

TABLE 1B
DATA QUALIFIERS

NO QUALIFIERS indicates that the data are acceptable both qualitatively and quantitatively.

U Indicates that the compound is not detected above the concentration listed.

L Indicates results which fall below the Contract Required Quantitation Limit. Results are considered estimates and usable for limited purposes.

J Results are estimated and the data are valid for limited purposes. The results are qualitatively acceptable.

N Presumptive evidence of the presence of the material. The compound identification is considered to be tentative. The data are usable for limited purposes.

R Results are rejected and data are invalid for all purposes.

TABLE 2
Sample Quantitation Limits

Case No.: LV2S38 Memo #01
 Site: Newmark
 Laboratory: Region IX, Las Vegas
 Reviewer: Barbara Gordon
 ESAT/ICF Technology, Inc.
 Date: April 17, 1992

<u>Volatile Compounds</u>	<u>Units, ug/Kg</u>	<u>Q</u>	<u>C</u>
Chloromethane	10		
Bromomethane	10		
Vinyl chloride	10		
Chloroethane	10		
Methylene chloride	10		
Acetone	10		
Carbon disulfide	10		
1,1-Dichloroethene	10		
1,1-Dichloroethane	10		
1,2-Dichloroethene (total)	10		
Chloroform	10		
1,2-Dichloroethane	10		
2-Butanone	10		
1,1,1-Trichloroethane	10		
Carbon tetrachloride	10		
Bromodichloromethane	10		
1,2-Dichloropropane	10		
1,1,2,2-Tetrachloroethane	10		
1,2-Dichloropropane	10		
trans-1,3-Dichloropropene	10		
Trichloroethene	10		
Dibromochloromethane	10		
1,1,2-Trichloroethane	10		
Benzene	10		
cis-1,3-Dichloropropene	10		
Bromoform	10		
2-Hexanone	10		
4-Methyl-2-pentanone	10		
Tetrachloroethene	10		
Toluene	10		
Chlorobenzene	10		
Ethylbenzene	10		
Styrene	10		
Total Xylenes	10		

Q - Qualifier
 C - Comment

TABLE 2
(cont'd)

To calculate the sample quantitation limits, multiply CRQL by the following factors:

<u>Sample No.</u>	<u>Volatiles</u>
YK595	1.43
YK596	1.25
YK597	1.15
YK598	1.22
VBLK1	1.00
VBLK2	1.00

TPO: [] ACTION [X] FYI

Region IX

ORGANIC REGIONAL DATA ASSESSMENT

CASE NO. LV2S38 Memo #01 LABORATORY Region IX, Las Vegas

SDG NO. YK595 DATA USER _____

SOW 3/90 (Revision 7/91) REVIEW COMPLETION DATE April 17, 1992

NO. OF SAMPLES _____ WATER _____ 4 SOIL _____ OTHER _____

REVIEWER [] ESD [X] ESAT [] OTHER, CONTRACT/CONTRACTOR _____

	VOA	BNA	PEST	OTHER
1. HOLDING TIMES	<u>0</u>	_____	_____	_____
2. GC-MS TUNE/GC PERFORMANCE	<u>0</u>	_____	_____	_____
3. INITIAL CALIBRATIONS	<u>0</u>	_____	_____	_____
4. CONTINUING CALIBRATIONS	<u>0</u>	_____	_____	_____
5. FIELD QC	<u>F</u>	_____	_____	_____
6. LABORATORY BLANKS	<u>0</u>	_____	_____	_____
7. SURROGATES	<u>0</u>	_____	_____	_____
8. MATRIX SPIKE/DUPLICATES	<u>0</u>	_____	_____	_____
9. REGIONAL QC	<u>F</u>	_____	_____	_____
10. INTERNAL STANDARDS	<u>0</u>	_____	_____	_____
11. COMPOUND IDENTIFICATION	<u>0</u>	_____	_____	_____
12. COMPOUND QUANTITATION	<u>0</u>	_____	_____	_____
13. SYSTEM PERFORMANCE	<u>0</u>	_____	_____	_____
14. OVERALL ASSESSMENT	<u>0</u>	_____	_____	_____

O - No problems or minor problems that do not affect data usability.
X - No more than about 5% of the data points are qualified as either estimated or unusable.
M - More than about 5% of the data points are qualified as estimated.
Z - More than about 5% of the data points are qualified as unusable.
F - Not applicable.

TPO ACTION ITEMS: _____

AREAS OF CONCERN: _____

160 Spear Street, Suite 1380
San Francisco, California
94105-1535

415/957-0110

URS TDMT Only TDCN: 0687
Project #: 62172 Loc: 09.71 Type: 71



ICF TECHNOLOGY INCORPORATED

MEMORANDUM

DATE: May 22, 1992

SUBJECT: Review of Analytical Data

FROM: Carolyn Studeny *CS*
ESAT Senior Organic Data Reviewer
ICF Technology, Inc.

THROUGH: Jacob Silva
Environmental Scientist
Quality Assurance Management Section
Environmental Services Branch, OPM (P-3-2)

TO: Kevin Mayer
Remedial Project Manager
South Coast Groundwater Section (H-6-4)



Attached are comments resulting from Region 9 review of the following analytical data:

SITE: Newmark
EPA SITE ID NO: J5
CASE/SAS NO.: LV2S38 Memo #17
SDG NO.: YK613

LABORATORY: Region IX, Las Vegas
ANALYSIS: RAS Semivolatiles

SAMPLE NO.: YK613 through YK617

COLLECTION DATE: April 2, 1992

REVIEWER: Ian Jensen
ESAT/ICF Technology, Inc.

TELEPHONE NUMBER: (415) 882-3187

If there are any questions, please contact the reviewer.

Attachment

cc: Brenda Bettencourt
Larry Zinky - URS/SAS

TPO: [] For Action [X] FYI

Data Validation Report

Case No.: LV2S38 Memo #17
Site: Newmark
Laboratory: Region IX, Las Vegas
Reviewer: Ian Jensen, ESAT/ICF Technology, Inc.
Date: May 22, 1992

I. Case Summary

SAMPLE INFORMATION:

BNA Sample Numbers: YK613 through YK617
Concentration and Matrix: Low Level Soil
Analysis: RAS Semivolatiles
SOW: 3/90
Collection Date: April 2, 1992
Sample Receipt Date: April 6, 1992
Extraction Date: April 9, 1992
Analysis Date: April 23, 1992

FIELD QC:

Trip Blanks (TB): None
Field Blanks (FB): None
Equipment Blanks (EB): None
Background Samples (BG): None
Field Duplicates (D1): None

METHOD BLANK AND ASSOCIATED SAMPLES:

SBLK: YK613 through YK617, YK613MS and YK613MSD

TABLES:

1A: Analytical Results with Qualifications
1B: Data Qualifiers
1C: Tentatively Identified Compounds
2: Sample Quantitation Limits of Target Compound List (TCL) Analytes

ADDITIONAL COMMENTS:

This report was prepared according to the EPA draft document, "National Functional Guidelines for Organic Data Review," December, 1990 (6/91 Revision).

II. Validation Summary

	VOA		BNA		PEST	
	Acceptable/Comment		Acceptable/Comment		Acceptable/Comment	
HOLDING TIMES	[]	[]	[Y]	[B]	[]	[]
GC/MS TUNE/GC PERFORMANCE	[]	[]	[Y]	[]	[]	[]
CALIBRATIONS	[]	[]	[Y]	[]	[]	[]
FIELD QC	[]	[]	[N/A]	[]	[]	[]
LABORATORY BLANKS	[]	[]	[Y]	[A]	[]	[]
SURROGATES	[]	[]	[Y]	[]	[]	[]
MATRIX SPIKE/DUPLICATES	[]	[]	[Y]	[]	[]	[]
INTERNAL STANDARDS	[]	[]	[Y]	[]	[]	[]
COMPOUND IDENTIFICATION	[]	[]	[Y]	[]	[]	[]
COMPOUND QUANTITATION	[]	[]	[Y]	[]	[]	[]
SYSTEM PERFORMANCE	[]	[]	[Y]	[C]	[]	[]

N/A - Not Applicable

III. Validity and Comments

- A. Due to laboratory blank contamination problems, the result reported in Table 1A for the following analyte is considered an estimate (J) and usable for limited purposes only:

- Butylbenzylphthalate in sample YK614

Although not detected in the laboratory method blank, butylbenzylphthalate has been historically found as a common laboratory contaminant. It is the opinion of the reviewer that the butylbenzylphthalate found in the sample listed above is an artifact.

The result for the sample listed above is considered as nondetected and estimated (U,J) and the detection limit is increased, according to the blank qualification rules.

- B. The SW-846 technical holding times were not exceeded for any of the samples analyzed.
- C. All other results are considered valid and usable for all purposes. All quality control criteria have been met and are considered acceptable.

ANALY AL RESULTS
TABLE 1A*

Case No.: LV2838 Memo #17
 Site: Newmark
 Lab.: Region IX, Las Vegas
 Reviewer: Ian Jensen, ESAT/ICP Technology, Inc.
 Date: May 22, 1992

Analysis Type: Low Level Soil Samples
 for RAS Semivolatiles

Concentration in ug/Kg

Sample Location Sample I.D.	YK613		YK614		YK615		YK616		YK617		Method Blank SBLK		CRQL	
	Result	Val Com	Result	Val Com	Result	Val Com								
Butylbenzylphthalate	350 U		1100 U	J A	350 U		380 U		400 U		330 U		330	
Percent Solids	96 %		92 %		94 %		87 %		83 %		-----		-----	

*The other requested analytes were analyzed for, but "Not Detected". The Sample Quantitation Limits are listed in Table 2.

Val-Validity Refer to Data Qualifiers in Table 1B.

Com.-Comments Refer to the Corresponding Section in the Narrative for each letter.

CRQL-Contract Required Quantitation Limits

NA-Not Analyzed

D1, D2, etc.-Field Duplicate Pairs

FB-Field Blank, EB-Equipment Blank, TB-Travel Blank

BG-Background Sample

TABLE 1B
DATA QUALIFIERS

NO QUALIFIERS indicates that the data are acceptable both qualitatively and quantitatively.

