 5727-012 MS/MSD

Date of Digestion: 03/18/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	7.1	2.	61.7	2730[a]	8.9	90	150[a]	75 -125	≤20
Se	0	0.5	0.06	12[a]	4.2	84	194[a]	75 - 125	≤20
Tl	0	2.5	1.8	72[a]	2.8	112	43[a]	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Matrix spike recoveries and RPD's for As, Se and Tl are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5727

Instrument #: PE2380

Analyst: SP

Batch #: 920318-1103

Date Of Analysis: 03/21/92

Spike Sample ID: 5727-012 MS/MSD

Date of Digestion: 03/18/92

Spike ID Code: W4-2420

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.27	108	0.26	104	4	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5745

Instrument #: ICP#1

Analyst: RJ

Batch #: 920319-1107

Date Of Analysis: 03/20/92

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/19/92

Spike ID Code: 4-1392

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	25.	24.5	98	24.3	97	1	75 -125	≤20
Be	0	2.5	2.6	104	2.5	100	4	75 - 125	≤20
Cd	0	2.5	2.1	84	2.1	84	0	75 - 125	≤20
Cr	0	10.	10.4	104	10.9	109	5	75 - 125	≤20
Cu	0	12.5	12.5	100	12.6	101	1	75 - 125	≤20
Pb	0	25.	26.1	104	25.1	100	4	75 - 125	≤20
Ni	0	25.	24.5	98	24.0	96	2	75 - 125	≤20
Ag	0	2.5	1.9	76	2.0	80	5	75 - 125	≤20
Zn	0	25.	24.1	96	24.1	96	0	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5745

Instrument #: PE5100

Analyst: SP

Batch #: 920319-1105

Date Of Analysis: 03/23/92[a]

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/19/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	2.00	2.07	104	2.12	106	2	75 -125	≤20
Se	0	0.50	0.47	94	0.55	110	16	75 - 125	≤20
Tl	0	2.50	2.83	113	2.82	113	0	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Applies to all metals except As, which was analyzed on 03/24/92.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5745

Instrument #: PE2380

Analyst: SP

Batch #: 920319-1102

Date Of Analysis: 03/21/92

Spike Sample ID: LCSS/LCSDS1

Date of Digestion: 03/19/92

Spike ID Code: W4-2420

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.24	96	0.26	104	8	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5745

Instrument #: ICP#1

Analyst: RJ

Batch #: 920319-1106

Date Of Analysis: 03/20/92

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/19/92

Spike ID Code: 4-1392

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	25.	24.8	99	24.8	99	0	75 -125	≤20
Be	0	2.5	2.5	100	2.5	100	0	75 - 125	≤20
Cd	0	2.5	2.0	80	1.9	76	5	75 - 125	≤20
Cr	0	10.	10.7	107	10.6	106	1	75 - 125	≤20
Cu	0	12.5	13.0	104	12.9	103	1	75 - 125	≤20
Pb	0	25.	25.1	100	26.1	104	4	75 - 125	≤20
Ni	0	25.	24.6	98	25.1	100	2	75 - 125	≤20
Ag	0	2.5	1.9	76	1.9	76	0	75 - 125	≤20
Zn	0	25.	24.4	98	24.5	98	0	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5745

Instrument #: PE5100

Analyst: SP

Batch #: 920319-1104

Date Of Analysis: 03/23/92[a]

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/19/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	2.00	2.12	106	2.14	107	0	75 -125	≤20
Se	0	0.50	0.52	104	0.56	112	7	75 - 125	≤20
Tl	0	2.50	2.76	110	2.74	110	0	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Applies to all metals except As, which was analyzed on 03/24/92.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5745

Instrument #: PE2380

Analyst: SP

Batch #: 920319-1103

Date Of Analysis: 03/21/92

Spike Sample ID: LCSS/LCSDS2

Date of Digestion: 03/19/92

Spike ID Code: W4-2420

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.23	92	0.24	96	4	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5745

Instrument #: ICP#1

Analyst: RJ

Batch #: 920319-1106

Date Of Analysis: 03/20/92

Spike Sample ID: 5745-003 MS/MSD

Date of Digestion: 03/19/92

Spike ID Code: 4-1392

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	25.	6.8	27[a]	6.0	24[a]	12	75 -125	≤20
Be	0.45	2.5	3.0	102	3.0	102	0	75 - 125	≤20
Cd	1.5	2.5	3.3	72[a]	3.2	68[a]	3	75 - 125	≤20
Cr	15.	10.	34.5	195[a]	32.1	171[a]	7	75 - 125	≤20
Cu	16.	12.5	36.4	163[a]	31.1	121	16	75 - 125	≤20
Pb	7.5	25.	32.8	101	33.2	103	1	75 - 125	≤20
Ni	17.	25.	43.0	104	43.3	105	1	75 - 125	≤20
Ag	0	2.5	1.9	76	1.8	72[a]	5	75 - 125	≤20
Zn	40.	25.	76.9	148[a]	73.7	135[a]	4	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Matrix spike recoveries for Sb, Cd, Cr, Cu, and Zn are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5745

Instrument #: PE5100

Analyst: SP

Batch #: 920319-1104

Date Of Analysis: 03/23/92[a]

Spike Sample ID: 5745-003 MS/MSD

Date of Digestion: 03/19/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	4.4	2.00	4.32	0[b]	3.40	0[b]	24	75 -125	≤20
Se	0	0.50	0.20	40[b]	0.22	44[b]	10	75 - 125	≤20
Tl	0	2.50	2.49	100	2.48	99	1	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Applies to all metals except As, which was analyzed on 03/24/92.

[b] Matrix spike recoveries for As and Se are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5745

Instrument #: PE2380

Analyst: SP

Batch #: 920319-1103

Date Of Analysis: 03/21/92

Spike Sample ID: 5745-063 MS/MSD

Date of Digestion: 03/19/92

Spike ID Code: W4-2420

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.24	96	0.24	96	0	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5745

Instrument #: ICP#1

Analyst: RJ

Batch #: 920319-1107

Date Of Analysis: 03/20/92

Spike Sample ID: 5745-063 MS/MSD

Date of Digestion: 03/19/92

Spike ID Code: 4-1392

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	25.	6.4	26[a]	5.5	22[a]	15	75 -125	≤20
Be	0.67	2.5	3.1	97	3.2	101	3	75 - 125	≤20
Cd	0	2.5	2.0	80	1.9	76	5	75 - 125	≤20
Cr	17.	10.	26.8	98	28.7	117	7	75 - 125	≤20
Cu	9.6	12.5	21.2	93	22.4	102	6	75 - 125	≤20
Pb	12.	25.	35.5	94	36.9	100	4	75 - 125	≤20
Ni	14.	25.	36.0	88	38.1	96	6	75 - 125	≤20
Ag	0	2.5	1.8	72[a]	1.7	68[a]	6	75 - 125	≤20
Zn	46.	25.	65.2	77	72.8	107	11	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Matrix spike recoveries for Sb and Ag are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5745

Instrument #: PE2380

Analyst: SP

Batch #: 920319-1102

Date Of Analysis: 03/21/92

Spike Sample ID: 5745-003 MS/MSD

Date of Digestion: 03/19/92

Spike ID Code: W4-2420

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.27	112	0.27	112	0	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5709

Instrument #: PE5100

Analyst: SP

Batch #: 920317-1102

Date Of Analysis: 03/21/92

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/17/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	2.00	2.07	104	2.04	102	2	75 -125	≤20
Se	0	0.50	0.54	108	0.53	106	2	75 - 125	≤20
Tl	0	2.50	2.83	113	2.86	114	0	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5709

Instrument #: PE2380

Analyst: SP

Batch #: 920317-1101

Date Of Analysis: 03/18/92

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/17/92

Spike ID Code: W4-2328

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.25	100	0.23	92	8	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5709

