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Section 3

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PCB Aroclor and Chlorinated Pesticide Results

QA/QC Narratives

Tree Swallow Tissue and QC Results

US EPA ARCHIVE DOCUMENT



SDMS DocID 48769

QA/QC Narratives

PCB Aroclor/Pesticide QA/QC Summary **QC Batch 01-380 – Tree Swallow Nestlings**

PROJECT: USACE NAE Delivery Order #01 Centredale
PARAMETER: PCB Aroclor and Chlorinated Pesticides
LABORATORY: Battelle, Duxbury, MA
MATRIX: Tree swallow nestlings
SAMPLE CUSTODY: Tree swallow nestlings were collected by USGS between May 30 and June 12, 2001. Samples were received for processing at Battelle MSL on July 11, 2001. Swallow nestling samples were freeze-dried, homogenized and a sub-sample shipped to Battelle Duxbury for PCB Aroclor and chlorinated pesticides analyses.

Freeze-dried, nestling homogenates were received at Battelle Duxbury on August 31, 2001. Samples arrived after normal business hours and were not logged into the laboratory until September 3, 2001. The cooler was at room temperature upon login. Battelle does not believe that the samples were compromised since they had already been freeze-dried.

QA/QC MEASUREMENT PERFORMANCE CRITERIA:

	Reference Method	Blank	Surrogate Recovery	LCS/MS Recovery	SRM % Diff.	MS/MSD Replicate Relative Precision	Achieved RL (ng/g wet)	Project Goals * (ng/g wet)
PCB/PEST	L-9	<QL ^a	40-125% Recovery	40-120% Recovery ^b	≤30% PD ^c	≤30% RPD ^{b,d}	Aroclor: 28.3 to 87.4	Aroclor: 0.48 to 17
	Battelle SOP 5-128						Pest: 2.26 to 6.99	Pest: 0.0565 to 6020
							Technical Chlordane: 283 to 873	Technical Chlordane: NA
							Toxaphene: 73.7 to 175	Toxaphene: 0.873

^a Or associated samples >10× blank values.

^b For 90% of analytes; Analyte concentration in MS/MSD must be >5× background to be used for data quality assessment

^c From a range of certified values; using surrogate-corrected data; certified values in SRM must be >3× the detection limit to be used for data quality assessment

^d Sample duplicate – detected values must be >3× the detection limit to be used for data quality assessment

* Project detection limit goals vary by analyte – see Worksheet #9b in the project QAPP (Battelle, 2001) for detection limit goals by analyte.

METHOD: Freeze-dried nestling samples were prepared and analyzed for PCB Aroclor and chlorinated pesticides following methods described in Battelle's Quality Assurance Project Plan (Battelle, 2001). Briefly,

Sample Preparation – Tissues were extracted and cleaned following procedures in Battelle SOP 5-190, which are methods developed by Battelle in support of NOAA's National Status and Trends Mussel Watch Project (Peven and Uhler, 1993a). Approximately 2-g of freeze-dried nestling homogenate was weighed into a Teflon extraction jar, spiked with the appropriate surrogate internal standard (SIS) compounds, combined with 75 mL DCM and sodium sulfate, macerated with a Tissuemizer and centrifuged. The extract was decanted into an Erlenmeyer flask. This process was

PCB Aroclor/Pesticide QA/QC Summary
QC Batch 01-380 – Tree Swallow Nestlings

METHOD
(cont):

repeated a second time using an additional 75 mL DCM. A third extraction was performed on the sample using 50 mL DCM and shaking on a shaker table for approximately 30 minutes. The sample was then centrifuged a third time and the solvent decanted into the Erlenmeyer with the rest of the sample extract. The combined extract was dried over sodium sulfate and concentrated by Kuderna-Danish (KD) technique to approximately 10 mL. A measured aliquot of extract was removed for lipid determination (above). The remaining extract was concentrated to approximately 2 to 3 mLs and processed through an alumina column (40 g F20 2% deactivated) and HPLC cleanup.

The post-HPLC extract was concentrated under nitrogen, solvent exchanged into hexane to approximately 1 mL, and spiked with recovery internal standard (RIS) compounds. The extract was transferred to GC/ECD for chlorinated pesticides /PCB Aroclors analysis.

GC/ECD Analysis – PCB Aroclors and chlorinated pesticides were analyzed by GC/ECD (Hewlett Packard 5890 Series 2 GC) using a 60-m DB5 column and hydrogen as the carrier gas. A minimum of a five-point calibration curve was used for pesticide analysis ranging from approximately 0.008 to 0.3 µg/mL. A single point calibration at approximately 2 µg/mL was used for Technical Chlordane and PCB Aroclors analysis. And a single point calibration at approximately 4 µg/mL was used for Toxaphene analysis

GC/ECD Calibration Issues – One continuing calibration analyzed with the sequence failed for several pesticides. The failure was due to low argon/methane pressure and affected the continuing calibration and instrument control check only. No samples were affected. The next continuing calibration met criteria for all compounds except Endrin (30% PD from initial).