- U Indicates that the compound is not detected above the concentration listed.
- L Indicates results which fall below the Contract Required Quantitation Limit. Results are considered estimates and usable for limited purposes.
- J Results are estimated and the data are valid for limited purposes. The results are qualitatively acceptable.
- N Presumptive evidence of the presence of the material. The compound identification is considered to be tentative. The data are usable for limited purposes.
- R Results are rejected and data are invalid for all purposes.

TABLE 1C
Detected Tentatively Identified Compounds (TICs)

Case No.: LV2S38 Memo #17
 Site: Newmark
 Laboratory: Region IX, Las Vegas
 Reviewer: Ian Jensen
 ESAT/ICF Technology, Inc.
 Date: May 22, 1992

<u>Sample Number</u>	<u>Compound</u>	<u>Fraction</u>	<u>Retention Time, min.</u>	<u>Concentration (ug/Kg)</u>	<u>Rating* (Remarks)</u>
YK613	Unknown	BNA	11.53	200 J	
YK614	Unknown	BNA	28.25	500 J	
	Unknown	BNA	28.35	200 J	
	Unknown	BNA	28.47	400 J	
	Unknown	BNA	28.70	400 J	
	Unknown hydrocarbon	BNA	28.93	400 J	
	Unknown	BNA	29.50	2000 J	
	Unknown	BNA	29.80	1000 J	
	Unknown	BNA	30.42	3000 J	
	Unknown	BNA	30.70	1000 J	
YK615	Unknown	BNA	11.53	200 J	
YK616	Unknown	BNA	11.53	200 J	
	Unknown	BNA	25.22	90 J	
	Unknown	BNA	33.08	100 J	
YK617	Unknown	BNA	11.53	200 J	

J (estimated): Value is considered usable for limited purposes.

*Rating codes--probability that identification is correct:

A - High B - Moderate C - Low

TABLE 2
Sample Quantitation Limits

Case No.: LV2S38 Memo #17
 Site: Newmark
 Laboratory: Region IX, Las Vegas
 Reviewer: Ian Jensen
 ESAT/ICF Technology, Inc.
 Date: May 22, 1992

<u>Semivolatile Compounds</u>	<u>Units. ug/Kg</u>	<u>Q</u>	<u>C</u>
Phenol	330		
bis(2-Chloroethyl)ether	330		
2-Chlorophenol	330		
1,3-Dichlorobenzene	330		
1,4-Dichlorobenzene	330		
1,2-Dichlorobenzene	330		
2-Methylphenol	330		
2,2'-oxybis(1-Chloropropane)	330		
4-Methylphenol	330		
N-Nitroso-di-N-propylamine	330		
Hexachloroethane	330		
Nitrobenzene	330		
Isophorone	330		
2-Nitrophenol	330		
2,4-Dimethylphenol	330		
bis(2-Chloroethoxy)methane	330		
2,4-Dichlorophenol	330		
1,2,4-Trichlorobenzene	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	800		
2-Chloronaphthalene	330		
2-Nitroaniline	800		
Dimethylphthalate	330		
Acenaphthylene	330		
3-Nitroaniline	800		

Q - Qualifier
 C - Comment

TABLE 2
(cont'd)

<u>Semivolatile Compounds</u>	<u>Units. ug/Kg</u>	<u>Q</u>	<u>C</u>
Acenaphthene	330		
2,4-Dinitrophenol	800		
4-Nitrophenol	800		
Dibenzofuran	330		
2,4-Dinitrotoluene	330		
2,6-Dinitrotoluene	330		
Diethylphthalate	330		
4-Chlorophenyl-phenylether	330		
Fluorene	330		
4-Nitroaniline	800		
4,6-Dinitro-2-methylphenol	800		
N-Nitrosodiphenylamine	330		
4-Bromophenyl-phenylether	330		
Hexachlorobenzene	330		
Pentachlorophenol	800		
Phenanthrene	330		
Anthracene	330		
Carbazole	330		
Di-n-butylphthalate	330		
Fluoranthene	330		
Pyrene	330		
Butylbenzylphthalate	330		
3,3'-Dichlorobenzidine	330		
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-cd)pyrene	330		
Dibenz(a,h)anthracene	330		
Benzo(g,h,i)perylene	330		

Q - Qualifier
C - Comment

Data Validation Report

Case No.: LV2S38 Memo #7
Site: Newmark
Laboratory: Region IX, Las Vegas
Reviewer: Ian Jensen, ESAT/ICF Technology, Inc.
Date: May 15, 1992

I. Case Summary

SAMPLE INFORMATION:

BNA Sample Numbers: YK600, YK602, YK603 and YK609 through YK612
Concentration and Matrix: Low Level Soil
Analysis: RAS Semivolatiles
SOW: 3/90
Collection Date: March 12 through 26, 1992
Sample Receipt Date: March 13 through 28, 1992
Extraction Date: March 16 through 30, 1992
Analysis Date: March 27 and April 7, 1992

FIELD QC:

Trip Blanks (TB): None
Field Blanks (FB): None
Equipment Blanks (EB): None
Background Samples (BG): None
Field Duplicates (DL): None

METHOD BLANKS AND ASSOCIATED SAMPLES:

SBLK(3/16/92): YK600
SBLK(3/18/92): YK602 and YK603
SBLK(3/30/92): YK609 through YK612, YK611-MS and YK611-MSD

TABLES:

1A: Analytical Results with Qualifications
1B: Data Qualifiers
1C: Tentatively Identified Compounds
2: Sample Quantitation Limits of Target Compound List (TCL) Analytes

ADDITIONAL COMMENTS:

This report was prepared according to the EPA draft document, "National Functional Guidelines for Organic Data Review," December, 1990 (6/91 Revision).

II. Validation Summary

	VOA		BNA		PEST	
	Acceptable/Comment		Acceptable/Comment		Acceptable/Comment	
HOLDING TIMES	[]	[]	[Y]	[B]	[]	[]
GC/MS TUNE/GC PERFORMANCE	[]	[]	[Y]	[]	[]	[]
CALIBRATIONS	[]	[]	[Y]	[]	[]	[]
FIELD QC	[]	[]	[N/A]	[]	[]	[]
LABORATORY BLANKS	[]	[]	[Y]	[A]	[]	[]
SURROGATES	[]	[]	[Y]	[]	[]	[]
MATRIX SPIKE/DUPLICATES	[]	[]	[Y]	[]	[]	[]
INTERNAL STANDARDS	[]	[]	[Y]	[]	[]	[]
COMPOUND IDENTIFICATION	[]	[]	[Y]	[]	[]	[]
COMPOUND QUANTITATION	[]	[]	[Y]	[]	[]	[]
SYSTEM PERFORMANCE	[]	[]	[Y]	[C]	[]	[]

N/A - Not Applicable

III. Validity and Comments

- A. Due to laboratory blank contamination problems, the following analyte is considered an estimate (J) and usable for limited purposes only (see Table 1A):

- Di-n-butylphthalate in sample numbers YK602, YK603 and YK612

Although not detected in the laboratory method blanks, di-n-butylphthalate has been historically found as a common laboratory contaminant. It is the opinion of the reviewer that di-n-butylphthalate found in the samples listed above are artifacts.

The results for the samples listed above are considered as nondetected and estimated (U,J) according to the blank qualification rules.

- B. The SW-846 technical holding times were not exceeded for any of the samples analyzed.
- C. All other results are considered valid and usable for all purposes. All quality control criteria have been met and are considered acceptable.

TABLE 2
(cont'd)

To calculate the sample quantitation limits, multiply CRQL by the following factors:

<u>Sample No.</u>	<u>Semivolatiles</u>
YK613	1.04
YK614	1.09
YK615	1.06
YK616	1.15
YK617	1.20
Method Blank	1.00

TPO: [] ACTION [X] FYI

Region IX

ORGANIC REGIONAL DATA ASSESSMENT

CASE NO. LV2S38 Memo #17 LABORATORY Region IX, Las Vegas

SDG NO. YK613 DATA USER _____

SOW 3/90 REVIEW COMPLETION DATE May 22, 1992

NO. OF SAMPLES _____ WATER 5 SOIL _____ OTHER _____

REVIEWER [] ESD [X] ESAT [] OTHER, CONTRACT/CONTRACTOR _____

	VOA	BNA	PEST	OTHER
1. HOLDING TIMES	_____	<u>0</u>	_____	_____
2. GC-MS TUNE/GC PERFORMANCE	_____	<u>0</u>	_____	_____
3. INITIAL CALIBRATIONS	_____	<u>0</u>	_____	_____
4. CONTINUING CALIBRATIONS	_____	<u>0</u>	_____	_____
5. FIELD BLANKS	_____	<u>F</u>	_____	_____
6. LABORATORY BLANKS	_____	<u>0</u>	_____	_____
7. SURROGATES	_____	<u>0</u>	_____	_____
8. MATRIX SPIKE/DUPLICATES	_____	<u>0</u>	_____	_____
9. REGIONAL QC ("F" - not applicable)	_____	<u>F</u>	_____	_____
10. INTERNAL STANDARDS	_____	<u>0</u>	_____	_____
11. COMPOUND IDENTIFICATION	_____	<u>0</u>	_____	_____
12. COMPOUND QUANTITATION	_____	<u>0</u>	_____	_____
13. SYSTEM PERFORMANCE	_____	<u>0</u>	_____	_____
14. OVERALL ASSESSMENT	_____	<u>0</u>	_____	_____

- O - No problems or minor problems that do not affect data usability.
- X - No more than about 5% of the data points are qualified as either estimated or unusable.
- M - More than about 5% of the data points are qualified as estimated.
- Z - More than about 5% of the data points are qualified as unusable.

TPO ACTION ITEMS: _____

AREAS OF CONCERN: _____

URS TDMT Only TDCN: 0678
Project #: 62172 Loc: 09.71 Type: 71



ICF TECHNOLOGY INCORPORATED

MAY 18 1992

MEMORANDUM

DATE: May 15, 1992

SUBJECT: Review of Analytical Data

FROM: Carolyn Studeny *CS*
ESAT Senior Organic Data Reviewer
ICF Technology, Inc.