Instrument #: ICP#1

Analyst: RJ

Batch #: 920317-1103

Date Of Analysis: 03/18/92

Spike Sample ID: 5709-002 MS/MSD

Date of Digestion: 03/17/92

Spike ID Code: 4-1392

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	25.	6.0	24[a]	5.2	21[a]	14	75 -125	≤20
Be	0.54	2.5	3.1	102	3.1	102	0	75 - 125	≤20
Cd	0	2.5	2.5	100	2.5	100	0	75 - 125	≤20
Cr	14.	10.	24.5	105	25.3	113	3	75 - 125	≤20
Cu	11.	12.5	23.3	98	23.3	98	0	75 - 125	≤20
Pb	12.	25.	35.3	93	36.3	97	3	75 - 125	≤20
Ni	10.	25.	34.0	96	35.1	100	3	75 - 125	≤20
Ag	0	2.5	2.5	100	2.5	100	0	75 - 125	≤20
Zn	49.	25.	72.2	93	74.2	101	3	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Matrix spike recoveries for Sb are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5709

Instrument #: PE5100

Analyst: SP

Batch #: 920317-1102

Date Of Analysis: 03/21/92

Spike Sample ID: 5709-002 MS/MSD

Date of Digestion: 03/17/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	2.9	2.00	4.07	58[a]	4.21	66[a]	13	75 -125	≤20
Se	0	0.50	0.08	16[a]	0.12	24[a]	40[b]	75 - 125	≤20
Tl	0	2.50	3.10	124	3.16	126[a]	2	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Matrix spike recoveries for As, Se and Tl are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

[b] Matrix spike relative percent difference is beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5709

Instrument #: PE2380

Analyst: SP

Batch #: 920317-1101

Date Of Analysis: 03/18/92

Spike Sample ID: 5709-002 MS/MSD

Date of Digestion: 03/17/92

Spike ID Code: W4-2328

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0.09	0.25	0.12	12[a]	0.09	0[b]	—	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Matrix spike recovery for Hg is beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

[b] A zero percent matrix spike recovery was obtained for Hg; however, LCS QC data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5756

Instrument #: ICP #1

Analyst: RJ

Batch #: 920320-1104

Date Of Analysis: 03/21/92

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/20/92

Spike ID Code: 4-1392

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	25.	23.9	96	24.9	100	4	75 -125	≤20
Be	0	2.5	2.4	96	2.6	104	8	75 - 125	≤20
Cd	0	2.5	1.9	76	2.0	80	5	75 - 125	≤20
Cr	0	10.	9.8	98	10.3	103	5	75 - 125	≤20
Cu	0	12.5	12.4	99	13.2	106	6	75 - 125	≤20
Pb	0	25.	25.7	103	27.9	112	8	75 - 125	≤20
Ni	0	25.	24.4	98	25.7	103	5	75 - 125	≤20
Ag	0	2.5	1.8	72[a]	2.0	80	10	75 - 125	≤20
Zn	0	25.	23.2	93	24.6	98	6	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] The laboratory quality control sample for Ag is beyond quality control limits. However, data is acceptable using USEPA CLP/SOW 7/88, criteria.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5756

Instrument #: PE2380

Batch #: 920320-1105

Analyst: SP

Spike Sample ID: LCSS/LCSDS

Date Of Analysis: 03/21/92

Spike ID Code: W4-2420

Date of Digestion: 03/20/92

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.24	96	0.24	96	0	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5756

Instrument #: ICP #1

Analyst: RJ

Batch #: 920320-1104

Date Of Analysis: 03/21/92

Spike Sample ID: 5756-003 MS/MSD

Date of Digestion: 03/20/92

Spike ID Code: 4-1392

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	25.	3.4	14[a]	3.4	14[a]	0	75 -125	≤20
Be	0.68	2.5	3.0	93	3.2	101	6	75 - 125	≤20
Cd	0	2.5	1.9	76	2.4	96	23[c]	75 - 125	≤20
Cr	20.	10.	26.7	67[a]	27.8	78	4	75 - 125	≤20
Cu	19.	12.5	28.5	76	30.2	90	6	75 - 125	≤20
Pb	16.	25.	38.1	88	39.0	92	2	75 - 125	≤20
Ni	16.	25.	37.8	87	39.0	92	3	75 - 125	≤20
Ag	0	2.5	1.5	60[b]	1.6	64[b]	6	75 - 125	≤20
Zn	67.	25.	82.4	62[a]	86.3	77	5	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Matrix spike recoveries for Sb, Cr and Zn are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

[b] The matrix spike recoveries for Ag are beyond the advisory control limits. The laboratory control sample recovery is also beyond control limits. However, data is acceptable using USEPA CLP/SOW 7/88 criteria.

[c] Matrix spike relative percent difference is beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5756

Instrument #: PE2380

Analyst: SP

Batch #: 920320-1105

Date Of Analysis: 03/21/92

Spike Sample ID: 5756-0003 MS/MSD

Date of Digestion: 03/20/92

Spike ID Code: W4-2420

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.23	92	0.23	92	0	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5784

Instrument #: PE2380

Analyst: SP

Batch #: 920403-1103

Date Of Analysis: 04/03/92

Spike Sample ID: 5784-002 MS/MSD

Date of Digestion: 04/03/92

Spike ID Code: W4-24

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.21	84	0.26	104	21[a]	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Matrix spike relative percent difference is beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5761

Instrument #: PE5100/TJA4000

Batch #: 920325-1101

Spike Sample ID: LCSS/LCSDS

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

Analyst: SP

Date Of Analysis: 03/27/92

Date of Digestion: 03/25/92

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	2.00	2.11	106	2.23	112	6	75 -125	≤20
Tl	0	2.50	2.88	115	2.88	115	0	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5761

Instrument #: ICP #1

Analyst: RJ

Batch #: 920325-1102

Date Of Analysis: 03/26/92

Spike Sample ID: 5761-003 MS/MSD

Date of Digestion: 03/25/92

Spike ID Code: 4-1397

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	25.	3.1	12[a]	4.2	17[a]	30[b]	75 -125	≤20
Be	1.2	2.5	3.7	100	3.7	100	0	75 - 125	≤20
Cd	0	2.5	2.2	88	2.1	84	5	75 - 125	≤20
Cr	24.	10.	35.3	113	33.3	93	6	75 - 125	≤20
Cu	24.	12.5	40.8	134[a]	45.1	169[a]	10	75 - 125	≤20
Pb	26.	25.	49.9	96	47.1	84	6	75 - 125	≤20
Ni	20.	25.	42.8	91	41.4	86	3	75 - 125	≤20
Ag	0	2.5	2.4	96	2.2	88	9	75 - 125	≤20
Zn	76.	25.	102.	104	94.9	75	7	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Matrix spike recoveries for Sb and Cu are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

[b] Matrix spike relative percent difference is beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5761

Instrument #: PE5100/TJA4000

Analyst: SP

Batch #: 920325-1101

Date Of Analysis: 03/27/92

Spike Sample ID: 5761-003 MS/MSD

Date of Digestion: 03/25/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	6.2	2.00	7.8	80	8.0	90	12	75 -125	≤20
Tl	0	2.50	2.74	110	2.73	109	0	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5761

Instrument #: PE2380

Batch #: 920325-1103

Spike Sample ID: 5761-003 MS/MSD

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

Analyst: SP

Date Of Analysis: 03/26/92

Date of Digestion: 03/25/92

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.20	80	0.22	88	10	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5756

Instrument #: PE5100/TSA 4000

Analyst: SP

Batch #: 920320-1103

Date Of Analysis: 03/24/92[a]

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/20/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	2.00	2.44	122	2.31	116	5	75 -125	≤20
Se	0	0.50	0.48	96	0.52	104	8	75 - 125	≤20
Tl	0	2.50	2.89	115	2.94	118	3	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Applies to As only. Se analyzed on 03/25/92. Tl analyzed on 03/27/92

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5756

Instrument #: PE2380

Analyst: SP

Batch #: 920320-1105

Date Of Analysis: 03/21/92

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/20/92

Spike ID Code: W4-2420

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.24	96	0.24	96	0	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5756

Instrument #: ICP #1

Analyst: RJ

Batch #: 920320-1104

Date Of Analysis: 03/21/92

Spike Sample ID: 5756-003 MS/MSD

Date of Digestion: 03/20/92

Spike ID Code: 4-1392

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	25.	3.4	14[a]	3.4	14[a]	0	75 -125	≤20
Be	0.68	2.5	3.0	93	3.2	101	6	75 - 125	≤20
Cd	0	2.5	1.9	76	2.4	96	23[c]	75 - 125	≤20
Cr	20.	10.	26.7	67[a]	27.8	78	4	75 - 125	≤20
Cu	19.	12.5	28.5	76	30.2	90	6	75 - 125	≤20
Pb	16.	25.	38.1	88	39.0	92	2	75 - 125	≤20
Ni	16.	25.	37.8	87	39.0	92	3	75 - 125	≤20
Ag	0	2.5	1.5	60[b]	1.6	64[b]	6	75 - 125	≤20
Zn	67.	25.	82.4	62[a]	86.3	77	5	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Matrix spike recoveries for Sb, Cr and Zn are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

[b] The matrix spike recoveries for Ag are beyond the advisory control limits. The laboratory control sample recovery is also beyond control limits. However, data is acceptable using USEPA CLP/SOW 7/88 criteria.