Estimated Pesticide Data – Most samples contained high levels of Aroclor 1254 and Technical Chlordane, resulting in co-elution with some chlorinated pesticides. Co-elution between high-level contaminants (e.g., PCB Aroclor) and relatively lower level contaminants such as chlorinated pesticides can lead to less accurate peak integrations for the affected pesticides. As a result, chlorinated pesticide results for the nestling samples should be considered estimates.

Total Aroclor – was determined as the most predominant Aroclor formulation, or mixture of two major Aroclor formulations. The predominant Aroclor formulation (>80%) was Aroclor 1254, with relatively lower levels of Aroclor 1268.

**HOLDING
TIMES:**

Samples were prepared for analysis in one analytical batch. Samples were extracted within 5 months of collection and analyzed within 20 days of extraction.

<u>Batch</u>	<u>Extraction Date</u>	<u>Analysis Date</u>
01-380	10/16/2001	11/2 – 5/2001

PCB Aroclor/Pesticide QA/QC Summary
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**DETECTION
LIMITS:**

PCB Aroclor and chlorinated pesticide results are reported relative to the sample-specific reporting limits (also referred to as QL in the QAPP) for that compound. The sample-specific RL is based on the low calibration standard and adjusted for sample specific processing factors and volumes, as follow:

$$RL = (\text{Concentration in Low Std.} \times \text{final extract volume} \times \text{dilution factors}) / \text{Sample size}$$

Where,

Concentration in Low Std. = approximately 0.008 µg/mL for pesticides and PCB congeners; 1 µg/mL Technical Chlordane; 0.1 µg/mL for Aroclor; and 0.2 µg/mL for Toxaphene**

Final Extract Volume = 1,100 µL

Dilution Factor = approximately 4 to 5

Sample Size = approximately 30-g wet

** Note that a mid-level, single point calibration was analyzed for Technical Chlordane (2 µg/mL), PCB Aroclor (2 µg/mL) and Toxaphene (4 µg/mL). However, the RL was based on the low range of the calibration curve, which was not analyzed with the samples. A full curve (for Technical Chlordane and Aroclor) had been analyzed within 11-weeks of the samples, thereby demonstrating that the instrument is sensitive at a lower level. Calculation of RLs is consistent with the methods specified in the QAPP (see Worksheet #9a).

Achieved RLs for most pesticides either met or were below the project detection limit goals. Achieved RLs for PCB Aroclor and Toxaphene did not meet the project detection limit goals. As noted in the QAPP, the project detection limit goals are provided for perspective rather than as a requirement for the analytical methods. If detection limits cannot be achieved, this will be addressed in the uncertainty discussions in the risk assessment.

BLANKS:

One laboratory procedural blank (PB) was prepared with the analytical batch. The blank was analyzed to ensure that the sample extraction and analysis methods were free of contamination.

01-380 -- PCB Aroclors/chlorinated pesticides were undetected in the laboratory blank.

**LABORATORY
CONTROL
SAMPLE**

Two laboratory control samples (LCS) were prepared with the analytical batch. One LCS sample was fortified with PCB congeners and chlorinated pesticides. The other LCS was fortified with PCB Aroclor 1016 and 1260. The percent recoveries of PCB Aroclor and chlorinated pesticides were calculated to measure data quality in terms of accuracy.

01-380 -- With the single exception of Endrin aldehyde, PCB Aroclor and chlorinated pesticides were recovered within the control limits specified in QAPP.

Recoveries ranged from:

	<u>Pesticides</u>	<u>PCB Aroclor</u>
ZL76LCS#1	39 -- 79%	not spiked
ZL77LCS#2	not spiked	60 -- 72%

Correction Action -- Endrin aldehyde was recovered at 39%, just below the lower limit of the measurement performance criteria (MPC). Endrin aldehyde was likely lost on the alumina cleanup column. Sample data for Endrin aldehyde should be considered biased low.

PCB Aroclor/Pesticide QA/QC Summary
QC Batch 01-380 – Tree Swallow Nestlings

MATRIX SPIKES:

A matrix spike (MS)/matrix spike duplicate (MSD) sample was prepared with the analytical batch. Chlorinated pesticides and PCB congeners were fortified into the MS/MSD, not Aroclor. Aroclor was only fortified into the LCS sample in accordance with the QAPP.

The percent recoveries of pesticides in the MS/MSD were calculated to measure data quality in terms of accuracy. The relative percent difference (RPD) between percent recoveries of pesticides in the MS and MSD were calculated to measure data quality in terms of precision.

01-380 – 15 out of 20 pesticides were recovered within the QC limits specified in the QAPP.

Recoveries ranged from:

	<u>Pesticides</u>
ZL78MS	4 – 71%
ZL79MSD	5 – 69%
RPDs	0.8 – 28.0%

QC exceedences included:

- Endosulfan I – 4% and 5% in the MS and MSD, respectively
- Endosulfan II – 36% and 27% in the MS and MSD, respectively
- Endrin aldehyde – 26% and 27% in the MS and MSD respectively
- Alpha-BHC – 40% in the MSD

Correction Action – The under-recovery of Endosulfan I appear to be sample related, and associated with a matrix interference that is causing low response of Endosulfan I in the MS/MSD. The chromatograms and peak integrations for Endosulfan II were reviewed, but no cause for the under-recovery was apparent. The under-recovery of Endrin aldehyde may be attributed to losses on the alumina cleanup column. Sample data should be biased low for these three pesticides. QC exceedences are flagged on the final report tables.