THROUGH: Jacob Silva *J. Silva*
Environmental Scientist
Quality Assurance Management Section
Environmental Services Branch, OPM (P-3-2)

TO: Kevin Mayer
Remedial Project Manager
South Coast Groundwater Section (H-6-4)

Attached are comments resulting from Region 9 review of the following analytical data:

SITE: Newmark
EPA SITE ID NO: J5
CASE/SAS NO.: LV2S38 Memo #7
SDG NO.: YK600

LABORATORY: Region IX, Las Vegas
ANALYSIS: RAS Semivolatiles

SAMPLE NO.: YK600, YK602, YK603 and YK609 through YK612

COLLECTION DATE: March 12 through 26, 1992

REVIEWER: Ian Jensen
ESAT/ICF Technology, Inc.

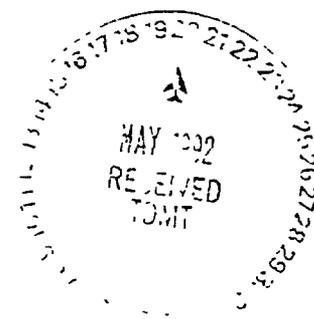
TELEPHONE NUMBER: (415) 882-3187

If there are any questions, please contact the reviewer.

Attachment

TPO: [] For Action [X] FYI

cc: Brenda Bettencourt
Larry Zinky - URS SAC



ANALYTICAL RESULTS

TABLE 1A*

Case No.: LV2838 Memo #7
 Site: Newmark
 Lab.: Region IX, Las Vegas
 Reviewer: Ian Jensen, ESAT/ICF Technology, Inc.
 Date: May 15, 1992

Analysis Type: Low Level Soil Samples
 for RAS Semivolatiles

Concentration in ug/Kg

Sample Location Sample I.D.	YK600			YK602			YK603			YK609			YK610			YK611			YK612		
	Result	Val	Com																		
Di-n-butylphthalate	350 U			400 U	J	A	380 U	J	A	390 U			390 U			390 U			400 U	J	A
Percent Solids	96 %			84 %			87 %			86 %			86 %			86 %			84 %		

Sample Location Sample I.D.	Method Blank SBLK(3/16/92)			Method Blank SBLK(3/18/92)			Method Blank SBLK(3/30/92)			CRQL											
	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Di-n-butylphthalate	330 U			330 U			330 U			330											

*The other requested analytes were analyzed for, but "Not Detected". The Sample Quantitation Limits are listed in Table 2.

Val-Validity Refer to Data Qualifiers in Table 1B.

Com.-Comments Refer to the Corresponding Section in the Narrative for each letter.

CRQL-Contract Required Quantitation Limits

NA-Not Analyzed

D1, D2, etc.-Field Duplicate Pairs

FB-Field Blank, EB-Equipment Blank, TB-Travel Blank

BG-Background Sample

TABLE 1B
DATA QUALIFIERS

NO QUALIFIERS indicates that the data are acceptable both qualitatively and quantitatively.

- U Indicates that the compound is not detected above the concentration listed.
- L Indicates results which fall below the Contract Required Quantitation Limit. Results are considered estimates and usable for limited purposes.
- J Results are estimated and the data are valid for limited purposes. The results are qualitatively acceptable.
- N Presumptive evidence of the presence of the material. The compound identification is considered to be tentative. The data are usable for limited purposes.
- R Results are rejected and data are invalid for all purposes.

TABLE 1C
Detected Tentatively Identified Compounds (TICs)

Case No.: LV2S38 Memo #7
 Site: Newmark
 Laboratory: Region IX, Las Vegas
 Reviewer: Ian Jensen
 ESAT/ICF Technology, Inc.
 Date: May 15, 1992

<u>Sample Number</u>	<u>Compound</u>	<u>Fraction</u>	<u>Retention Time, min.</u>	<u>Concentration (ug/Kg)</u>	<u>Rating^a (Remarks)</u>
YK600	Dodecanoic acid	BNA	19.82	800 J	C
YK602	Unknown	BNA	27.73	200 J	
	Unknown	BNA	31.83	300 J	
YK603	Unknown	BNA	31.82	100 J	
YK609	None found	BNA			
YK610	Unknown	BNA	24.45	200 J	
	Unknown	BNA	24.60	200 J	
	Unknown	BNA	24.67	2000 J	
K611	None found	BNA			
YK612	Unknown	BNA	31.77	200 J	

J (estimated): Value is considered usable for limited purposes.

^aRating codes--probability that identification is correct:

A - High B - Moderate C - Low

TABLE 2
Sample Quantitation Limits

Case No.: LV2S38 Memo #7
 Site: Newmark
 Laboratory: Region IX, Las Vegas
 Reviewer: Ian Jensen
 ESAT/ICF Technology, Inc.
 Date: May 15, 1992

<u>Semivolatile Compounds</u>	<u>Units. ug/Kg</u>	<u>Q</u>	<u>C</u>
Phenol	330		
bis(2-Chloroethyl)ether	330		
2-Chlorophenol	330		
1,3-Dichlorobenzene	330		
1,4-Dichlorobenzene	330		
1,2-Dichlorobenzene	330		
2-Methylphenol	330		
2,2'-oxybis(1-Chloropropane)	330		
4-Methylphenol	330		
N-Nitroso-di-N-propylamine	330		
Hexachloroethane	330		
Nitrobenzene	330		
Isophorone	330		
2-Nitrophenol	330		
2,4-Dimethylphenol	330		
bis(2-Chloroethoxy)methane	330		
2,4-Dichlorophenol	330		
1,2,4-Trichlorobenzene	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	800		
2-Chloronaphthalene	330		
2-Nitroaniline	800		
Dimethylphthalate	330		
Acenaphthylene	330		
3-Nitroaniline	800		

Q - Qualifier
 C - Comment

TABLE 2
(cont'd)

<u>Semivolatile Compounds</u>	<u>Units. ug/Kg</u>	<u>Q</u>	<u>C</u>
Acenaphthene	330		
2,4-Dinitrophenol	800		
4-Nitrophenol	800		
Dibenzofuran	330		
2,4-Dinitrotoluene	330		
2,6-Dinitrotoluene	330		
Diethylphthalate	330		
4-Chlorophenyl-phenylether	330		
Fluorene	330		
4-Nitroaniline	800		
4,6-Dinitro-2-methylphenol	800		
N-Nitrosodiphenylamine	330		
4-Bromophenyl-phenylether	330		
Hexachlorobenzene	330		
Pentachlorophenol	800		
Phenanthrene	330		
Anthracene	330		
Carbazole	330		
Di-n-butylphthalate	330		
Fluoranthene	330		
Pyrene	330		
Butylbenzylphthalate	330		
3,3'-Dichlorobenzidine	330		
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-cd)pyrene	330		
Dibenz(a,h)anthracene	330		
Benzo(g,h,i)perylene	330		

Q - Qualifier

C - Comment

TABLE 2
(cont'd)

To calculate the sample quantitation limits, multiply CRQL by the following factors:

<u>Sample No.</u>	<u>Semivolatiles</u>
YK600	1.04
YK602	1.19
YK603	1.15
YK609	1.16
YK610	1.16
YK611	1.16
YK612	1.19
Method Blanks	1.00

160 Spear Street, Suite 1380
San Francisco, California
94105-1535

415/957-0110

URS TDMT Only TDCN: 0627
Project #: 62172 Loc: 09.71 Type: 71



ICF TECHNOLOGY INCORPORATED

APR 27 1992
MEMORANDUM

DATE: April 20, 1992

SUBJECT: Review of Analytical Data

FROM: Carolyn Studeny *CS*
ESAT Senior Organic Data Reviewer
ICF Technology, Inc.

THROUGH: Jacob Silva *J. Silva*
Environmental Scientist
Quality Assurance Management Section
Environmental Services Branch, OPM (P-3-2)

TO: Kevin Mayer
Remedial Project Manager
South Coast Groundwater Section (H-6-4)



Attached are comments resulting from Region 9 review of the following analytical data:

SITE: Newmark
EPA SITE ID NO: J5
CASE/SAS NO.: LV2S38 Memo #2
SDG NO.: YK595

LABORATORY: Region IX, Las Vegas
ANALYSIS: RAS Semivolatiles

SAMPLE NO.: YK595 through YK598

COLLECTION DATE: February 26 through March 7, 1992

REVIEWER: Ian Jensen
ESAT/ICF Technology, Inc.
TELEPHONE NUMBER: (415) 882-3187

If there are any questions, please contact the reviewer.

Attachment

cc: Brenda Bettencourt
Larry Zinky, URS Sacramento }

TPO: [] For Action [X] FYI

An Average Relative Response Factor (RRF) below the 0.05 QC limit was observed for 2,4-dinitrophenol in the Initial Calibration performed on March 12, 1992. Relative Response Factors below the 0.05 QC limit were observed for 2,4-dinitrophenol and 4,6-dinitro-2-methylphenol in the Continuing Calibration performed on March 13, 1992. These deviations are not expected to affect the quality of the results, except for the analytes listed above.

Since the results for these analytes are non-detected, false negatives may exist.

- D. The SW-846 technical holding times were not exceeded for any of the samples analyzed.
- E. All other results are considered valid and usable for all purposes. All quality control criteria have been met and are considered acceptable.

ANAL' AL RESULTS

TABLE 1A*

Case No.: LV2S38 Memo #02
 Site: Newmark
 Lab.: Region IX, Las Vegas
 Reviewer: Ian Jensen, ESAT/ICF Technology, Inc.
 Date: April 20, 1992

Analysis Type: Low Level Soil Samples
 for RAS Semivolatiles

Concentration in ug/Kg

Sample I.D.	YK595			YK596			YK597			YK598			Method Blank SBLK(03/04/92)			Method Blank SBLK(03/10/92)			CRQL		
	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com									
Di-n-butyl phthalate	470	U		420	U		390	U		400	U		330	U		50	L	J A	330		
Butylbenzyl phthalate	470	U		420	U		390	U	J B	400	U		330	U		330	U		330		
bis(2-Ethylhexyl)phthalate	470	U		420	U		390	U	J B	400	U		330	U		330	U		330		
Percent Solids	70	%		80	%		87	%		82	%		---			---			---		

*The other requested analytes were analyzed for, but "Not Detected". The Sample Quantitation Limits are listed in Table 2.

Val-Validity Refer to Data Qualifiers in Table 1B.

Com.-Comments Refer to the Corresponding Section in the Narrative for each letter.