[c] Matrix spike relative percent difference is beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5756

Instrument #: PE5100/TJA 4000

Analyst: SP

Batch #: 920320-1103

Date Of Analysis: 03/24/92 [a]

Spike Sample ID: 5756-003 MS/MSD

Date of Digestion: 03/20/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	4.5	2.00	10.8	315[b]	9.85	268[b]	16	75 -125	≤20
Se	2.9	0.50	1.53	0[c]	2.26	0[c]	0	75 - 125	≤20
Tl	0	2.50	2.79	112	2.64	106	6	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Applies to As and Se. Tl analyzed on 03/27/92.

[b] Matrix spike recoveries for As are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

[c] Zero percent matrix spike recoveries were obtained for Se; however, laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5756

Instrument #: PE2380

Analyst: SP

Batch #: 920320-1105

Date Of Analysis: 03/21/92

Spike Sample ID: 5756-0003 MS/MSD

Date of Digestion: 03/20/92

Spike ID Code: W4-2420

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	.0.23	92	0.23	92	0	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5758

Instrument #: ICP #1

Analyst: RJ

Batch #: 920323-1104

Date Of Analysis: 03/26/92

Spike Sample ID: 5758-062 MS/MSD

Date of Digestion: 03/23/92

Spike ID Code: 4-1397

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	25.	6.0	24[a]	7.3	29[a]	20	75 -125	≤20
Be	0.52	2.5	3.0	99	3.0	99	0	75 - 125	≤20
Cd	0	2.5	2.1	84	2.1	84	0	75 - 125	≤20
Cr	9.4	10.	19.1	97	19.6	102	3	75 - 125	≤20
Cu	10.	12.5	22.4	99	21.8	94	3	75 - 125	≤20
Pb	11.	25.	35.2	97	33.6	90	5	75 - 125	≤20
Ni	6.6	25.	29.9	93	30.2	94	1	75 - 125	≤20
Ag	0	2.5	2.5	100	2.6	104	4	75 - 125	≤20
Zn	46.	25.	68.8	91	68.0	88	1	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Matrix spike recoveries for Sb are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5758

Instrument #: PE5100/TJA 4000

Analyst: SP

Batch #: 920323-1102

Date Of Analysis: 03/25/92[a]

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/23/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	2.00	2.01	100	1.94	97	3	75 -125	≤20
Se	0	0.50	0.60	120	0.56	112	7	75 - 125	≤20
Tl	0	2.50	2.30	92	2.52	101	9	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Applies to all metals except Tl, which was analyzed on 03/30/92.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5758

Instrument #: PE 2380

Analyst: BM

Batch #: 920323-1103

Date Of Analysis: 03/26/92

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/23/92

Spike ID Code: W4-2420

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.24	96	0.19	76	23	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5758

Instrument #: ICP #1

Analyst: RJ

Batch #: 920323-1101

Date Of Analysis: 03/26/92

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/23/92

Spike ID Code: 4-1397

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	25.	24.9	100	25.3	101	2	75 -125	≤20
Be	0	2.5	2.5	100	2.5	100	0	75 - 125	≤20
Cd	0	2.5	2.0	80	2.1	84	5	75 - 125	≤20
Cr	0	10.	10.5	105	10.8	108	3	75 - 125	≤20
Cu	0	12.5	12.6	101	12.8	102	2	75 - 125	≤20
Pb	0	25.	25.2	101	26.	104	3	75 - 125	≤20
Ni	0	25.	24.6	98	24.9	100	1	75 - 125	≤20
Ag	0	2.5	2.7	108	2.6	104	4	75 - 125	≤20
Zn	0	25.	23.3	93	23.4	94	0	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5758

Instrument #: PE5100/TJA 4000

Analyst: SP

Batch #: 920323-1105

Date Of Analysis: 03/26/92[a]

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/23/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	2.00	1.89	94	2.04	102	8	75 -125	≤20
Se	0	0.50	0.49	98	0.58	116	17	75 - 125	≤20
Tl	0	2.50	2.48	99	2.45	98	1	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Applies to all metals except Tl, which was analyzed on 03/31/92.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5758

Instrument #: PE 2380

Analyst: BM

Batch #: 920323-1106

Date Of Analysis: 03/26/92

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/23/92

Spike ID Code: W4-2420

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.18	72[a]	0.20	80	10	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] The laboratory control sample recovery is beyond advisory control limits. The calibration data associated with this lab project for the same instrument on the same day were within acceptance limits.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5758

Instrument #: TJA4000

Analyst: SP

Batch #: 920323-1105

Date Of Analysis: 03/26/92[a]

Spike Sample ID: 5758-062 MS/MSD

Date of Digestion: 03/23/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	3.2	2.00	4.16	48[b]	4.42	61[b]	23[c]	75 -125	≤20
Se	0	0.50	0.52	104	0.52	104	0	75 - 125	≤20
Tl	0	2.50	2.49	100	2.36	94	6	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Applies to all metals except Tl, which was analyzed on 03/31/92.

[b] Matrix spike recoveries for As are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

[c] Matrix spike relative percent difference is beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5758

Instrument #: ICP #1

Analyst: RJ

Batch #: 920323-1104

Date Of Analysis: 03/26/92

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 03/23/92

Spike ID Code: 4-1397

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	25.	26.0	104	25.7	103	1	75 -125	≤20
Be	0	2.5	2.6	104	2.7	108	4	75 - 125	≤20
Cd	0	2.5	2.2	88	2.4	96	9	75 - 125	≤20
Cr	0	10.	10.8	108	10.8	108	0	75 - 125	≤20
Cu	0	12.5	12.9	103	13.0	104	1	75 - 125	≤20
Pb	0	25.	27.6	110	25.7	103	7	75 - 125	≤20
Ni	0	25.	26.6	106	25.0	100	6	75 - 125	≤20
Ag	0	2.5	2.6	104	2.6	104	0	75 - 125	≤20
Zn	0	25.	24.6	98	24.2	97	1	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5758

Instrument #: PE5100/TJA4000

Analyst: SP

Batch #: 920323-1102

Date Of Analysis: 03/25/92[a]

Spike Sample ID: 5758-003 MS/MSD

Date of Digestion: 03/23/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	11.	2.00	11.9	45[b]	12.2	60[b]	18	75 -125	≤20
Se	4.5	0.50	4.68	36[b]	4.31	0[c]	200[d]	75 - 125	≤20
Tl	0	2.50	2.31	92	1.92	77	18	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

[a] Applies to all metals except Tl, which was analyzed on 03/30/92.

[b] Matrix spike recoveries for As and Se are beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

[c] A zero percent matrix spike recovery was obtained for Se; however, the laboratory control sample data are acceptable.