**PCB Aroclor/Pesticide QA/QC Summary
QC Batch 01-380 – Tree Swallow Nestlings**

SURROGATES: Four PCB surrogate compounds were added to each sample prior to extraction, including PCBs 14, 34, 104, and 112. Recovery data for PCBs 34 and 112 were calculated to measure data quality in terms of accuracy (extraction efficiency). Recovery data for the other two PCB surrogate compounds are not reported, as these are used as alternative surrogates in cases of interferences.

01-380 – PCB112 was under-recovered in all but 4 study samples; PCB34 was recovered within the QC limits in all but 5 study samples.

Correction Action – The under-recovery of PCB112 appears to be sample related and associated with interferences from co-eluting PCBs and/or Technical Chlordane. Note that all laboratory QC samples (e.g. blank, LCS, SRM) had acceptable recoveries of both PCB surrogates.

Three samples had low recoveries of both PCB surrogate compounds, including:

- A-TS-35-N (Battelle ID W6488)
- A-TS-57-N (Battelle ID W6492)
- G-TS-02-N (Battelle ID W6493)
- L-TS-63-N (Battelle ID W6499)

These 4 samples will be re-extracted provide sufficient material is available for re-extraction. *Samples were re-extracted with batch 01-672. Re-extract results reported. DML 6/19/02.*

REPLICATES: A laboratory duplicate was prepared with the batch. The RPD between laboratory replicate analyses for PCB Aroclor and chlorinated pesticides was calculated to measure data quality in terms of precision.

01-380 – RPDs were within the control limits specified in the QAPP for all target compounds except 4,4'-DDT (30.5% RPD).

RPDs ranged from:

	<u>Pesticides</u>	<u>PCB Aroclor</u>
Duplicate	17.3 – 30.5%	22.4 – 23.5%

SRM: A standard reference material (SRM, NIST 1974a) was prepared with each analytical batch. The percent difference (PD) between detected concentrations and certified values (lower and upper range) was calculated to measure data quality in terms of accuracy. *Note* – if the detected value fell within the certified range, then the PD is 0.0%.

01-380 – All 5 certified pesticides had PD values < 30%.

PDs ranged from:

	<u>Certified Pesticides</u>
ZL80SRM	0.0 – 28.5%

REFERENCES: Battelle 2001. *Centredale Manor Restoration Project Superfund Site Baseline Risk Assessment, Initial Project Planning and Support*. Tasks 19-22 QAPP prepared under contract to USACE NAE. Delivery Order #59. May 23, 2001. 509pp + apps.

PCB Aroclor/Pesticide QA/QC Summary **QC Batch 01-588 -- Tree Swallow Eggs**

PROJECT: USACE NAE Delivery Order #01 Centredale
PARAMETER: PCB Aroclor and Chlorinated Pesticides
LABORATORY: Battelle, Duxbury, MA
MATRIX: Tree swallow eggs
SAMPLE CUSTODY: Tree swallow egg samples were collected by USGS between May 21 and June 22, 2001. Swallow eggs were received at Battelle Duxbury on July 11, 2001. Samples were received in good condition and the cooler temperature upon receipt was -10.7 °C.

QA/QC MEASUREMENT PERFORMANCE CRITERIA:

PCB/ PEST	Reference Method	Blank	Surrogate Recovery	LCS/MS Recovery	SRM % Diff.	MS/MSD Replicate Relative Precision	Achieved RL (ng/g wet)	Project Goals * (ng/g wet)
	L-9 Battelle SOP 5-128	<QL ^a	40-125% Recovery	40-120% Recovery ^b	≤30% PD ^c	≤30% RPD ^{b,d}	Aroclor: 98.3 to 151	Aroclor: 0.48 to 17
							Pest: 2.90 to 12.0	Pest: 0.0565 to 6020
							Technical Chlordane: 983 to 1505	Technical Chlordane: NA
							Toxaphene: 197 to 301	Toxaphene: 0.873

^a Or associated samples >10× blank values.

^b For 90% of analytes: Analyte concentration in MS/MSD must be >5× background to be used for data quality assessment

^c From a range of certified values; using surrogate corrected data; certified values in SRM must be >3× the detection limit to be used for data quality assessment

^d Sample duplicate – detected values must be >3× the detection limit to be used for data quality assessment

* Project detection limit goals vary by analyte – see Worksheet #9b in the project QAPP (Battelle, 2001) for detection limit goals by analyte.