CRQL-Contract Required Quantitation Limits

NA-Not Analyzed

D1, D2, etc.-Field Duplicate Pairs

FB-Field Blank, EB-Equipment Blank, TB-Travel Blank

BG-Background Sample

TABLE 1B
DATA QUALIFIERS

NO QUALIFIERS indicates that the data are acceptable both qualitatively and quantitatively. -

- U Indicates that the compound is not detected above the concentration listed.
- L Indicates results which fall below the Contract Required Quantitation Limit. Results are considered estimates and usable for limited purposes.
- J Results are estimated and the data are valid for limited purposes. The results are qualitatively acceptable.
- N Presumptive evidence of the presence of the material. The compound identification is considered to be tentative. The data are usable for limited purposes.
- R Results are rejected and data are invalid for all purposes.

TABLE 1C
Detected Tentatively Identified Compounds (TICs)

Case No.: LV2S38 Memo #2
 Site: Newmark
 Laboratory: Region IX, Las Vegas
 Reviewer: Ian Jensen
 ESAT/ICF Technology, Inc.
 Date: April 20, 1992

<u>Sample Number</u>	<u>Compound</u>	<u>Fraction</u>	<u>Retention Time, min.</u>	<u>Concentration (ug/Kg)</u>	<u>Rating* (Remarks)</u>
YK595	None Found	BNA			
YK596	Unknown	BNA	10.30	400 J	
	Unknown	BNA	30.75	1000 J	
YK597	None Found	BNA			
YK598	Unknown	BNA	8.03	300 J	

J (estimated): Value is considered usable for limited purposes.

*Rating codes--probability that identification is correct:

A = High B = Moderate C = Low

TABLE 2
Sample Quantitation Limits

Case No.: LV2S38 Memo #2
 Site: Newmark
 Laboratory: Region IX, Las Vegas
 Reviewer: Ian Jensen
 ESAT/ICF Technology, Inc.
 Date: April 20, 1992

<u>Semivolatile Compounds</u>	<u>Units, ug/Kg</u>	<u>Q</u>	<u>C</u>
Phenol	330		
bis(2-Chloroethyl)ether	330		
2-Chlorophenol	330		
1,3-Dichlorobenzene	330		
1,4-Dichlorobenzene	330		
1,2-Dichlorobenzene	330		
2-Methylphenol	330		
2,2'-oxybis(1-Chloropropane)	330		
4-Methylphenol	330		
N-Nitroso-di-N-propylamine	330		
Hexachloroethane	330		
Nitrobenzene	330		
Isophorone	330		
2-Nitrophenol	330		
2,4-Dimethylphenol	330		
bis(2-Chloroethoxy)methane	330		
2,4-Dichlorophenol	330		
1,2,4-Trichlorobenzene	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	800		
2-Chloronaphthalene	330		
2-Nitroaniline	800		
Dimethylphthalate	330		
Acenaphthylene	330		
3-Nitroaniline	800		

Q - Qualifier
 C - Comment

TABLE 2
(cont'd)

<u>Semivolatile Compounds</u>	<u>Units, ug/Kg</u>	<u>Q</u>	<u>C</u>
Acenaphthene	330		
2,4-Dinitrophenol	800	J	C
4-Nitrophenol	800		
Dibenzofuran	330		
2,4-Dinitrotoluene	330		
2,6-Dinitrotoluene	330		
Diethylphthalate	330		
4-Chlorophenyl-phenylether	330		
Fluorene	330		
4-Nitroaniline	800		
4,6-Dinitro-2-methylphenol	800	J	C
N-Nitrosodiphenylamine	330		
4-Bromophenyl-phenylether	330		
Hexachlorobenzene	330		
Pentachlorophenol	800		
Phenanthrene	330		
Anthracene	330		
Carbazole	330		
Di-n-butylphthalate	330		
Fluoranthene	330		
Pyrene	330		
Butylbenzylphthalate	330		
3,3'-Dichlorobenzidine	330		
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-cd)pyrene	330		
Dibenz(a,h)anthracene	330		
Benzo(g,h,i)perylene	330		

Q - Qualifier
C - Comment

TABLE 2
(cont'd)

To calculate the sample quantitation limits, multiply CRQL by the following factors:

<u>Sample No.</u>	<u>Semivolatiles</u>
YK595	1.43
YK596	1.25
YK597	1.15
YK598	1.22
Method Blanks	1.00

TPO: [] ACTION [X] FYI

Region IX

ORGANIC REGIONAL DATA ASSESSMENT

CASE NO. LV2S38 Memo #2 LABORATORY Region IX, Las Vegas

SDG NO. YK595 DATA USER _____

SOW 3/90 REVIEW COMPLETION DATE April 20, 1992

NO. OF SAMPLES _____ WATER 4 SOIL _____ OTHER _____

REVIEWER [] ESD [X] ESAT [] OTHER, CONTRACT/CONTRACTOR _____

	VOA	BNA	PEST	OTHER
1. HOLDING TIMES	<u>0</u>	_____	_____	_____
2. GC-MS TUNE/GC PERFORMANCE	<u>0</u>	_____	_____	_____
3. INITIAL CALIBRATIONS	<u>X</u>	_____	_____	_____
4. CONTINUING CALIBRATIONS	<u>X</u>	_____	_____	_____
5. FIELD BLANKS	<u>F</u>	_____	_____	_____
6. LABORATORY BLANKS	<u>0</u>	_____	_____	_____
7. SURROGATES	<u>0</u>	_____	_____	_____
8. MATRIX SPIKE/DUPLICATES	<u>0</u>	_____	_____	_____
9. REGIONAL QC ("F" - not applicable)	<u>F</u>	_____	_____	_____
10. INTERNAL STANDARDS	<u>0</u>	_____	_____	_____
11. COMPOUND IDENTIFICATION	<u>0</u>	_____	_____	_____
12. COMPOUND QUANTITATION	<u>0</u>	_____	_____	_____
13. SYSTEM PERFORMANCE	<u>0</u>	_____	_____	_____
14. OVERALL ASSESSMENT	<u>X</u>	_____	_____	_____

O - No problems or minor problems that do not affect data usability.

X - No more than about 5% of the data points are qualified as either estimated or unusable.

M - More than about 5% of the data points are qualified as estimated.

Z - More than about 5% of the data points are qualified as unusable.

TPO ACTION ITEMS: _____

AREAS OF CONCERN: _____

Data Validation Report

Case No.: LV2S38 Memo #2
Site: Newmark
Laboratory: Region IX, Las Vegas
Reviewer: Ian Jensen, ESAT/ICF Technology, Inc.
Date: April 20, 1992

I. Case Summary

SAMPLE INFORMATION:

BNA Sample Numbers: YK595 through YK598
Concentration and Matrix: Low Level Soil
Analysis: RAS Semivolatiles
SOW: 3/90
Collection Date: February 26 through March 7, 1992
Sample Receipt Date: February 28 through March 10, 1992
Extraction Date: March 4 and 10, 1992
Analysis Date: March 13, 1992

FIELD QC:

Trip Blanks (TB): None
Field Blanks (FB): None
Equipment Blanks (EB): None
Background Samples (BG): None
Field Duplicates (D1): None

METHOD BLANKS AND ASSOCIATED SAMPLES:

SBLK(03/04/92): YK595 and YK596
SBLK(03/10/92): YK597, YK598, YK598MS and YK598MSD

TABLES:

1A: Analytical Results with Qualifications
1B: Data Qualifiers
1C: Tentatively Identified Compounds
2: Sample Quantitation Limits of Target Compound
List (TCL) Analytes

ADDITIONAL COMMENTS:

This report was prepared according to the EPA draft document, "National Functional Guidelines for Organic Data Review," December, 1990 (6/91 Revision).

II. Validation Summary

	VOA		BNA		PEST	
	Acceptable/	Comment	Acceptable/	Comment	Acceptable/	Comment
HOLDING TIMES	[]	[]	[Y]	[D]	[]	[]
GC/MS TUNE/GC PERFORMANCE	[]	[]	[Y]	[]	[]	[]
CALIBRATIONS	[]	[]	[N]	[C]	[]	[]
FIELD QC	[]	[]	[Y]	[]	[]	[]
LABORATORY BLANKS	[]	[]	[Y]	[B]	[]	[]
SURROGATES	[]	[]	[Y]	[]	[]	[]
MATRIX SPIKE/DUPLICATES	[]	[]	[Y]	[]	[]	[]
INTERNAL STANDARDS	[]	[]	[Y]	[]	[]	[]
COMPOUND IDENTIFICATION	[]	[]	[Y]	[]	[]	[]
COMPOUND QUANTITATION	[]	[]	[Y]	[A]	[]	[]
SYSTEM PERFORMANCE	[]	[]	[Y]	[E]	[]	[]

N/A = Not Applicable

III. Validity and Comments

A. The result reported in Table 1A for the following analyte is considered an estimate (J) and usable for limited purposes only:

- Di-n-butylphthalate in method blank SBLK(03/10/92) (denoted with an "L" qualifier)

Results below the Contract Required Quantitation Limits (CRQL) are considered to be qualitatively acceptable but quantitatively unreliable due to the uncertainty in analytical precision near the limit of detection.

B. Due to laboratory blank contamination problems, the results reported in Table 1A for the following analytes are considered as estimates (J) and usable for limited purposes only:

- Butylbenzylphthalate and bis(2-ethylhexyl)phthalate in sample number YK597

Although not detected in the laboratory method blanks, bis(2-ethylhexyl)phthalate and butylbenzylphthalate have been historically found as common laboratory contaminants. It is the opinion of the reviewer that the bis(2-ethylhexyl)phthalate and butylbenzylphthalate found in sample number YK597 are artifacts.

The results for the sample listed above are considered as non-detected and estimated (U,J) according to the blank qualification rules.