[d] Matrix spike relative percent difference is beyond advisory quality control limits; however, the laboratory control sample data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5758

Instrument #: PE 2380

Analyst: BM

Batch #: 920323-1106

Date Of Analysis: 03/26/92

Spike Sample ID: 5758-062 MS/MSD

Date of Digestion: 03/23/92

Spike ID Code: W4-2420

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.24	96	0.23	92	4	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

Comments:

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5868

Instrument #: PE5100

Analyst: SP

Batch #: 920427-1105

Date Of Analysis: 04/30/92[a]

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 04/27/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	2.00	2.5	125	2.1	105	17	75 - 125	≤20
Se	0	0.50	0.52	104	0.47	94	10	75 - 125	≤20
Tl	0	2.50	3.02	121	3.12	125	3	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

[a] Applies to Se and Tl only. As was analyzed on 05/01/92.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5868

Instrument #: ICP #1

Analyst: FR

Batch #: 920427-1104

Date Of Analysis: 05/01/92[a]

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 04/27/92

Spike ID Code: 4-1411, W4-2561

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	25.	24.3	97	23.4	94	3	75 - 125	≤20
Be	0	2.5	2.69	108	2.56	102	6	75 - 125	≤20
Cd	0	2.5	1.99	80	1.85	74[b]	7	75 - 125	≤20
Cr	0	10.	10.5	105	10.1	101	4	75 - 125	≤20
Cu	0	12.5	12.5	100	12.1	97	3	75 - 125	≤20
Pb	0	25.	24.5	98	24.1	96	2	75 - 125	≤20
Ni	0	25.	23.8	95	23.5	94	1	75 - 125	≤20
Ag	0	2.5	2.55	102	2.41	96	6	75 - 125	≤20
Zn	0	25.	23.2	93	23.0	92	1	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

[a] Applies to all metals except Be, which was analyzed on 05/04/92.

[b] The laboratory control spike duplicate is beyond control limits; however, the laboratory control spike is acceptable. In addition, the calibration data associated with this laboratory project for the same instrument on the same day were within acceptance limits.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5868

Instrument #: PE2380

Analyst: BM

Batch #: 920427-1106

Date Of Analysis: 04/27/92

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 04/27/92

Spike ID Code: W4-2600

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.27	108	0.27	108	0	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5868

Instrument #: PE5100/TJA 4000

Analyst: SP

Batch #: 920429-1302

Date Of Analysis: 05/01/92 [a]

Spike Sample ID: 5868-004 MS/MSD

Date of Digestion: 04/29/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	1.9	2.00	3.58	84	3.64	87	4	75 -125	≤20
Se	0	0.50	0.26	52[b]	0.22	44[b]	16	75 - 125	≤20
Tl	0	2.50	2.46	98	2.36	94	4	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

[a] Applies to As and Tl only. Se was analyzed on 04/30/92.

[b] Matrix spike recoveries for Se are beyond advisory quality control limits; however, LCS QC data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5868

Instrument #: ICP #1

Analyst: FR

Batch #: 920427-1104

Date Of Analysis: 05/01/92[a]

Spike Sample ID: 5868-079 MS/MSD

Date of Digestion: 04/27/92

Spike ID Code: 4-1411, W4-2561

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Sb	0	25.	13.3	53[b]	12.5	50[b]	6	75 - 125	≤20
Be	0	2.5	2.69	108	2.70	108	0	75 - 125	≤20
Cd	0	2.5	2.30	92	1.82	73[c]	23[c]	75 - 125	≤20
Cr	4.9	10.	14.7	98	14.5	96	2	75 - 125	≤20
Cu	2.7	12.5	14.4	94	14.5	94	0	75 - 125	≤20
Pb	2.4	25.	27.6	101	25.7	93	8	75 - 125	≤20
Ni	2.9	25.	26.5	94	25.3	90	4	75 - 125	≤20
Ag	0	2.5	2.37	95	2.36	94	1	75 - 125	≤20
Zn	18.	25.	41.5	94	39.9	88	6	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

[a] Applies to all metals except Be, which was analyzed on 05/04/92.

[b] Matrix spike recovery for Sb is beyond advisory quality control limits; however, LCS QC data are acceptable.

[c] Matrix spike recovery and matrix spike relative percent difference for Cd are beyond advisory quality control limits; however, laboratory control spike is acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5868

Instrument #: PE5100/TJA 4000

Analyst: SP

Batch #: 920427-1105

Date Of Analysis: 04/30/92 [a]

Spike Sample ID: 5868-079 MS/MSD

Date of Digestion: 04/27/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	1.1	2.00	3.5	120	3.6	125	4	75 -125	≤20
Se	0	0.50	0.24	48[b]	0.20	40[b]	18	75 - 125	≤20
Tl	0	2.50	3.14	126 [b]	2.93	117	7	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

[a] Applies to Se and Tl only. As was analyzed on 05/01/92.

[b] Matrix spike recoveries for Se and Tl are beyond advisory quality control limits; however, LCS QC data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5868

Instrument #: PE2380

Analyst: BM

Batch #: 920427-1106

Date Of Analysis: 04/27/92

Spike Sample ID: 5868-079 MS/MSD

Date of Digestion: 04/27/92

Spike ID Code: W4-2600

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.29	116	0.32	128[a]	10	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

[a] Matrix spike recovery for Hg is beyond advisory quality control limits; however, LCS QC data are acceptable.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5879

Instrument #: PE5100/TJA4000

Analyst: SP

Batch #: 920427-1105

Date Of Analysis: 04/30/92[a]

Spike Sample ID: LCSS/LCSDS

Date of Digestion: 04/27/92

Spike ID Code: W4-838

Matrix: Soil Units: mg/Kg

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
As	0	2.00	2.5	125	2.1	105	17	75 - 125	≤20
Se	0	0.50	0.52	104	0.47	94	10	75 - 125	≤20
Tl	0	2.50	3.02	121	3.12	125	3	75 - 125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

[a] Applies to Se and Tl only. As was analyzed on 05/01/92.

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QUALITY CONTROL REPORT

McLaren Analytical Laboratory
Spike/Spike Duplicate Recovery
Metals

LP#: 5879

Instrument #: PE2380

Batch #: 920427-1106

Spike Sample ID: LCSS/LCSDS

Spike ID Code: W4-2600

Matrix: Soil Units: mg/Kg

Analyst: BM

Date Of Analysis: 04/27/92

Date of Digestion: 04/27/92

METALS	(a) SAMPLE CONC.	(b) SPIKE CONC.	(c) SAMPLE + SPIKE CONC.	(d) SPIKE REC.%	(e) SAMPLE DUP. + SPIKE CONC.	(f) SPIKE DUP. REC.%	(g) RPD %	ACCEPTANCE LIMITS REC%	ACCEPTANCE LIMITS RPD
Hg	0	0.25	0.27	108	0.27	108	0	75 -125	≤20

Spike Recovery = d = ((c-a)/b) x 100
Spike Duplicate Recovery = f = ((e-a)/b) x 100
Relative Percent Difference = g = (|c-e|)/((c+e) x .5) x 100

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RADIONUCLIDES

ROCKETDYNE SANTA SUSANA FIELD LABORATORY
MATRIX SPIKE RESULTS FOR IODINE-129 IN SOIL

Sample Description	Analysis Date	Teledyne Sample Number	Activity of Spike Added pCi/g (dry)	Unspiked Activity pCi/g (dry)	Matrix Spike Activity pCi/g (dry)	Matrix Spike Percent Activity
M1	10/21/92	SPS-1856	29.8	<0.1	28.4	95%
M2	10/21/92	SPS-1995	29.8	<0.3	30.1	101%
M3	10/21/92	SPS-1878	29.8	<0.2	28.1	94%
M4	10/21/92	SPS-1908	29.8	<0.2	29.0	97%
M5	10/21/92	SPS-1868	29.8	<0.2	31.0	104%
M6	10/21/92	SPS-1960	29.8	<0.3	28.0	94%
M7	10/21/92	SPS-1947	29.8	<0.3	27.2	91%

NM - Not measured

ROCKETDYNE SANTA SUSANA FIELD LABORATORY'
MATRIX SPIKE RESULTS FOR GAMMA SCAN IN SOIL
USING CESIUM-137 (Cs-137)