METHOD: Swallow egg samples were prepared and analyzed for PCB Aroclor and chlorinated pesticides following methods described in Battelle's Quality Assurance Project Plan (Battelle, 2001). Briefly,

Sample Preparation -- Tissues were extracted and cleaned following procedures in Battelle SOP 5-190, which are methods developed by Battelle in support of NOAA's National Status and Trends Mussel Watch Project (Peven and Uhler, 1993a). Approximately 2-g of well mixed, wet swallow egg was weighed into a Teflon extraction jar, spiked with the appropriate surrogate internal standard (SIS) compounds, combined with 75 mL DCM and sodium sulfate, macerated with a Tissuermixer and centrifuged. The extract was decanted into an Erlenmeyer flask. This process was repeated a second time using an additional 75 mL DCM. A third extraction was performed on the sample using 50 mL DCM and shaking on a shaker table for approximately 30 minutes. The sample was then centrifuged a third time and the solvent decanted into the Erlenmeyer with the rest of the sample extract. The combined extract was dried over sodium sulfate and concentrated by Kuderna-Danish (KD) technique to approximately 10 mL. A measured aliquot of extract was removed for

PCB Aroclor/Pesticide QA/QC Summary
QC Batch 01-568 – Tree Swallow Eggs

METHOD
(cont):

lipid determination (above). The remaining extract was concentrated to approximately 2 to 3 mLs and processed through an alumina column (40 g F20 2% deactivated) and HPLC cleanup.

The post-HPLC extract was concentrated under nitrogen, solvent exchanged into hexane to approximately 1 mL, and spiked with recovery internal standard (RIS) compounds. The extract was transferred to GC/ECD for chlorinated pesticides /PCB Aroclors analysis.

GC/ECD Analysis – PCB Aroclors and chlorinated pesticides were analyzed by GC/ECD (Hewlett Packard 5890 Series 2 GC) using a 60-m DB5 column and hydrogen as the carrier gas. A minimum of a five-point calibration curve was used for pesticide analysis ranging from approximately 0.008 to 0.3 µg/mL. A single point calibration at approximately 2 µg/mL was used for Technical Chlordane and PCB Aroclors analysis. And a single point calibration at approximately 4 µg/mL was used for Toxaphene analysis.

GC/ECD Calibration Issues – alpha-BHC over-responded slightly in the last continuing calibration analyzed with the sequence, resulting in a 33% PD from the initial calibration. Alpha-BHC was undetected in the study samples and the calibration exceedence is not expected to impact data quality as a result.

Estimated Pesticide Data – Most samples contained high levels of Aroclor 1254, resulting in co-elution with some chlorinated pesticides. Co-elution between high-level contaminants (e.g., PCB Aroclor) and relatively lower level contaminants such as chlorinated pesticides can lead to less accurate peak integrations for the affected pesticides. As a result, chlorinated pesticide results for the nestling samples should be considered estimates.

Total Aroclor – was determined as the most predominant Aroclor formulation, or mixture of two major Aroclor formulations. The predominant Aroclor formulation (>75%) was Aroclor 1254, with relatively lower levels of Aroclor 1268.

HOLDING
TIMES:

Samples were prepared for analysis in one analytical batch. Samples were extracted within 5 months of collection and analyzed within 22 days of extraction.

<u>Batch</u>	<u>Extraction Date</u>	<u>Analysis Date</u>
01-568	10/23/2001	11/12 ~ 14/2001

PCB Aroclor/Pesticide QA/QC Summary
QC Batch 01-568 – Tree Swallow Eggs

**DETECTION
LIMITS:**

PCB Aroclor and chlorinated pesticide results are reported relative to the sample-specific reporting limits (also referred to as QL in the QAPP) for that compound. The sample-specific RL is based on the low calibration standard and adjusted for sample specific processing factors and volumes, as follow:

$$RL = (\text{Concentration in Low Std.} \times \text{final extract volume} \times \text{dilution factors}) / \text{Sample size}$$

Where,

Concentration in Low Std. = approximately 0.008 µg/mL for pesticides and PCB congeners; 1 µg/mL Technical Chlordane; 0.1 µg/mL for Aroclor; and 0.2 µg/mL for Toxaphene**

Final Extract Volume = 1,100 µL

Dilution Factor = approximately 1.7

Sample Size = approximately 2-g wet (and 5.06 g for SRM)

**** Note that a mid-level, single point calibration was analyzed for Technical Chlordane (2 µg/mL), PCB Aroclor (2 µg/mL) and Toxaphene (4 µg/mL). However, the RL was based on the low range of the calibration curve, which was not analyzed with the samples. A full curve (for Technical Chlordane and Aroclor) had been analyzed within 12-weeks of the samples, thereby demonstrating that the instrument is sensitive at a lower level. Calculation of RLs is consistent with the methods specified in the QAPP (see Worksheet #9a).**

Achieved RLs for PCB Aroclor, Toxaphene, and approximately half the target pesticides did not meet the project detection limit goals, in part due to the small sample size available for extraction (2-g vs. 30-g wet target). As noted in the QAPP, the project detection limit goals are provided for perspective rather than as a requirement for the analytical methods. If detection limits cannot be achieved, this will be addressed in the uncertainty discussions in the risk assessment.

BLANKS:

One laboratory procedural blank (PB) was prepared with the analytical batch. The blank was analyzed to ensure that the sample extraction and analysis methods were free of contamination.

01-568 – PCB Aroclors/chlorinated pesticides were undetected in the laboratory blank.

**LABORATORY
CONTROL
SAMPLE**

Two laboratory control samples (LCS) were prepared with the analytical batch. One LCS sample was fortified with PCB congeners and chlorinated pesticides. The other LCS was fortified with PCB Aroclor 1016 and 1260. The percent recoveries of PCB Aroclor and chlorinated pesticides were calculated to measure data quality in terms of accuracy.