C. Due to low Relative Response Factors (RRFs) in the Initial and Continuing Calibrations, the quantitation limits for the following analytes are considered as estimates (J) and usable for limited purposes only (see Table 2):

- 2,4-Dinitrophenol and 4,6-dinitro-2-methylphenol in all samples and method blanks

CASE NARRATIVE

Laboratory: Region IX
Case Number: LV2S38
Sample Delivery Group (SDG): YK595
Contract: Superfund (CERCLA)
Analyses Performed: GC/ECD for TCL RAS Pesticides/PCBs
ESAT Document Control #: ESAT-A-9B-5830
Submitted to Region IX on 03/26/92 by Gerry Francisco, ICF/ESAT
Sample Numbers:

<u>EPA Number</u>	<u>Lab Number</u>
YK595	AA05824
YK596	AA05825
YK597	AA05895
YK598	AA05896

4 soil samples in 2 batches from the Newmark Well Field Superfund Site in California were received at the USEPA Region IX Laboratory on 02/28/92 and 03/10/92. Requested analyses were for both pesticides and PCBs according to the 02/88 revision of the USEPA CLP SOW for Organics Analysis. The samples were ultrasonicated in methylene chloride/acetone, cleaned up with GPC, transferred to hexane, cleaned up further with alumina, and analyzed by GC/ECD. No problems were encountered with the extractions.

No target pesticides/PCBs were detected in any of the samples in excess of the minimum CRQL of 50 parts per trillion (ppt).

Breakdown and linearity problems shown on Form VIII Pest-1 for the DB-5 confirmation column, first sequence, were corrected in the second through the application of a concentrated formulation of silanizing chemicals to the glass surfaces that contact the carrier gas stream. The additional peak seen in some of the initial calibration chromatograms is due to this reagent. The contaminant interfered slightly with the DBC surrogate compound in EVALA and diminished quickly thereafter; the samples were unaffected. A minor modification to our silanizing procedure should eliminate this extraneous peak from future chromatograms.

If there are any questions about the data, please call Timothy L. Vonnahme at (702) 798-2218 or Gerry Francisco at (702) 798-2227.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Jerry Vail

Jerry Vail
ESAT Team Leader
Region IX Laboratory

2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: US EPA REGION9 Contract: SUPERFUND

Code: USEPAR9 Case No.: LV2S38 SAS No.: _____ SDG No.: YK595

Level: (low/med) LOW

	EPA SAMPLE NO.	S1 (DBC) #	OTHER
01	PBLK1(03/15/92)	84	0
02	PBLK1(03/22/92)	74	0
03	YK595	86	0
04	YK596	83	0
05	YK597	84	0
06	YK598	83	0
07	YK598MS	80	0
08	YK598MSD	81	0

ADVISORY
QC LIMITS
(20-150)

S1 (DBC) = Dibutylchloroendate

Column to be used to flag recovery values

* Values outside of contract required QC limits

. D Surrogates diluted out

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SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: US EPA REGION9 Contract: SUPERFUNDLab Code: USEPAR9 Case No.: LV2S38 SAS No.: _____ SDG No.: YK595Matrix Spike - EPA Sample No.: YK598 Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	32.5	0	27.7	85	46-127
Heptachlor	32.5	0	25.4	78	35-130
Aldrin	32.5	0	26.2	81	34-132
Dieldrin	81.3	0	91.0	112	31-134
Endrin	81.3	0	87.4	108	42-139
4,4'-DDT	81.3	0	75.3	93	23-134

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
gamma-BHC (Lindane)	32.5	27.7	85	0	50	46-127
Heptachlor	32.5	24.5	75	4	31	35-130
Aldrin	32.5	24.9	77	5	43	34-132
Dieldrin	81.2	89.6	110	2	38	31-134
Endrin	81.2	89.0	110	-2	45	42-139
4,4'-DDT	81.2	72.7	90	3	50	23-134

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 6 outside limitsSpike Recovery: 0 out of 12 outside limits

COMMENTS:

4C
PESTICIDE METHOD BLANK SUMMARY

Lab Name: US EPA REGION9 Contract: SUPERFUND
 Lab Code: USEPAR9 Case No.: LV2S38 SAS No.: _____ SDG No.: YK595
 Lab Sample ID: AA05826RB Lab File ID: _____
 Matrix: (soil/water) SOIL Level: (low/med) LOW
 Date Extracted: 03/04/92 Extraction: (SepF/Cont/Sonc) SONC
 Date Analyzed (1): 03/15/92 Date Analyzed (2): 03/15/92
 Time Analyzed (1): 0913 Time Analyzed (2): 0913
 Instrument ID (1): 3400-2B Instrument ID (2): 3400-2A
 GC Column ID (1): 30M DB-608 GC Column ID (2): 30M DB-5

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	YK595	AA05824	03/15/92	03/15/92
02	YK596	AA05825	03/15/92	03/15/92

CONTENTS:

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4C
PESTICIDE METHOD BLANK SUMMARY

Lab Name: US EPA REGION9 Contract: SUPERFUND
 Lab Code: USEPAR9 Case No.: LV2S38 SAS No.: _____ SDG No.: YK595
 Lab Sample ID: AA05897RB Lab File ID: _____
 Matrix: (soil/water) SOIL Level: (low/med) LOW
 Date Extracted: 03/10/92 Extraction: (SepF/Cont/Sonc) SONC
 Date Analyzed (1): 03/22/92 Date Analyzed (2): 03/22/92
 Time Analyzed (1): 0553 Time Analyzed (2): 0553
 Instrument ID (1): 3400-2B Instrument ID (2): 3400-2A
 GC Column ID (1): 30M_DB-608 GC Column ID (2): 30M_DB-5

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	YK597	AA05895	03/22/92	03/22/92
02	YK598	AA05896	03/22/92	03/22/92
03	YK598MS	AA05896MS	03/22/92	03/22/92
04	YK598MSD	AA05896MSD	03/21/92	03/21/92

COMMENTS:

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8D
PESTICIDE EVALUATION STANDARDS SUMMARY

Lab Name: US EPA REGION9 Contract: SUPERFUND
 Lab Code: USEPAR9 Case No.: LV2S38 SAS No.: _____ SDG No.: YK595
 Instrument ID: 3400-2B GC Column ID: 30M_DB-608
 Dates of Analyses: 03/14/92 to 03/16/92

Evaluation Check for Linearity

PESTICIDE	CALIBRATION FACTOR EVAL MIX A	CALIBRATION FACTOR EVAL MIX B	CALIBRATION FACTOR EVAL MIX C	%RSD (\leq 10.0%)
Aldrin	93000000	91800000	96900000	2.8
Endrin	50300000	45800000	48000000	4.7
4,4'-DDT	41000000	41400000	45300000	5.6
DBC	37200000	33900000	34500000	5.0

(1)

(1) If > 10.0% RSD, plot a standard curve and determine the ng for each sample in that set from the curve.

Evaluation Check for 4,4'-DDT/Endrin Breakdown
(percent breakdown expressed as total degradation)

	DATE ANALYZED	TIME ANALYZED	ENDRIN	4,4'-DDT	COMBINED (2)
INITIAL					
01 EVAL MIX B	03/14/92	1401	9.3	4.9	
02 EVAL MIX B	03/15/92	1514	13.5	6.2	
03 EVAL MIX B	03/16/92	0539	17.8	5.4	

(2) See Form instructions.

8D
PESTICIDE EVALUATION STANDARDS SUMMARY

Lab Name: US EPA REGION9 Contract: SUPERFUND
 La Code: USEPAR9 Case No.: LV2S38 SAS No.: _____ SDG No.: YK595
 Instrument ID: 3400-2A GC Column ID: 30M DB-5
 Dates of Analyses: 03/14/92 to 03/16/92

Evaluation Check for Linearity

PESTICIDE	CALIBRATION FACTOR EVAL MIX A	CALIBRATION FACTOR EVAL MIX B	CALIBRATION FACTOR EVAL MIX C	%RSD (\leq 10.0%)
Aldrin	84300000	84600000	88200000	2.5
Endrin	19600000	18100000	18700000	4.0
4,4'-DDT	21100000	30200000	35200000	24.8
DBC	33500000	32700000	33100000	1.2

(1)

(1) If $> 10.0\%$ RSD, plot a standard curve and determine the ng for each sample in that set from the curve.

Evaluation Check for 4,4'-DDT/Endrin Breakdown
(percent breakdown expressed as total degradation)

	DATE ANALYZED	TIME ANALYZED	ENDRIN	4,4'-DDT	COMBINED (2)
INITIAL					
01 EVAL MIX B	03/14/92	1401	56.4	14.6	
02 EVAL MIX B	03/15/92	1514	56.5	12.7	
03 EVAL MIX B	03/16/92	0539	60.9	12.4	

(2) See Form instructions.

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8D
PESTICIDE EVALUATION STANDARDS SUMMARY

Lab Name: US EPA REGION9 Contract: SUPERFUND
 La. Code: USEPAR9 Case No.: LV2S38 SAS No.: _____ SDG No.: YK595
 Instrument ID: 3400-2B GC Column ID: 30M_DB-608
 Dates of Analyses: 03/20/92 to 03/22/92

Evaluation Check for Linearity

PESTICIDE	CALIBRATION FACTOR EVAL MIX A	CALIBRATION FACTOR EVAL MIX B	CALIBRATION FACTOR EVAL MIX C	%RSD (\leq 10.0%)
Aldrin	115000000	112000000	127000000	6.7
Endrin	61100000	55300000	59900000	5.2
4,4'-DDT	55800000	51400000	57100000	5.5
DBC	39400000	37700000	40700000	3.8

(1)

(1) If $> 10.0\%$ RSD, plot a standard curve and determine the ng for each sample in that set from the curve.

Evaluation Check for 4,4'-DDT/Endrin Breakdown
(percent breakdown expressed as total degradation)

	DATE ANALYZED	TIME ANALYZED	ENDRIN	4,4'-DDT	COMBINED (2)
INITIAL					
01 EVAL MIX B	03/21/92	0547	4.5	2.4	
02 EVAL MIX B	03/22/92	0106	6.3	2.6	

(2) See Form instructions.

SA

8D
PESTICIDE EVALUATION STANDARDS SUMMARY

Lab Name: US EPA REGION9 Contract: SUPERFUND
 Lab Code: USEPAR9 Case No.: LV2S38 SAS No.: _____ SDG No.: YK595
 Instrument ID: 3400-2A GC Column ID: 30M DB-5
 Dates of Analyses: 03/20/92 to 03/22/92

Evaluation Check for Linearity

PESTICIDE	CALIBRATION FACTOR EVAL MIX A	CALIBRATION FACTOR EVAL MIX B	CALIBRATION FACTOR EVAL MIX C	%RSD (\leq 10.0%)
Aldrin	101000000	101000000	112000000	6.1
Endrin	53800000	50100000	51800000	3.6
4,4'-DDT	56700000	55900000	58500000	2.3
DBC	32000000	36800000	39300000	10.3

(1)

(1) If > 10.0% RSD, plot a standard curve and determine the ng for each sample in that set from the curve.