Sample Description	Analysis Date	Teledyne Sample Number	Activity of Spike Added pCi/g (dry)	Unspiked Activity pCi/g (dry)*	Matrix Spike Activity pCi/g (dry)	Matrix Spike Percent Activity
M1	5/11	69738	0.7	0.16	0.956	111%
M2	5/5	70156	0.082	0.158	0.255	106%
M3	5/27	70169	0.7	0.118	0.78	95%
M4	5/8	70821	0.163	0.303	0.449	96%
M5	6/12	70916	0.881	0.338	1.13	93%
M6	6/22	70942	0.63	NM	0.65	103%
M7	6/22	70956	0.774	0.0904	0.999	116%

pCi/g(dry) – Picocuries per gram (dry)

NM – Not measured

ROCKETDYNE SANTA SUSANA FIELD LABORATORY
MATRIX SPIKE RESULTS FOR TRITIUM IN SOIL

Sample Description	Analysis Date	Teledyne Sample Number	Activity of Spike Added pCi/g (dry)	Unspiked Activity pCi/g (dry)	Matrix Spike Activity pCi/g (dry)	Matrix Spike Percent Activity
M1	4/11	69738	1.1	NM	1.7	155%
M2	4/16	70156	0.23	0.046	0.25	91%
M3	5/10	70169	0.11	0.042	0.16	105%
M4	5/29	70821	0.22	<0.03	0.20	91%
M5	6/15	70916	0.68	0.059	0.65	88%
M6	6/15	70942	0.22	<0.02	0.20	91%
M7	6/18	70956	0.57	0.026	0.51	86%

pCi/g(dry) - Picocuries per gram (dry)

NM - Not measured due to insufficient sample size

ROCKETDYNE SANTA SUSANA FIELD LABORATORY
MATRIX SPIKE RESULTS FOR IODINE – 129 IN WATER

Analysis Date	Teledyne Sample Number	Activity of Spike Added pCi/g (dry)*	Unspiked Activity pCi/g (dry)	Matrix Spike Activity pCi/g (dry)	Matrix Spike Percent Activity
4/29/92	SPS–1899A	28	NM	32	114%
5/30/92	SPW–2154A	28	NM	26.1	93%

*pCi/g (dry) – picoCuries per gram (dry)

NM – Not measured

ROCKETDYNE SANTA SUSANA FIELD LABORATORY
MATRIX SPIKE RESULTS FOR ISOTOPIC PLUTONIUM IN WATER

Analysis Date	Teledyne Sample Number	Activity of Spike Added pCi/g (dry)*	Unspiked Activity pCi/g (dry)	Matrix Spike Activity pCi/g (dry)	Matrix Spike Percent Activity
4/23	74401	1.1		0.99	90%

*pCi/g (dry) – picoCuries per gram (dry)

NM – Not measured

ROCKETDYNE SANTA SUSANA FIELD LABORATORY
MATRIX SPIKE RESULTS FOR GAMMA SCAN IN WATER (AS CESIUM-137)

Analysis Date	Teledyne Sample Number	Activity of Spike Added pCi/g (dry)*	Unspiked Activity pCi/g (dry)	Matrix Spike Activity pCi/g (dry)	Matrix Spike Percent Activity
4/23	74401	73		73.6	101%

*pCi/g (dry) – picoCuries per gram (dry)

NM – Not measured

ROCKETDYNE SANTA SUSANA FIELD LABORATORY
MATRIX SPIKE RESULTS FOR TRITIUM IN WATER

Analysis Date	Teledyne Sample Number	Activity of Spike Added pCi/g (dry)*	Unspiked Activity pCi/g (dry)	Matrix Spike Activity pCi/g (dry)	Matrix Spike Percent Activity
4/23	74401	1400		1300	93%

*pCi/g (dry) – picoCuries per gram (dry)

NM – Not measured

ROCKETDYNE SANTA SUSANA FIELD LABORATORY
MATRIX SPIKE RESULTS FOR GROSS ALPHA/GROSS BETA RADIOACTIVITY IN WATER

Analysis Date	Teledyne Sample Number	Analyte	Activity of Spike Added pCi/g (dry)*	Unspiked Activity pCi/g (dry)	Matrix Spike Activity pCi/g (dry)	Matrix Spike Percent Activity
4/23	74401	Gross Alpha	37		39	105%
4/23	74401	Gross Beta	74		85	115%

*pCi/g (dry) – picoCuries per gram (dry)

NM – Not measured

ROCKETDYNE SANTA SUSANA FIELD LABORATORY
MATRIX SPIKE RESULTS FOR FRUIT

Sample Description	Analysis Date	Teledyne Sample Number	Radionuclide	Activity of Spike Added pCi/g (dry)	Unspiked Activity pCi/g (dry)	Matrix Spike Activity pCi/g (dry)	Matrix Spike Percent Activity
MS2OA	4/14	70661	Strontium-90	0.11	NM	0.075	68%
	4/10	70661	Iodine-129	0.2	NM	0.23	115%
	6/7	70661	Tritium	1.3	NM	1.2	92%
MSA1OA	4/8	69553	Strontium-90	0.58	NM	0.53	91%
	3/27	69553	Iodine-129	0.4	NM	0.38	95%
	4/6	69553	Plutonium-239	0.0095	NM	0.0091	96%
	4/29	69553	Tritium	1.1	NM	1.5	136%
	4/8	69553	Cobalt-60	0.02	NM	0.021	105%
	4/8	69553	Cesium-137	0.01	NM	0.013	130%
MSD1AOA	4/8	70355	Strontium-90	0.58	NM	0.49	84%
	3/28	70355	Iodine-129	0.4	NM	0.35	88%
	4/6	70355	Plutonium-239	0.0095	NM	0.0098	103%
	4/9	70355	Tritium	1.1	NM	0.15	14%
	4/12	70355	Cobalt-60	0.02	NM	0.02	100%
	4/12	70355	Cesium-137	0.01	NM	0.0083	83%

pCi/g(dry) - Picocuries per gram(dry)

NM - Not measured

ROCKETDYNE SANTA SUSANA FIELD LABORATORY
MATRIX SPIKE RESULTS FOR FRUIT

Sample Description	Analysis Date	Teledyne Sample Number	Radionuclide	Activity of Spike Added pCi/g (dry)	Unspiked Activity pCi/g (dry)	Matrix Spike Activity pCi/g (dry)	Matrix Spike Percent Activity
MS1BOA	4/8	69554	Strontium-90	0.41	NM	0.34	83%
	3/27	69554	Iodine-129	0.4	NM	0.36	90%
	4/6	69554	Plutonium-239	0.0067	NM	0.0064	96%
	4/29	69554	Tritium	1.0	NM	1.1	110%
	4/9	69554	Cobalt-60	0.02	NM	0.0193	97%
	4/9	69554	Cesium-137	0.01	NM	0.0129	129%
MSD1BOA	4/8	70356	Strontium-90	0.41	NM	0.34	83%
	3/28	70356	Iodine-129	0.4	NM	0.36	90%
	4/6	70356	Plutonium-239	0.0067	NM	0.0063	94%
	4/9	70356	Tritium	1.0	NM	1.2	120%
	4/16	70356	Cobalt-60	0.02	NM	0.019	95%
	4/16	70356	Cesium-137	0.01	NM	0.0093	93%

pCi/g(dry) - Picocuries per gram(dry)

NM - Not measured

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 05/08/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 3
3-0602	04-0029403-012	03/16/92	04/18/92	

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.
69736	88466 BG02074SC		03/10	1030			TH-228	1.58+-0.16E 00		04/01			4
							H-3	3.3 +-0.5 E-02		04/28			5
69737	88471 MATRIXSPIKE M1SB		03/10	1530			PU-238	L.T. 2. E-02		04/10			6
							PU-239	3.0 +-0.5 E-01		04/10			6
69738	88472 MATRIXSPIKE M1SC		03/10	1530			BE-7	L.T. 1. E 00		05/11			4
							K-40	1.98+-0.20E 01		05/11			4
							MN-54	L.T. 6. E-02		05/11			4
							CO-58	L.T. 8. E-02		05/11			4
							FE-59	L.T. 3. E-01		05/11			4
							CO-60	L.T. 5. E-02		05/11			4
							ZN-65	L.T. 1. E-01		05/11			4
							ZR-95	L.T. 1. E-01		05/11			4
							RU-103	L.T. 1. E-01		05/11			4
							RU-106	L.T. 5. E-01		05/11			4
							I-131	L.T. 1. E 01		05/11			4
							CS-134	L.T. 6. E-02		05/11			4
							CS-137	9.56+-0.96E-01		05/11			4
							BA-140	L.T. 2. E 00		05/11			4
							CE-141	L.T. 3. E-01		05/11			4
							CE-144	L.T. 5. E-01		05/11			4
							RA-226	1.85+-0.92E 00		05/11			4
							TH-228	1.71+-0.17E 00		05/11			4
							H-3	1.7 +-0.1 E-01		04/11			5
69739	88502 SM04095SB		03/11	0800			PU-238	L.T. 6. E-02		04/11			6
							PU-239	L.T. 1. E-02		04/11			6