01-568 – With the single exception of Endrin aldehyde, PCB Aroclor and chlorinated pesticides were recovered within the control limits specified in QAPP.

Recoveries ranged from:

	Pesticides	PCB Aroclor
ZM06LCS#1	38 – 80%	not spiked
ZM07LCS#2	not spiked	59 – 82%

Correction Action – Endrin aldehyde was recovered at 39%, just below the lower limit of the measurement performance criteria (MPC). Endrin aldehyde was likely lost on the alumina cleanup column. Sample data for Endrin aldehyde should be considered biased low.

PCB Aroclor/Pesticide QA/QC Summary
QC Batch 01-568 – Tree Swallow Eggs

**MATRIX
SPIKES:**

A matrix spike (MS) sample was prepared with the analytical batch. A matrix spike duplicate (MSD) was not prepared with the batch due to limited sample material available. Chlorinated pesticides and PCB congeners were fortified into the MS, not Aroclor. Aroclor was only fortified into the LCS sample in accordance with the QAPP.

The percent recoveries of pesticides in the MS were calculated to measure data quality in terms of accuracy.

01-568 – With the single exception of 4,4'-DDE, chlorinated pesticides were recovered within the control limits specified in QAPP.

Recoveries ranged from:

	<u>Pesticides</u>
ZM08MS	48 – 362%*

* Recoveries ranged from 48 – 105% excluding 4,4'-DDE.

Correction Action – The concentration of 4,4'-DDE in the MS was not above five times background levels, and as a result should not be used to assess data quality.

SURROGATES:

Four PCB surrogate compounds were added to each sample prior to extraction, including PCBs 14, 34, 104, and 112. Recovery data for PCBs 34 and 112 were calculated to measure data quality in terms of accuracy (extraction efficiency). Recovery data for the other two PCB surrogate compounds are not reported, as these are used as alternative surrogates in cases of interferences.

01-568 – All PCB surrogates were recovered within the control limits specified in the QAPP for all study samples. Note that PCB surrogates were not recovered in the procedural blank prepared with the batch.

Correction Action – It appears that the blank was not fortified with surrogate compounds prior to extraction, as both PCB surrogates were recovered at 0% in the blank. The blank did not contain any target pesticides or PCBs, however this is unrelated to the failure to fortify the blank with surrogate compounds. Blank contamination for PCB/pesticide analysis is rare. As a result, Battelle believes that the target pesticide and PCB data for the blank is not impacted by the low PCB surrogate recoveries and the data are considered usable. No further corrective action was taken.

REPLICATES:

A laboratory duplicate was prepared with the batch. The RPD between laboratory replicate analyses for PCB Aroclor and chlorinated pesticides was calculated to measure data quality in terms of precision.

01-568 – With the exception of Aroclor 1254, RPDs were within the control limits specified in the QAPP for all target compounds detected at levels above 3× the RL.

RPDs ranged from:

	<u>Pesticides</u>	<u>PCB Aroclor</u>
Duplicate	21.7 – 73.8%	7.9 – 31.5%

Correction Action – The RPD between concentrations of Aroclor 1254 in the laboratory duplicates just exceeded the RPD criteria (31.5% vs. 30% goal). The chromatograms were reviewed and a reason for the elevated RPD was not evident, beyond sample non-homogeneity.

PCB Aroclor/Pesticide QA/QC Summary
QC Batch 01-568 – Tree Swallow Eggs

SRM: A standard reference material (SRM, NIST 1974a) was prepared with each analytical batch. The percent difference (PD) between detected concentrations and certified values (lower and upper range) was calculated to measure data quality in terms of accuracy. *Note* – if the detected value fell within the certified range, then the PD is 0.0%.

01-568 – All 5 certified pesticides had PD values < 30%.

PDs ranged from:

	<u>Certified Pesticides</u>
ZM09SRM	0.0 – 29.2%

REFERENCES: Battelle 2001. *Centredale Manor Restoration Project Superfund Site Baseline Risk Assessment, Initial Project Planning and Support*. Tasks 19-22 QAPP prepared under contract to USACE NAE. Delivery Order #59. May 23, 2001. 509pp + apps.