Evaluation Check for 4,4'-DDT/Endrin Breakdown
(percent breakdown expressed as total degradation)

	DATE ANALYZED	TIME ANALYZED	ENDRIN	4,4'-DDT	COMBINED (2)
INITIAL					
01 EVAL MIX B	03/21/92	0547	6.6	0.9	
02 EVAL MIX B	03/22/92	0106	7.8	0.7	

(2) See Form instructions.

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8E
 PESTICIDE EVALUATION STANDARDS SUMMARY
 Evaluation of Retention Time Shift for Dibutylchloroendate

Lab. Name: US EPA REGION9 Contract: SUPERFUND
 Lab Code: USEPAR9 Case No.: LV2S38 SAS No.: _____ SDG No.: YK595
 Instrument ID: 3400-2B GC Column ID: 30M_DB-608
 Dates of Analyses: 03/14/92 to 03/16/92

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	% D	*
01	EVALA	S32B003	03/14/92	1248	0.0	
02	EVALB	S32B004	03/14/92	1401	0.0	
03	EVALC	S32B005	03/14/92	1514	0.0	
04	INDA	S32B006	03/14/92	1626	0.0	
05	INDB	S32B009	03/14/92	2002	0.0	
06	TOXAPH	S32B012	03/14/92	2338	0.0	
07	AR1660	S32B013	03/15/92	0049	0.0	
08	AR1221	S32B014	03/15/92	0201	0.0	
09	AR1232	S32B015	03/15/92	0313	0.0	
10	AR1242	S32B016	03/15/92	0424	0.0	
11	AR1248	S32B017	03/15/92	0536	0.0	
12	AR1254	S32B018	03/15/92	0648	0.0	
13	PBLK1	AA05826RB	03/15/92	0913	0.0	
14	ZZZZZ	NEW_INDA	03/15/92	1025	0.0	
15	ZZZZZ	NEW_INDB	03/15/92	1137	0.0	
16	EVALB	S32B025	03/15/92	1514	0.0	
17	YK595	AA05824	03/15/92	2116	0.0	
18	INDA	S32B031	03/15/92	2228	0.0	
19	YK596	AA05825	03/15/92	2340	0.0	
20	EVALB	S32B037	03/16/92	0539	0.0	
21	INDB	S32B043	03/16/92	1256	-0.1	
22	INDA	S32B047	03/16/92	1823	0.0	

* Values outside of QC limits (2.0% for packed columns,
 0.3% for capillary columns)

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8E
 PESTICIDE EVALUATION STANDARDS SUMMARY
 Evaluation of Retention Time Shift for Dibutylchlorendate

Lab Name: US EPA REGION9 Contract: SUPERFUND
 Lab Code: USEPAR9 Case No.: LV2S38 SAS No.: _____ SDG No.: YK595
 Instrument ID: 3400-2A GC Column ID: 30M DB-5
 Dates of Analyses: 03/14/92 to 03/16/92

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	% D	*
01	EVALA	S32A003	03/14/92	1248	0.0	
02	EVALB	S32A004	03/14/92	1401	0.0	
03	EVALC	S32A005	03/14/92	1514	-0.1	
04	INDA	S32A006	03/14/92	1626	-0.1	
05	INDB	S32A009	03/14/92	2002	0.1	
06	TOXAPH	S32A012	03/14/92	2338	0.1	
07	AR1660	S32A013	03/15/92	0049	0.1	
08	AR1221	S32A014	03/15/92	0201	0.1	
09	AR1232	S32A015	03/15/92	0313	0.1	
10	AR1242	S32A016	03/15/92	0424	0.1	
11	AR1248	S32A017	03/15/92	0536	0.1	
12	AR1254	S32A018	03/15/92	0648	0.1	
13	PBLK1	AA05826RB	03/15/92	0913	0.0	
14	ZZZZZ	NEW_INDA	03/15/92	1025	-0.1	
15	ZZZZZ	NEW_INDB	03/15/92	1137	-0.1	
16	EVALB	S32A025	03/15/92	1514	0.0	
17	YK595	AA05824	03/15/92	2116	0.0	
18	INDA	S32A031	03/15/92	2228	0.0	
19	YK596	AA05825	03/15/92	2340	0.0	
20	EVALB	S32A037	03/16/92	0539	0.0	
21	INDB	S32A043	03/16/92	1256	-0.3	
22	INDA	S32A047	03/16/92	1823	-0.2	

* Values outside of QC limits (2.0% for packed columns,
 0.3% for capillary columns)

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8E
 PESTICIDE EVALUATION STANDARDS SUMMARY
 Evaluation of Retention Time Shift for Dibutylchlorodate

Lab Name: US EPA REGION9 Contract: SUPERFUND
 Lab Code: USEPAR9 Case No.: LV2S38 SAS No.: _____ SDG No.: YK595
 Instrument ID: 3400-2B GC Column ID: 30M DB-608
 Dates of Analyses: 03/20/92 to 03/22/92

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	% D	*
01	EVALA	S38B009	03/21/92	0435	0.0	
02	EVALB	S38B010	03/21/92	0547	0.0	
03	EVALC	S38B011	03/21/92	0659	0.0	
04	INDA	S38B012	03/21/92	0811	0.0	
05	INDB	S38B013	03/21/92	0924	0.0	
06	TOXAPH	S38B014	03/21/92	1037	-0.1	
07	AR1660	S38B015	03/21/92	1149	-0.1	
08	AR1221	S38B016	03/21/92	1302	-0.1	
09	AR1232	S38B017	03/21/92	1414	-0.1	
10	AR1242	S38B018	03/21/92	1527	-0.1	
11	AR1248	S38B019	03/21/92	1639	-0.1	
12	AR1254	S38B020	03/21/92	1752	-0.1	
13	YK598MSD	AA05896MSD	03/21/92	1905	0.0	
14	EVALB	S38B026	03/22/92	0106	0.0	
15	YK597	AA05895	03/22/92	0218	0.0	
16	YK598	AA05896	03/22/92	0330	0.0	
17	YK598MS	AA05896MS	03/22/92	0442	0.0	
18	PBLK1	AA05897RB	03/22/92	0553	0.0	
19	INDA	S38B032	03/22/92	0817	0.0	
20	INDB	S38B044	03/22/92	2247	0.0	

* Values outside of QC limits (2.0% for packed columns,
 0.3% for capillary columns)

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 PESTICIDE EVALUATION STANDARDS SUMMARY
 Evaluation of Retention Time Shift for Dibutylchlorodate

Lab Name: US EPA REGION9 Contract: SUPERFUND
 Lab Code: USEPAR9 Case No.: LV2S38 SAS No.: _____ SDG No.: YK595
 Instrument ID: 3400-2A GC Column ID: 30M DB-5
 Dates of Analyses: 03/20/92 to 03/22/92

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	% D	*
01	EVALA	S38A009	03/21/92	0435	0.0	
02	EVALB	S38A010	03/21/92	0547	0.0	
03	EVALC	S38A011	03/21/92	0659	0.0	
04	INDA	S38A012	03/21/92	0811	0.0	
05	INDB	S38A013	03/21/92	0924	-0.1	
06	TOXAPH	S38A014	03/21/92	1037	-0.1	
07	AR1660	S38A015	03/21/92	1149	-0.1	
08	AR1221	S38A016	03/21/92	1302	-0.1	
09	AR1232	S38A017	03/21/92	1414	-0.1	
10	AR1242	S38A018	03/21/92	1527	-0.1	
11	AR1248	S38A019	03/21/92	1639	-0.1	
12	AR1254	S38A020	03/21/92	1752	-0.1	
13	YK598MSD	AA05896MSD	03/21/92	1905	-0.1	
14	EVALB	S38A026	03/22/92	0106	0.0	
15	YK597	AA05895	03/22/92	0218	0.0	
16	YK598	AA05896	03/22/92	0330	0.0	
17	YK598MS	AA05896MS	03/22/92	0442	0.0	
18	PBLK1	AA05897RB	03/22/92	0553	0.0	
19	INDA	S38A032	03/22/92	0817	0.0	
20	INDB	S38A044	03/22/92	2247	0.0	

* Values outside of QC limits (2.0% for packed columns,
 0.3% for capillary columns)

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PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: US EPA REGION9

Contract: SUPERFUND

La. Code: USEPAR9 Case No.: LV2S38

SAS No.: _____

SDG No.: YK595

Instrument ID: 3400-2B

GC Column ID: 30M_DB-608

DATE(S) QF FROM: <u>03/14/92</u>	DATE OF ANALYSIS <u>03/15/92</u>
ANALYSIS TO: <u>03/15/92</u>	TIME OF ANALYSIS <u>2228</u>
TIME(S) OF FROM: <u>1626</u>	EPA SAMPLE NO.
ANALYSIS TO: <u>0648</u>	(STANDARD) <u>INDA</u>

COMPOUND	RT	RT WINDOW		CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
		FROM	TO					
alpha-BHC	32.16	32.08	32.24	107000000				
beta-BHC	34.44	34.36	34.52	36500000				
delta-BHC	36.07	35.99	36.15	103000000				
gamma-BHC	34.04	33.96	34.12	93000000	34.04	100000000	Y	-7.5
Heptachlor	35.47	35.39	35.55	85600000	35.46	95200000	Y	-11.2
Aldrin	36.90	36.82	36.98	88800000	36.90	95700000	Y	-7.8
Hept. epoxide	39.38	39.30	39.46	79800000	39.37	85800000	Y	-7.5
Endosulfan I	40.84	40.76	40.92	72700000	40.84	77700000	Y	-6.9
Dieldrin	42.12	42.04	42.20	74800000	42.12	80300000	Y	-7.4
4,4'-DDE	41.85	41.77	41.93	73600000				
Endrin	43.62	43.54	43.70	54400000				
Endosulfan II	44.36	44.28	44.44	65200000	44.36	69600000	Y	-6.7
4'-DDD	44.11	44.03	44.19	57600000				
Endo. sulfate	46.18	46.10	46.26	54000000				
4,4'-DDT	45.31	45.23	45.39	60600000	45.30	66300000	Y	-9.4
Methoxychlor	48.81	48.73	48.89	28400000	48.80	31100000	Y	-9.5
Endrin ketone	49.34	49.26	49.42	66200000				
a. Chlordane	40.74	40.66	40.82	73900000				
g. Chlordane	40.06	39.98	40.14	79000000				
Toxaphene	47.93	47.85	48.01	2100000				
Aroclor-1016	35.62	35.54	35.70	4880000				
Aroclor-1221	32.00	31.92	32.08	1400000				
Aroclor-1232	35.63	35.55	35.71	2120000				
Aroclor-1242	35.62	35.54	35.70	4000000				
Aroclor-1248	39.75	39.67	39.83	2680000				
Aroclor-1254	42.48	42.40	42.56	3780000				
Aroclor-1260	43.52	43.44	43.60	3110000				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRDL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D.
Confirmation of such analytes is based primarily on pattern recognition.