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 05/08/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 9
3-0602	04-0029403-012	03/16/92	04/18/92	

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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.
69754	88490 BG01005SC		03/10	1400			BE-7	L.T. 3. E-01		04/01			4
							K-40	2.08+-0.21E 01		04/01			4
							MN-54	L.T. 4. E-02		04/01			4
							CO-58	L.T. 3. E-02		04/01			4
							FE-59	L.T. 1. E-01		04/01			4
							CO-60	L.T. 3. E-02		04/01			4
							ZN-65	L.T. 9. E-02		04/01			4
							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	9.20+-2.68E-02		04/01			4
							BA-140	L.T. 1. E-01		04/01			4
							CE-141	L.T. 8. E-02		04/01			4
							CE-144	L.T. 3. E-01		04/01			4
							RA-226	1.64+-0.52E 00		04/01			4
							TH-228	1.45+-0.15E 00		04/01			4
							H-3	3.0 +-1.1 E-02		05/05			5
69759	88471 MATRIXSPIKE DUP M1SB		03/10	1530			PU-238	L.T. 2. E-02		04/10			6
							PU-239	3.1 +-0.5 E-01		04/10			6
69760	88472 MATRIXSPIKE DUP M1SC		03/10	1530			BE-7	L.T. 1. E 00		05/12			4
							K-40	2.10+-0.21E 01		05/12			4
							MN-54	L.T. 6. E-02		05/12			4
							CO-58	L.T. 8. E-02		05/12			4
							FE-59	L.T. 3. E-01		05/12			4
							CO-60	L.T. 5. E-02		05/12			4
							ZN-65	L.T. 2. E-01		05/12			4
							ZR-95	L.T. 1. E-01		05/12			4
							RU-103	L.T. 2. E-01		05/12			4
							RU-106	L.T. 5. E-01		05/12			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 05/08/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0602	04-0029403-012	03/16/92	04/18/92

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.
69760 88472	RIXSPIKE DUP MLSC		03/10	1530			I-131	L.T. 1. E-01		05/12			4
							CS-134	L.T. 7. E-02		05/12			4
							CS-137	8.95+-0.90E-01		05/12			4
							BA-140	L.T. 2. E 00		05/12			4
							CE-141	L.T. 3. E-01		05/12			4
							CE-144	L.T. 5. E-01		05/12			4
							RA-226	2.47+-1.05E 00		05/12			4
							TH-228	1.65+-0.17E 00		05/12			4
							H-3	1.7 +-0.2 E-01		05/05			5

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 05/15/92

PAGE 3

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

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S O I L

TELEDYNE SAMPLE NUMBER		CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	TIME	STOP DATE	TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
70166	88232	BG05016SB		03/13	1700			PU-238	L.T. 2. E-02		04/09			6
								PU-239	L.T. 5. E-03		04/09			6
70167	88233	BG05016SC		03/13	1700			BE-7	L.T. 3. E-01		04/01			4
								K-40	2.20+-0.22E 01		04/01			4
								MN-54	L.T. 3. E-02		04/01			4
								CO-58	L.T. 3. E-02		04/01			4
								FE-59	L.T. 9. E-02		04/01			4
								CO-60	L.T. 3. E-02		04/01			4
								ZN-65	L.T. 7. E-02		04/01			4
								ZR-95	L.T. 4. E-02		04/01			4
								RU-103	L.T. 3. E-02		04/01			4
								RU-106	L.T. 3. E-01		04/01			4
								I-131	L.T. 1. E-01		04/01			4
								CS-134	L.T. 3. E-02		04/01			4
								CS-137	7.42+-2.87E-02		04/01			4
								BA-140	L.T. 8. E-02		04/01			4
								CE-141	L.T. 6. E-02		04/01			4
								CE-144	L.T. 2. E-01		04/01			4
								RA-226	1.73+-0.48E 00		04/01			4
								TH-228	7.27+-0.73E-01		04/01			4
								H-3	2.7 +-1.7 E-02		05/10			4
70168	88245	MS	M3SB	03/13	1605			PU-238	L.T. 2. E-02		04/09			6
								PU-239	3.6 +-0.5 E-01		04/09			6
70169	88246	MS	M3SC	03/13	1605			BE-7	L.T. 3. E-01		04/01			4
								K-40	2.12+-0.21E 01		04/01			4
								MN-54	L.T. 4. E-02		04/01			4
								CO-58	L.T. 4. E-02		04/01			4
								FE-59	L.T. 9. E-02		04/01			4
								CO-60	L.T. 4. E-02		04/01			4
								ZN-65	L.T. 9. E-02		04/01			4

The results for T1#70169 are unspiked. We do need these results in order to compare with the results after spiking. A revised report will be sent as soon as the spiked results are available.

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	

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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.
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

REVISED 08/26/92
ADDITIONAL DATA 07/27/92
RUN DATE 06/09/92

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.
70819	90131 BB00003SC		03/17	1130			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	1.57+-0.48E 00		04/25			4
							TH-228	1.45+-0.15E 00		04/25			4
							H-3	L.T. 3. E-02		05/29			5
70820	90141 M4SB	MS	03/17	1100			PU-238	L.T. 6. E-02		05/05			6
							PU-239	3.2 +-0.7 E-01		05/05			6
70821	90142 M4SC	MS	03/17	1100			BE-7	L.T. 7. E-01		05/08			4
							K-40	1.94+-0.19E 01		05/08			4
							MN-54	L.T. 4. E-02		05/08			4
							CO-58	L.T. 6. E-02		05/08			4
							FE-59	L.T. 2. E-01		05/08			4
							CO-60	L.T. 4. E-02		05/08			4
							ZN-65	L.T. 1. E-01		05/08			4
							ZR-95	L.T. 8. E-02		05/08			4
							RU-103	L.T. 1. E-01		05/08			4
							RU-106	L.T. 4. E-01		05/08			4
							I-131	L.T. 3. E 00		05/08			4
							CS-134	L.T. 5. E-02		05/08			4
							CS-137	4.49+-0.52E-01		05/08			4
							BA-140	L.T. 9. E-01		05/08			4
							CE-141	L.T. 2. E-01		05/08			4
							CE-144	L.T. 3. E-01		05/08			4
							RA-226	2.13+-0.53E 00		05/08			4
							TH-228	1.40+-0.14E 00		05/08			4
							H-3	2.0 +-0.2 E-01		05/29			5

TI#70820 was prepared with 0.33 pCi/g of Pu-239.

TI#70821 was prepared with 3.03 E-01 pCi/g of Cs-137 and with 2.2 E-01 pCi/g of H-3.

The H-3 activity of TI#70821 without the addition of the spike was L.T. 3. E-02.

The above note concerning Cs-137 in TI#70821 is incorrect. It should read:
The unspiked Cs-137 activity was 3.03E-01 pCi/g. Cesium-137 was added to the sample at a concentration of 1.63E-01 pCi/g.

J. Martin 7-27-92

J. Martin 8-26-92

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

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

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 5
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.
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
							H-3	L.T. 6. E-02		06/15			5

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.

JC Martin 7-27-92

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

ADDITIONAL DATA 07/27/92
RUN DATE 06/19/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 6
3-0633	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.
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
								RA-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

The H-3 spiked activity added to TI#70942 was 0.22 pCi/g. The H-3 activity of TI#70942 without the addition of the spike was L.T. 2. E-02.

fr Martin 7-27-92

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
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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.
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.