Tree Swallow Tissue and QC Results

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	ICL
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	4,4'-DDD	50-29-3		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	4,4'-DDE	72-54-8		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	4,4'-DDT	72-55-9		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Aldrin	309-00-2		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	alpha-BHC	319-84-6		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	alpha-Chlordane	5103-71-9		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	beta-BHC	319-85-7		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	delta-BHC	319-86-6		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Dieldrin	60-57-1		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Endosulfan I	959-98-8		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Endosulfan II	33213-65-9		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Endosulfan Sulfate	1031-07-8		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Endrin	72-20-8		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Endrin Aldehyde	7421-93-4		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Endrin Ketone	53484-70-5		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	gamma-BHC	58-89-9		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	gamma-Chlordane	5103-74-2		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Hepachlor	76-44-8		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Hepachlor Epoxide	1024-57-3		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Methoxychlor	72-43-5		BATD SOP 5 126	2.93	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Technical chlordane	57-74-9		BATD SOP 5 126	365.97	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Toxaphene	8001-35-2		BATD SOP 5 126	73.19	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Aroclor-1016	12674-11-2		BATD SOP 5 126	36.60	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Aroclor-1221	1104-28-2		BATD SOP 5 126	36.60	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Aroclor-1232	11141-16-6		BATD SOP 5 126	36.60	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Aroclor-1242	53489-21-8		BATD SOP 5 126	36.60	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Aroclor-1248	12672-29-8		BATD SOP 5 126	36.60	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Aroclor-1254	11097-60-1		BATD SOP 5 126	36.60	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Aroclor-1260	11098-82-5		BATD SOP 5 126	36.60	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Aroclor-1268	11100-14-4		BATD SOP 5 126	36.60	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Total Aroclor			BATD SOP 5 126	282.77	ng/g - wet wt	U	
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Ch3(34)	37690-68-5		BATD SOP 5 126	84	%RECOVERY		
INA	ZL75PB	IBATD	P BLANK	INA	10/16/01	11/02/01		01-380	Ch5(112)	74472-36-9		BATD SOP 5 126	72	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	4,4'-DDD	50-29-3		BATD SOP 5 126	73	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	4,4'-DDE	72-54-8		BATD SOP 5 126	74	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	4,4'-DDT	72-55-9		BATD SOP 5 126	77	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	Aldrin	309-00-2		BATD SOP 5 126	66	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	alpha-BHC	319-84-6		BATD SOP 5 126	63	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	alpha-Chlordane	5103-71-9		BATD SOP 5 126	70	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	beta-BHC	319-85-7		BATD SOP 5 126	66	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	delta-BHC	319-86-6		BATD SOP 5 126	67	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	Dieldrin	60-57-1		BATD SOP 5 126	72	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	Endosulfan I	959-98-8		BATD SOP 5 126	52	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	Endosulfan II	33213-65-9		BATD SOP 5 126	51	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	Endosulfan Sulfate	1031-07-8		BATD SOP 5 126	72	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	Endrin	72-20-8		BATD SOP 5 126	72	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	Endrin Aldehyde	7421-93-4		BATD SOP 5 126	39	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	Endrin Ketone	53484-70-5		BATD SOP 5 126	73	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	gamma-BHC	58-89-9		BATD SOP 5 126	65	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	gamma-Chlordane	5103-74-2		BATD SOP 5 126	78	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	Hepachlor	76-44-8		BATD SOP 5 126	64	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	Hepachlor Epoxide	1024-57-3		BATD SOP 5 126	57	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	Methoxychlor	72-43-5		BATD SOP 5 126	79	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	Technical chlordane	57-74-9		BATD SOP 5 126	NA	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	Toxaphene	8001-35-2		BATD SOP 5 126	NA	%RECOVERY		
INA	ZL76LCS#1	IBATD	LCS	INA	10/16/01	11/02/01		01-380	Aroclor-1016	12674-11-2		BATD SOP 5 126	NA	%RECOVERY		

[illegible]