GO

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PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: US EPA REGION9 Contract: SUPERFUND

La. Code: USEPAR9 Case No.: LV2S38 SAS No.: _____ SDG No.: YK595

Instrument ID: 3400-2A GC Column ID: 30M DB-5

DATE(S) OF ANALYSIS FROM: <u>03/14/92</u>	DATE OF ANALYSIS <u>03/15/92</u>
TO: <u>03/15/92</u>	TIME OF ANALYSIS <u>2228</u>
TIME(S) OF ANALYSIS FROM: <u>1626</u>	EPA SAMPLE NO. _____
TO: <u>0648</u>	(STANDARD) <u>INDA</u>

COMPOUND	RT	RT WINDOW		CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
		FROM	TO					
alpha-BHC	33.84	33.67	34.01	92900000				
beta-BHC	34.97	34.80	35.14	32000000				
delta-BHC	36.29	36.12	36.46	91800000				
gamma-BHC	35.40	35.23	35.57	88200000	35.35	88500000	N	-0.3
Heptachlor	38.66	38.49	38.83	78900000	38.62	82500000	N	-4.6
Aldrin	40.14	39.97	40.31	80700000	40.15	81600000	N	-1.1
Hept. epoxide	41.83	41.66	42.00	71200000	41.78	72300000	N	-1.5
Endosulfan I	43.37	43.20	43.54	66000000	43.33	67400000	N	-2.1
Dieldrin	44.44	44.27	44.61	63600000	44.39	65300000	N	-2.7
4,4'-DDE	44.05	43.88	44.22	65500000				
Endrin	45.28	45.11	45.45	20400000				
Endosulfan II	45.66	45.49	45.83	64100000	45.62	63600000	N	0.8
4,4'-DDD	45.73	45.56	45.90	49000000				
Endo. sulfate	47.26	47.09	47.43	50600000				
4,4'-DDT	47.30	47.13	47.47	52200000	47.25	55400000	N	-6.1
Methoxychlor	49.50	49.33	49.67	22500000	49.45	23100000	N	-2.7
Endrin ketone	49.26	49.09	49.43	73100000				
a. Chlordane	43.38	43.21	43.55	64500000				
g. Chlordane	42.74	42.57	42.91	69900000				
Toxaphene	47.76	47.59	47.93	1310000				
Aroclor-1016	37.80	37.63	37.97	4430000				
Aroclor-1221	33.81	33.64	33.98	1380000				
Aroclor-1232	37.81	37.64	37.98	1890000				
Aroclor-1242	37.80	37.63	37.97	3590000				
Aroclor-1248	41.98	41.81	42.15	2440000				
Aroclor-1254	44.43	44.26	44.60	3200000				
Aroclor-1260	50.30	50.13	50.47	5660000				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRDL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

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PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: US EPA REGION9 Contract: SUPERFUND

L. Code: USEPAR9 Case No.: LV2S38 SAS No.: _____ SDG No.: YK595

Instrument ID: 3400-2B GC Column ID: 30M DB-608

DATE(S) OF FROM: <u>03/14/92</u>	DATE OF ANALYSIS <u>03/16/92</u>
ANALYSIS TO: <u>03/15/92</u>	TIME OF ANALYSIS <u>1256</u>
TIME(S) OF FROM: <u>1626</u>	EPA SAMPLE NO.
ANALYSIS TO: <u>0648</u>	(STANDARD) <u>INDB</u>

COMPOUND	RT	RT WINDOW		CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
		FROM	TO					
alpha-BHC	32.16	32.08	32.24	107000000	32.22	122000000	Y	-14.0
beta-BHC	34.44	34.36	34.52	36500000	34.50	40600000	Y	-11.2
delta-BHC	36.07	35.99	36.15	103000000	36.13	118000000	Y	-14.6
gamma-BHC	34.04	33.96	34.12	93000000				
Heptachlor	35.47	35.39	35.55	85600000				
Aldrin	36.90	36.82	36.98	88800000	36.96	102000000	Y	-14.9
Hept. epoxide	39.38	39.30	39.46	79800000				
Endosulfan I	40.84	40.76	40.92	72700000				
Dieldrin	42.12	42.04	42.20	74800000				
4,4'-DDE	41.85	41.77	41.93	73600000	41.91	85500000	Y	-16.2
Endrin	43.62	43.54	43.70	54400000	43.68	61000000	Y	-12.1
Endosulfan II	44.36	44.28	44.44	65200000				
'-DDD	44.11	44.03	44.19	57600000	44.18	66300000	Y	-15.1
Endo. sulfate	46.18	46.10	46.26	54000000	46.25	60400000	Y	-11.8
4,4'-DDT	45.31	45.23	45.39	60600000				
Methoxychlor	48.81	48.73	48.89	28400000				
Endrin ketone	49.34	49.26	49.42	66200000	49.42	75100000	Y	-13.4
a. Chlordane	40.74	40.66	40.82	73900000	40.80	84600000	Y	-14.5
g. Chlordane	40.06	39.98	40.14	79000000	40.12	90600000	Y	-14.7
Toxaphene	47.93	47.85	48.01	2100000				
Aroclor-1016	35.62	35.54	35.70	4880000				
Aroclor-1221	32.00	31.92	32.08	1400000				
Aroclor-1232	35.63	35.55	35.71	2120000				
Aroclor-1242	35.62	35.54	35.70	4000000				
Aroclor-1248	39.75	39.67	39.83	2680000				
Aroclor-1254	42.48	42.40	42.56	3780000				
Aroclor-1260	43.52	43.44	43.60	3110000				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRDL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

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PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: US EPA REGION9 Contract: SUPERFUND

Lab Code: USEPAR9 Case No.: LV2S38 SAS No.: _____ SDG No.: YK595

Instrument ID: 3400-2A GC Column ID: 30M_DB-5

DATE(S) OF ANALYSIS FROM: <u>03/14/92</u>	DATE OF ANALYSIS <u>03/16/92</u>
TO: <u>03/15/92</u>	TIME OF ANALYSIS <u>1256</u>
TIME(S) OF ANALYSIS FROM: <u>1626</u>	EPA SAMPLE NO. _____
TO: <u>0648</u>	(STANDARD) <u>INDB</u>

COMPOUND	RT	RT WINDOW		CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
		FROM	TO					
alpha-BHC	33.84	33.67	34.01	92900000	33.96	99800000	N	-7.4
beta-BHC	34.97	34.80	35.14	32000000	35.09	33900000	N	-5.9
delta-BHC	36.29	36.12	36.46	91800000	36.42	96800000	N	-5.4
gamma-BHC	35.40	35.23	35.57	88200000				
Heptachlor	38.66	38.49	38.83	78900000				
Aldrin	40.14	39.97	40.31	80700000	40.26	85800000	N	-6.3
Hept. epoxide	41.83	41.66	42.00	71200000				
Endosulfan I	43.37	43.20	43.54	66000000				
Dieldrin	44.44	44.27	44.61	63600000				
4,4'-DDE	44.05	43.88	44.22	65500000	44.18	70500000	N	-7.6
Endrin	45.28	45.11	45.45	20400000	45.42	28900000	N	-41.7
Endosulfan II	45.66	45.49	45.83	64100000				
4,4'-DDD	45.73	45.56	45.90	49000000	45.86	52200000	N	-6.5
Endo. sulfate	47.26	47.09	47.43	50600000	47.40	52900000	N	-4.5
4,4'-DDT	47.30	47.13	47.47	52200000				
Methoxychlor	49.50	49.33	49.67	22500000				
Endrin ketone	49.26	49.09	49.43	73100000	49.42	73000000	N	0.1
a. Chlordane	43.38	43.21	43.55	64500000	43.51	69100000	N	-7.1
g. Chlordane	42.74	42.57	42.91	69900000	42.88	74900000	N	-7.2
Toxaphene	47.76	47.59	47.93	1310000				
Aroclor-1016	37.80	37.63	37.97	4430000				
Aroclor-1221	33.81	33.64	33.98	1380000				
Aroclor-1232	37.81	37.64	37.98	1890000				
Aroclor-1242	37.80	37.63	37.97	3590000				
Aroclor-1248	41.98	41.81	42.15	2440000				
Aroclor-1254	44.43	44.26	44.60	3200000				
Aroclor-1260	50.30	50.13	50.47	5660000				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRDL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

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PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: US EPA REGION9 Contract: SUPERFUND

Lab Code: USEPAR9 Case No.: LV2S38 SAS No.: _____ SDG No.: YK595

Instrument ID: 3400-2B GC Column ID: 30M DB-608

DATE(S) OF FROM: <u>03/14/92</u>	DATE OF ANALYSIS <u>03/16/92</u>
ANALYSIS TO: <u>03/15/92</u>	TIME OF ANALYSIS <u>1823</u>
TIME(S) OF FROM: <u>1626</u>	EPA SAMPLE NO.
ANALYSIS TO: <u>0648</u>	(STANDARD) <u>INDA</u>