Table 1. In-house spiked matrix samples.

Lab Code	Sample Description	Date Analyzed	Analysis	Concentration (pCi/L/g dry) TIML Result	Known Activity	Expected Precision
SPS-1856	M-1 SA	10-23-92	Sr-90	28.9±1.6	27.6±6.0	3.0
		10-21-92	I-129	28.4±2.7	29.8±6.0	3.0
SPS-1995	M-2 SA	10-23-92	Sr-90	29.3±1.7	27.6±6.0	3.0
		10-21-92	I-129	30.1±2.8	29.8±6.0	3.0
SPS-1878	M-3 SA	10-23-92	Sr-90	30.3±1.8	27.6±6.0	3.0
		10-21-92	I-129	28.1±2.7	29.8±6.0	3.0
SPS-1908	M-4 SA	10-23-92	Sr-90	29.4±1.7	27.6±6.0	3.0
		10-21-92	I-129	29.0±2.8	29.8±6.0	3.0
SPW-1868	M-5 SA	10-23-92	Sr-90	30.4±1.6	27.6±6.0	3.0
		10-21-92	I-129	31.0±2.7	29.8±6.0	3.0
SPS-1960	M-6 SA	10-23-92	Sr-90	30.4±1.6	27.6±6.0	3.0
		10-21-92	I-129	28.0±2.6	29.8±6.0	3.0
SPS-1947	M-7 SA	10-23-92	Sr-90	30.8±1.7	27.6±6.0	3.0
		10-21-92	I-129	27.2±2.9	29.8±6.0	3.0
SPW-2230	BB 16005 RC	10-22-92	I-129	29.0±2.7	29.8±6.0	3.0
SPW-2231	BG 19003 WC	10-22-92	I-129	28.0±2.6	29.8±6.0	3.0

The error given is the probable counting error at 95% confidence level.

Table: Results of the analyses for iodine-129 and strontium-90 in twenty-three (23) 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
88451	BG02074SA	03/10/92	SPS-1821	<0.3	04/29	<0.01	04/25
88457	BG02007SA	03/10/92	1822	<0.1	04/29	0.02±0.01	04/25
88464	BG02078SA	03/10/92	1823	<0.1	04/30	0.03±0.01	04/25
88476	BG01100SA	03/10/92	1824	<0.1	04/30	0.05±0.01	04/25
88482	BG01008SA	03/10/92	1825	<0.2	04/30	0.01±0.01	04/25
88501	SM04095SA	03/11/92	1826	<0.3	05/01	0.14±0.02	04/24
88507	SM04003SA	03/11/92	1827	<0.1	05/01	0.04±0.01	04/24
88513	SM04028SA	03/11/92	1828	<0.2	05/01	0.03±0.01	04/24
88519	SM04026SA	03/11/92	1829	<0.3	04/14	0.03±0.01	04/24
88525	SM04024SA	03/11/92	1830	<0.2	04/13	0.10±0.01	04/24
88531	SM00001SA	03/11/92	1831	<0.1	04/13	0.15±0.02	04/24
88488	BG01005SA	03/11/92	1832	<0.2	04/13	0.03±0.01	04/25
88351	SM02044SA	03/11/92	1833	<0.1	05/29	0.02±0.01	04/25
88357	SM02004SA	03/11/92	1834	<0.1	04/14	0.03±0.01	04/25
88363	SM02032SA	03/11/92	1835	<0.2	04/23	0.02±0.01	04/25
88369	SM02021SA	03/11/92	1836	<0.2	05/04	0.03±0.01	04/25
88375	SM02019SA	03/11/92	1837	<0.2	04/24	0.05±0.01	04/30
88301	SM03012SA	03/11/92	1838	<0.1	05/29	0.02±0.01	04/30
88307	SM03015SA	03/11/92	1839	<0.1	04/27	0.05±0.01	04/30
88313	SM03009SA	03/11/92	1840	<0.2	04/28	0.03±0.01	04/30
88319	SM03001SA	03/11/92	1841	<0.2	05/04	0.07±0.01	05/02
88325	SM03014SA	03/11/92	1842	<0.1	05/05	0.02±0.01	05/02
88470	M1SA	03/10/92	1856	<0.1	05/05	0.08±0.02	05/13

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

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~~ M3[illegible]	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.

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	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.

Table 1. In-house spiked samples.

Lab Code	Sample Description	Date Analyzed	Analysis	Concentration (pCi/L/g dry		
				TIML Result	Known Activity	Expected Precision
SPS-1884A	Soil	05-10-92	Sr-90	28.8±0.3	28.0±6.0	3.0
SPS-1899A	Water	04-29-92	Sr-90	32.0±1.6	28.0±6.0	3.0
SPS-1921A	Soil	05-30-92	Sr-90	23.5±1.2	28.0±6.0	3.0
SPS-1941A	Soil	05-30-92	Sr-90	24.8±1.2	28.0±6.0	3.0
SPW-2154A	Water	05-30-92	Sr-90	26.1±1.5	28.0±6.0	3.0
SPS-1836A	Soil	06-10-92	I-129	34.2±3.4	29.8±6.0	3.0
SPS-1837A	Soil	06-10-92	I-129	24.7±2.5	29.8±6.0	3.0
SPW-2155A	Soil	06-10-92	I-129	28.3±2.5	29.8±6.0	3.0

The error given is the probable counting error at 95% confidence level.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 10/13/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
3-4049	04-0029403-012	09/30/92	11/02/92	

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.
70450	170679	BP04001WI	MS	03/16	1205		GR-A	3.9 +-0.9 E 01		10/02			3
							GR-B	8.5 +-0.6 E 01		10/02			3
74401	197870	BB19003WD	MS	04/23	0830		BE-7	L.T. 1. E 03		10/13			4
							K-40	L.T. 2. E 02		10/13			4
							MN-54	L.T. 2. E 01		10/13			4
							CO-58	L.T. 6. E 01		10/13			4
							FE-59	L.T. 3. E 02		10/13			4
							CO-60	L.T. 1. E 01		10/13			4
							ZN-65	L.T. 4. E 01		10/13			4
							ZR-95	L.T. 9. E 01		10/13			4
							RU-103	L.T. 2. E 02		10/13			4
							RU-106	L.T. 2. E 02		10/13			4
							CS-134	L.T. 1. E 01		10/13			4
							CS-137	7.36+-1.20E 01		10/13			4
							BA-140	L.T. 2. E 05		10/13			4
							CE-141	L.T. 7. E 02		10/13			4
							CE-144	L.T. 1. E 02		10/13			4
							RA-226	L.T. 3. E 02		10/13			4
							TH-228	L.T. 3. E 01		10/13			4
74403	197872	BB19003WE	MS	04/23	0830		H-3	1.3 +-0.1 E 04		10/07			5
74412	197316	BB16001AWB	MS	04/23	1350		PU-239	9.9 +-1.8 E-01		10/06			6

LAST PAGE OF REPORT

APPROVED BY J. GUENTHER 10/13/92

SEND 1 COPIES TO MC4BOS 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.