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	IDL
NA	ZL76LCS#1	BATD	LCS	NA	10/16/01	11/02/01		01-380	Aroclor-1221	1104-28-2		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL76LCS#1	BATD	LCS	NA	10/16/01	11/02/01		01-380	Aroclor-1232	11141-16-5		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL76LCS#1	BATD	LCS	NA	10/16/01	11/02/01		01-380	Aroclor-1242	53469-21-9		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL76LCS#1	BATD	LCS	NA	10/16/01	11/02/01		01-380	Aroclor-1248	12672-29-6		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL76LCS#1	BATD	LCS	NA	10/16/01	11/02/01		01-380	Aroclor-1254	11097-69-1		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL76LCS#1	BATD	LCS	NA	10/16/01	11/02/01		01-380	Aroclor-1260	11096-82-5		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL76LCS#1	BATD	LCS	NA	10/16/01	11/02/01		01-380	Aroclor-1268	11100-14-4		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL76LCS#1	BATD	LCS	NA	10/16/01	11/02/01		01-380	Total Aroclor			BATD SOP 5 128	NA	%RECOVERY		
NA	ZL76LCS#1	BATD	LCS	NA	10/16/01	11/02/01		01-380	Cl3(34)	37680-68-5		BATD SOP 5 128	61	%RECOVERY		
NA	ZL76LCS#1	BATD	LCS	NA	10/16/01	11/02/01		01-380	Cl5(112)	74472-36-9		BATD SOP 5 128	72	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	4,4'-DDD	50-29-3		BATD SOP 5 128	53	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	4,4'-DDE	72-54-6		BATD SOP 5 128	71	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	4,4'-DDT	72-55-9		BATD SOP 5 128	59	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Aldrin	309-00-2		BATD SOP 5 128	48	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	alpha-BHC	319-84-6		BATD SOP 5 128	41	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	alpha-Chlordane	5103-71-9		BATD SOP 5 128	46	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	beta-BHC	319-85-7		BATD SOP 5 128	47	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	delta-BHC	319-86-8		BATD SOP 5 128	45	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Dieldrin	60-57-1		BATD SOP 5 128	52	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Endosulfan I	959-98-8		BATD SOP 5 128	4	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Endosulfan II	33213-65-9		BATD SOP 5 128	36	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Endosulfan Sulfate	1001-07-8		BATD SOP 5 128	69	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Endrin	72-20-6		BATD SOP 5 128	52	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Endrin Aldehyde	7421-93-4		BATD SOP 5 128	26	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Endrin Ketone	53494-70-5		BATD SOP 5 128	57	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	gamma-BHC	58-89-9		BATD SOP 5 128	48	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	gamma-Chlordane	5103-74-2		BATD SOP 5 128	55	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Heptachlor	76-44-8		BATD SOP 5 128	45	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	36	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Methoxychlor	72-43-5		BATD SOP 5 128	51	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Technical chlordane	57-74-8		BATD SOP 5 128	NA	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Toxaphene	8001-35-2		BATD SOP 5 128	NA	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Aroclor-1016	12674-11-2		BATD SOP 5 128	NA	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Aroclor-1221	1104-28-2		BATD SOP 5 128	NA	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Aroclor-1232	11141-16-5		BATD SOP 5 128	NA	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Aroclor-1242	53469-21-9		BATD SOP 5 128	NA	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Aroclor-1248	12672-29-6		BATD SOP 5 128	NA	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Aroclor-1254	11097-69-1		BATD SOP 5 128	NA	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Aroclor-1260	11096-82-5		BATD SOP 5 128	NA	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Aroclor-1268	11100-14-4		BATD SOP 5 128	NA	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Total Aroclor			BATD SOP 5 128	NA	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Cl3(34)	37680-68-5		BATD SOP 5 128	49	%RECOVERY		
ILTS-70-N	ZL76MS	BATD	MS	06/07/01	10/16/01	11/02/01		01-380	Cl5(112)	74472-36-9		BATD SOP 5 128	34	%RECOVERY		
ILTS-70-N	ZL76MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-380	4,4'-DDD	50-29-3		BATD SOP 5 128	53	%RECOVERY		
ILTS-70-N	ZL76MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-380	4,4'-DDE	72-54-6		BATD SOP 5 128	64	%RECOVERY		
ILTS-70-N	ZL76MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-380	4,4'-DDT	72-55-9		BATD SOP 5 128	61	%RECOVERY		
ILTS-70-N	ZL76MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-380	Aldrin	309-00-2		BATD SOP 5 128	48	%RECOVERY		
ILTS-70-N	ZL76MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-380	alpha-BHC	319-84-6		BATD SOP 5 128	40	%RECOVERY		
ILTS-70-N	ZL76MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-380	alpha-Chlordane	5103-71-9		BATD SOP 5 128	44	%RECOVERY		
ILTS-70-N	ZL76MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-380	beta-BHC	319-85-7		BATD SOP 5 128	47	%RECOVERY		
ILTS-70-N	ZL76MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-380	delta-BHC	319-86-8		BATD SOP 5 128	42	%RECOVERY		
ILTS-70-N	ZL76MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-380	Dieldrin	60-57-1		BATD SOP 5 128	51	%RECOVERY		
ILTS-70-N	ZL76MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-380	Endosulfan I	959-98-8		BATD SOP 5 128	5	%RECOVERY		
ILTS-70-N	ZL76MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-380	Endosulfan II	33213-65-9		BATD SOP 5 128	27	%RECOVERY		
ILTS-70-N	ZL76MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-380	Endosulfan Sulfate	1001-07-8		BATD SOP 5 128	69	%RECOVERY		
ILTS-70-N	ZL76MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-380	Endrin	72-20-6		BATD SOP 5 128	54	%RECOVERY		