COMPOUND	RT	RT WINDOW		CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
		FROM	TO					
alpha-BHC	32.16	32.08	32.24	107000000				
beta-BHC	34.44	34.36	34.52	365000000				
delta-BHC	36.07	35.99	36.15	103000000				
gamma-BHC	34.04	33.96	34.12	930000000	34.06	105000000	Y	-12.9
Heptachlor	35.47	35.39	35.55	856000000	35.49	976000000	Y	-14.0
Aldrin	36.90	36.82	36.98	888000000	36.92	1000000000	Y	-12.6
Hept. epoxide	39.38	39.30	39.46	798000000	39.40	894000000	Y	-12.0
Endosulfan I	40.84	40.76	40.92	727000000	40.87	811000000	Y	-11.6
Dieldrin	42.12	42.04	42.20	748000000	42.15	841000000	Y	-12.4
4,4'-DDE	41.85	41.77	41.93	736000000				
Endrin	43.62	43.54	43.70	544000000				
Endosulfan II	44.36	44.28	44.44	652000000	44.39	731000000	Y	-12.1
4 -DDD	44.11	44.03	44.19	576000000				
Enao. sulfate	46.18	46.10	46.26	540000000				
4,4'-DDT	45.31	45.23	45.39	606000000	45.33	687000000	Y	-13.4
Methoxychlor	48.81	48.73	48.89	284000000	48.83	328000000	Y	-15.5
Endrin ketone	49.34	49.26	49.42	662000000				
a. Chlordane	40.74	40.66	40.82	739000000				
g. Chlordane	40.06	39.98	40.14	790000000				
Toxaphene	47.93	47.85	48.01	210000000				
Aroclor-1016	35.62	35.54	35.70	488000000				
Aroclor-1221	32.00	31.92	32.08	140000000				
Aroclor-1232	35.63	35.55	35.71	212000000				
Aroclor-1242	35.62	35.54	35.70	400000000				
Aroclor-1248	39.75	39.67	39.83	268000000				
Aroclor-1254	42.48	42.40	42.56	378000000				
Aroclor-1260	43.52	43.44	43.60	311000000				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRDL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

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PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: US EPA REGION9 Contract: SUPERFUND

Lab Code: USEPAR9 Case No.: LV2S38 SAS No.: _____ SDG No.: YK595

Instrument ID: 3400-2A GC Column ID: 30M DB-5

DATE(S) OF FROM: <u>03/14/92</u>	DATE OF ANALYSIS <u>03/16/92</u>
ANALYSIS TO: <u>03/15/92</u>	TIME OF ANALYSIS <u>1823</u>
TIME(S) OF FROM: <u>1626</u>	EPA SAMPLE NO.
ANALYSIS TO: <u>0648</u>	(STANDARD) <u>INDA</u>

COMPOUND	RT	RT WINDOW		CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
		FROM	TO					
alpha-BHC	33.84	33.67	34.01	92900000				
beta-BHC	34.97	34.80	35.14	32000000				
delta-BHC	36.29	36.12	36.46	91800000				
gamma-BHC	35.40	35.23	35.57	88200000	35.41	92200000	N	-4.5
Heptachlor	38.66	38.49	38.83	78900000	38.68	85600000	N	-8.5
Aldrin	40.14	39.97	40.31	80700000	40.22	84600000	N	-4.8
Hept. epoxide	41.83	41.66	42.00	71200000	41.85	75000000	N	-5.3
Endosulfan I	43.37	43.20	43.54	66000000	43.39	69000000	N	-4.5
Dieldrin	44.44	44.27	44.61	63600000	44.46	67400000	N	-6.0
4,4'-DDE	44.05	43.88	44.22	65500000				
Endrin	45.28	45.11	45.45	20400000				
Endosulfan II	45.66	45.49	45.83	64100000	45.68	65000000	N	-1.4
4,4'-DDD	45.73	45.56	45.90	49000000				
Endo. sulfate	47.26	47.09	47.43	50600000				
4,4'-DDT	47.30	47.13	47.47	52200000	47.32	58000000	N	-11.1
Methoxychlor	49.50	49.33	49.67	22500000	49.52	24600000	N	-9.3
Endrin ketone	49.26	49.09	49.43	73100000				
a. Chlordane	43.38	43.21	43.55	64500000				
g. Chlordane	42.74	42.57	42.91	69900000				
Toxaphene	47.76	47.59	47.93	13100000				
Aroclor-1016	37.80	37.63	37.97	44300000				
Aroclor-1221	33.81	33.64	33.98	13800000				
Aroclor-1232	37.81	37.64	37.98	18900000				
Aroclor-1242	37.80	37.63	37.97	35900000				
Aroclor-1248	41.98	41.81	42.15	24400000				
Aroclor-1254	44.43	44.26	44.60	32000000				
Aroclor-1260	50.30	50.13	50.47	56600000				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRDL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

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PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: US EPA REGION9 Contract: SUPERFUND

Lab Code: USEPAR9 Case No.: LV2S38 SAS No.: _____ SDG No.: YK595

Instrument ID: 3400-2B GC Column ID: 30M DB-608

DATE(S) OF FROM: <u>03/21/92</u>	DATE OF ANALYSIS <u>03/22/92</u>
ANALYSIS TO: <u>03/21/92</u>	TIME OF ANALYSIS <u>0817</u>
TIME(S) OF FROM: <u>0811</u>	EPA SAMPLE NO.
ANALYSIS TO: <u>1752</u>	(STANDARD) <u>INDA</u>

COMPOUND	RT	RT WINDOW		CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
		FROM	TO					
alpha-BHC	32.05	31.97	32.13	126000000				
beta-BHC	34.32	34.24	34.40	413000000				
delta-BHC	35.95	35.87	36.03	124000000				
gamma-BHC	33.91	33.83	33.99	112000000	33.91	117000000	Y	-4.5
Heptachlor	35.34	35.26	35.42	959000000	35.34	103000000	Y	-7.4
Aldrin	36.77	36.69	36.85	107000000	36.77	114000000	Y	-6.5
Hept. epoxide	39.24	39.16	39.32	924000000	39.24	979000000	Y	-6.0
Endosulfan I	40.71	40.63	40.79	843000000	40.70	893000000	Y	-5.9
Dieldrin	41.98	41.90	42.06	863000000	41.99	899000000	Y	-4.2
4,4'-DDE	41.72	41.64	41.80	889000000				
Endrin	43.50	43.42	43.58	658000000				
Endosulfan II	44.22	44.14	44.30	759000000	44.23	804000000	Y	-5.9
4,4'-DDD	43.98	43.90	44.06	668000000				
Endo. sulfate	46.06	45.98	46.14	748000000				
4,4'-DDT	45.17	45.09	45.25	719000000	45.17	763000000	Y	-6.1
Methoxychlor	48.67	48.59	48.75	339000000	48.66	359000000	Y	-5.9
Endrin ketone	49.21	49.13	49.29	744000000				
a. Chlordane	40.62	40.54	40.70	854000000				
g. Chlordane	39.94	39.86	40.02	918000000				
Toxaphene	47.83	47.75	47.91	2360000				
Aroclor-1016	35.50	35.42	35.58	5850000				
Aroclor-1221	31.88	31.80	31.96	1650000				
Aroclor-1232	35.50	35.42	35.58	2560000				
Aroclor-1242	35.51	35.43	35.59	4830000				
Aroclor-1248	39.63	39.55	39.71	3150000				
Aroclor-1254	42.36	42.28	42.44	4390000				
Aroclor-1260	43.40	43.32	43.48	3640000				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
%D must be less than or equal to 15.0% for quantitation, and less than or equal to 20.0% for confirmation.

Note: Determining that no compounds were found above the CRDL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

For multicomponent analytes, the single largest peak that is characteristic of the component should be used to establish retention time and %D. Identification of such analytes is based primarily on pattern recognition.

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PESTICIDE/PCB STANDARDS SUMMARY

Lab Name: US EPA REGION9

Contract: SUPERFUND

La Code: USEPAR9 Case No.: LV2S38

SAS No.: _____

SDG No.: YK595

Instrument ID: 3400-2A

GC Column ID: 30M_DB-5

DATE(S) OF ANALYSIS FROM: <u>03/21/92</u>	DATE OF ANALYSIS <u>03/22/92</u>
TO: <u>03/21/92</u>	TIME OF ANALYSIS <u>0817</u>
TIME(S) OF ANALYSIS FROM: <u>0811</u>	EPA SAMPLE NO. _____
TO: <u>1752</u>	(STANDARD) <u>INDA</u>

COMPOUND	RT	RT WINDOW		CALIBRATION FACTOR	RT	CALIBRATION FACTOR	QNT Y/N	%D
		FROM	TO					
alpha-BHC	33.62	33.54	33.70	12000000				
beta-BHC	34.73	34.65	34.81	39600000				
delta-BHC	36.06	35.98	36.14	115000000				
gamma-BHC	35.10	35.02	35.18	111000000	35.10	107000000	N	3.6
Heptachlor	38.38	38.30	38.46	105000000	38.37	101000000	N	3.8
Aldrin	39.91	39.83	39.99	95500000	39.90	92600000	N	3.0
Hept. epoxide	41.54	41.46	41.62	84400000	41.53	82600000	N	2.1
Endosulfan I	43.08	43.00	43.16	78000000	43.07	76300000	N	2.2
Dieldrin	44.14	44.06	44.22	77600000	44.14	75800000	N	2.3
4,4'-DDE	43.84	43.76	43.92	77800000				
Endrin	45.06	44.98	45.14	55700000				
Endosulfan II	45.35	45.27	45.43	72100000	45.35	69600000	N	3.5
'-DDD	45.51	45.43	45.59	60500000				
Endo. sulfate	47.04	46.96	47.12	61600000				
4,4'-DDT	47.02	46.94	47.10	73200000	47.01	71600000	N	2.2
Methoxychlor	49.19	49.11	49.27	34200000	49.18	33800000	N	1.2
Endrin ketone	49.02	48.94	49.10	72600000				
a. Chlordane	43.16	43.08	43.24	76100000				
g. Chlordane	42.52	42.44	42.60	82300000				
Toxaphene	47.58	47.50	47.66	1780000				
Aroclor-1016	37.61	37.53	37.69	5240000				
Aroclor-1221	33.60	33.52	33.68	1710000				
Aroclor-1232	37.60	37.52	37.68	2310000				
Aroclor-1242	37.61	37.53	37.69	4310000				
Aroclor-1248	41.76	41.68	41.84	2740000				
Aroclor-1254	44.22	44.14	44.30	3650000				
Aroclor-1260	47.26	47.18	47.34	3690000				

Under QNT Y/N: enter Y if quantitation was performed, N if not performed.
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Note: Determining that no compounds were found above the CRDL is a form of quantitation, and therefore at least one column must meet the 15.0% criteria.

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