These are matrix spiked samples prepared with following activities: TI#70450: Gr-A = 37 ± 4 pCi/l and Gr-B = 74 ± 7 pCi/l
TI#74401: Cs-137 = 73 ± 7 pCi/l
TI#74403: H-3 = 1.4 ± 0.1 E 04 pCi/l
TI#74412: Pu-239 = 1.1 ± 0.2 pCi/l

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 05/01/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 5
3-0634	04-0029403-012	03/13/92	04/15/92	

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.
69552	90233 SM-04-026-0A		03/11	1515			ZR-95	L.T. 8. E-03		03/20			4
							RU-103	L.T. 8. E-03		03/20			4
							RU-106	L.T. 7. E-02		03/20			4
							I-131	L.T. 2. E-02		03/20			4
							CS-134	L.T. 8. E-03		03/20			4
							CS-137	L.T. 8. E-03		03/20			4
							BA-140	L.T. 1. E-02		03/20			4
							CE-141	L.T. 1. E-02		03/20			4
							CE-144	L.T. 5. E-02		03/20			4
							RA-226	L.T. 1. E-01		03/20			4
							TH-228	L.T. 1. E-02		03/20			4
							H-3	L.T. 9. E-02		04/07			5
							PU-238	L.T. 9. E-04		04/06			6
							PU-239	L.T. 6. E-04		04/06			6
69553	90240	MS 1A	03/11	1515			SR-90	5.3 +-0.4 E-01		04/08			3
							I-129	3.8 +-0.3 E-01		03/27			3
							BE-7	L.T. 3. E-01		04/08			4
							K-40	L.T. 6. E-02		04/08			4
							MN-54	L.T. 5. E-03		04/08			4
							CO-58	L.T. 2. E-02		04/08			4
							FE-59	L.T. 9. E-02		04/08			4
							CO-60	2.12+-0.43E-02		04/08			4
							ZN-65	L.T. 1. E-02		04/08			4
							ZR-95	L.T. 2. E-02		04/08			4
							RU-103	L.T. 8. E-02		04/08			4
							RU-106	L.T. 5. E-02		04/08			4
							CS-134	L.T. 6. E-03		04/08			4
							CS-137	1.27+-0.38E-02		04/08			4
							BA-140	L.T. 4. E 01		04/08			4
							CE-141	L.T. 2. E-01		04/08			4
							CE-144	L.T. 5. E-02		04/08			4
							RA-226	L.T. 9. E-02		04/08			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

REVISED 09/03/92
RUN DATE 05/01/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0634	04-0029403-012	03/13/92	04/15/92

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.
69553	90240	MS	03/11	1515			TH-228	L.T. 9. E-03		04/08			4
							H-3	1.5 +-0.1 E 00		04/29			5
							PU-238	L.T. 6. E-04		04/06			6
							PU-239	9.1 +-1.4 E-03		04/06			6
69554	90241	MS	03/11	1515			SR-90	3.4 +-0.2 E-01		04/08			3
							I-129	3.6 +-0.3 E-01		03/27			3
							BE-7	L.T. 3. E-01		04/09			4
							K-40	L.T. 6. E-02		04/09			4
							MN-54	L.T. 5. E-03		04/09			4
							CO-58	L.T. 2. E-02		04/09			4
							FE-59	L.T. 1. E-01		04/09			4
							CO-60	1.93+-0.39E-02		04/09			4
							ZN-65	L.T. 1. E-02		04/09			4
							ZR-95	L.T. 2. E-02		04/09			4
							RU-103	L.T. 7. E-02		04/09			4
							RU-106	L.T. 5. E-02		04/09			4
							CS-134	L.T. 6. E-03		04/09			4
							CS-137	1.29+-0.35E-02		04/09			4
							BA-140	L.T. 3. E-01		04/09			4
							CE-141	L.T. 2. E-01		04/09			4
							CE-144	L.T. 4. E-02		04/09			4
							RA-226	L.T. 8. E-02		04/09			4
							TH-228	L.T. 8. E-03		04/09			4
							H-3	1.1 +-0.1 E 00		04/29			5
							PU-238	L.T. 6. E-04		04/06			6
							PU-239	6.4 +-1.1 E-03		04/06			6
70355	90240	MSD	03/11	1515			SR-90	4.9 +-0.3 E-01		04/08			3
							I-129	3.5 +-0.3 E-01		03/28			3
							BE-7	L.T. 2. E-01		04/12			4
							K-40	L.T. 5. E-02		04/12			4
							MN-54	L.T. 4. E-03		04/12			4

The exponent for Co-60 for TI#69554 has been corrected. The original result was due to a transcription error. The calculation was performed correctly. [illegible] 9-3-92

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 05/01/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0634	04-0029403-012	03/13/92	04/15/92

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.
70355	90240	MSD	03/11	1515			CO-58	L.T. 1. E-02		04/12			4
							FE-59	L.T. 8. E-02		04/12			4
							CO-60	2.02+-0.34E-02		04/12			4
							ZN-65	L.T. 1. E-02		04/12			4
							ZR-95	L.T. 2. E-02		04/12			4
							RU-103	L.T. 6. E-02		04/12			4
							RU-106	L.T. 4. E-02		04/12			4
							CS-134	L.T. 4. E-03		04/12			4
							CS-137	8.33+-4.32E-03		04/12			4
							BA-140	L.T. 4. E 01		04/12			4
							CE-141	L.T. 2. E-01		04/12			4
							CE-144	L.T. 3. E-02		04/12			4
							RA-226	L.T. 6. E-02		04/12			4
							TH-228	L.T. 6. E-03		04/12			4
							H-3	1.5 +-0.1 E 00		04/09			5
							PU-238	L.T. 4. E-04		04/06			6
							PU-239	9.8 +-1.2 E-03		04/06			6
70356	90241	MSD	03/11	1515			SR-90	3.4 +-0.2 E-01		04/08			3
							I-129	3.6 +-0.3 E-01		03/28			3
							BE-7	L.T. 3. E-01		04/16			4
							K-40	L.T. 6. E-02		04/16			4
							MN-54	L.T. 5. E-03		04/16			4
							CO-58	L.T. 2. E-02		04/16			4
							FE-59	L.T. 9. E-02		04/16			4
							CO-60	1.87+-0.37E-02		04/16			4
							ZN-65	L.T. 1. E-02		04/16			4
							ZR-95	L.T. 2. E-02		04/16			4
							RU-103	L.T. 7. E-02		04/16			4
							RU-106	L.T. 4. E-02		04/16			4
							CS-134	L.T. 5. E-03		04/16			4
							CS-137	9.34+-3.15E-03		04/16			4
							BA-140	L.T. 5. E 01		04/16			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 05/01/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
3-0634	04-0029403-012	03/13/92	04/15/92

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.
70356	90241	MSD	03/11	1515			CE-141	L.T. 2. E-01		04/16			4
							CE-144	L.T. 4. E-02		04/16			4
							RA-226	L.T. 7. E-02		04/16			4
							TH-228	L.T. 7. E-03		04/16			4
							H-3	1.2 +-0.1 E 00		04/09			5
							PU-238	L.T. 4. E-04		04/06			6
							PU-239	6.3 +-0.8 E-03		04/06			6

LAST PAGE OF REPORT

APPROVED BY J. GUENTHER 05/01/92

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.

SPIKED ACTIVITIES ADDED FOR MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD)

(pCi/g wet)

TI#	SR-90	I-129	PU-239	H-3 (a)	CO-60 (b)	CS-137 (b)
69553/ 70355	0.58	0.40	0.0095	1.1±0.5	0.020	0.010
69554/ 70356	0.41	0.40	0.0067	1.0±0.2	0.020	0.010

(a) The first number is the spike activity added. The second number is the H-3 activity (as determined by a separate analysis) of the sample. To compare with the measured result these two numbers are to be added.

(b) Co-60 and Cs-137 are the spike isotopes for gamma ray spectroscopy. The oranges were analyzed in a 1 liter Marinelli geometry. The spike isotopes were counted in water in the same geometry.

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.
70660	90247 BG080010A		03/18	2000			ZR-95	L.T. 5. 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. 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. 7. E-03		03/28			4
							CE-144	L.T. 3. E-02		03/28			4
							RA-226	L.T. 9. E-02		03/28			4
							TH-228	L.T. 8. E-03		03/28			4
							H-3	L.T. 1. E-01		06/01			5
							PU-238	L.T. 2. E-04		04/13			6
							PU-239	L.T. 2. E-04		04/13			6
70661	90243 MS020A	MS	03/18	2000			SR-90	7.5 +-0.6 E-02		04/14			3
							I-129	2.3 +-0.2 E-01		04/10			3
							BE-7	L.T. 4. E-02		03/28			4
							K-40	1.36+-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. 1. E-02		03/28			4
							CO-60	L.T. 4. 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. 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. 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

TI#70661 was prepared with the following activities (in pCi/g):

Sr-90	1.1 E-01
I-129	2.0 E-01
H-3	1.3 E 00

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

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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	90201 BB12020T		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