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	IDL
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	Endrin Aldehyde	7421-93-4		BATD SOP 5 128	27	%RECOVERY	&	
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	Endrin Ketone	53494-70-5		BATD SOP 5 128	53	%RECOVERY		
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	gamma-BHC	58-89-9		BATD SOP 5 128	50	%RECOVERY		
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	gamma-Chlordane	5103-74-2		BATD SOP 5 128	53	%RECOVERY		
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	Heptachlor	78-44-8		BATD SOP 5 128	44	%RECOVERY		
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	36	%RECOVERY		
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	Methoxychlor	72-43-6		BATD SOP 5 128	47	%RECOVERY		
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	Technical chlordane	57-74-9		BATD SOP 5 128	NA	%RECOVERY		
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	Toxaphene	8001-35-2		BATD SOP 5 128	NA	%RECOVERY		
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	Aroclor-1016	12674-11-2		BATD SOP 5 128	NA	%RECOVERY		
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	Aroclor-1221	1104-28-2		BATD SOP 5 128	NA	%RECOVERY		
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	Aroclor-1232	11141-16-5		BATD SOP 5 128	NA	%RECOVERY		
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	Aroclor-1242	53469-21-9		BATD SOP 5 128	NA	%RECOVERY		
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	Aroclor-1248	12672-29-6		BATD SOP 5 128	NA	%RECOVERY		
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	Aroclor-1254	11097-69-1		BATD SOP 5 128	NA	%RECOVERY		
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	Aroclor-1260	11096-82-5		BATD SOP 5 128	NA	%RECOVERY		
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	Aroclor-1268	11100-14-4		BATD SOP 5 128	NA	%RECOVERY		
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	Total Aroclor			BATD SOP 5 128	NA	%RECOVERY		
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	CG(34)	37660-68-5		BATD SOP 5 128	46	%RECOVERY		
LT-70-N	ZL79MSD	BATD	MSD	06/07/01	10/16/01	11/02/01		01-360	CE(112)	74472-36-9		BATD SOP 5 128	29	%RECOVERY	&	
NA	ZL80SRM	BATD	SRM	NA	10/16/01	11/03/01		01-360	4,4'-DDD	50-29-3		BATD SOP 5 128	7.1	%DIFFERENCE		
NA	ZL80SRM	BATD	SRM	NA	10/16/01	11/03/01		01-360	4,4'-DDE	72-54-8		BATD SOP 5 128	0.0	%DIFFERENCE		
NA	ZL80SRM	BATD	SRM	NA	10/16/01	11/03/01		01-360	4,4'-DDT	72-55-9		BATD SOP 5 128	0.0	%DIFFERENCE		
NA	ZL80SRM	BATD	SRM	NA	10/16/01	11/03/01		01-360	alpha-Chlordane	5103-71-9		BATD SOP 5 128	28.5	%DIFFERENCE		
NA	ZL80SRM	BATD	SRM	NA	10/16/01	11/03/01		01-360	gamma-Chlordane	5103-74-2		BATD SOP 5 128	15.7	%DIFFERENCE		
NA	ZL80SRM	BATD	SRM	NA	10/16/01	11/03/01		01-360	CG(34)	37660-68-5		BATD SOP 5 128	64	%RECOVERY		
NA	ZL80SRM	BATD	SRM	NA	10/16/01	11/03/01		01-360	CE(112)	74472-36-9		BATD SOP 5 128	70	%RECOVERY		
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	4,4'-DDD	50-29-3		BATD SOP 5 128	4.90	ng/g - wet wt		
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	4,4'-DDE	72-54-8		BATD SOP 5 128	37.70	ng/g - wet wt		
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	4,4'-DDT	72-55-9		BATD SOP 5 128	0.64	ng/g - wet wt	J	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Aldrin	309-00-2		BATD SOP 5 128	4.39	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	alpha-BHC	319-84-6		BATD SOP 5 128	4.39	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	alpha-Chlordane	5103-71-9		BATD SOP 5 128	2.65	ng/g - wet wt	J	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	beta-BHC	319-85-7		BATD SOP 5 128	4.39	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	delta-BHC	319-86-8		BATD SOP 5 128	4.39	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Dieldrin	60-57-1		BATD SOP 5 128	11.57	ng/g - wet wt		
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Endosulfan I	959-98-8		BATD SOP 5 128	4.39	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Endosulfan II	33213-65-9		BATD SOP 5 128	4.39	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Endosulfan Sulfate	1031-07-8		BATD SOP 5 128	4.39	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Endrin	72-20-8		BATD SOP 5 128	4.39	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Endrin Aldehyde	7421-93-4		BATD SOP 5 128	4.39	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Endrin Ketone	53494-70-5		BATD SOP 5 128	4.39	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	gamma-BHC	58-89-9		BATD SOP 5 128	4.39	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	gamma-Chlordane	5103-74-2		BATD SOP 5 128	4.39	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Heptachlor	78-44-8		BATD SOP 5 128	4.39	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	3.61	ng/g - wet wt	J	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Methoxychlor	72-43-6		BATD SOP 5 128	4.39	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Technical chlordane	57-74-9		BATD SOP 5 128	228.07	ng/g - wet wt	J	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Toxaphene	8001-35-2		BATD SOP 5 128	109.61	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Aroclor-1016	12674-11-2		BATD SOP 5 128	54.90	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Aroclor-1221	1104-28-2		BATD SOP 5 128	54.90	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Aroclor-1232	11141-16-5		BATD SOP 5 128	54.90	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Aroclor-1242	53469-21-9		BATD SOP 5 128	54.90	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Aroclor-1248	12672-29-6		BATD SOP 5 128	54.90	ng/g - wet wt	U	
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Aroclor-1254	11097-69-1		BATD SOP 5 128	509.72	ng/g - wet wt		
LT-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-360	Aroclor-1260	11096-82-5		BATD SOP 5 128	54.90	ng/g - wet wt	U	

SAMPLE NO	LAB ID	MTL	ORCL CRCL	DIL FACTOR	PCT MOIST	COMMENTS	SAMPLE SIZE	SAMPLE SIZE UNITS	FINAL RESULT	FINAL QUAL	VALID COMMENT	FRACTION
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
L-TS-70-N	ZL79MSD			1.667	60.57		1.95	G WET				T
NA	ZL80SRM			1.667	88.61		4.27	G WET				T
NA	ZL80SRM			1.667	88.61		4.27	G WET				T
NA	ZL80SRM			1.667	88.61		4.27	G WET				T
NA	ZL80SRM			1.667	88.61		4.27	G WET				T
NA	ZL80SRM			1.667	88.61		4.27	G WET				T
NA	ZL80SRM				88.61		4.27	G WET				T
NA	ZL80SRM				88.61		4.27	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	4.39		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	549.04		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	109.81		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	54.90		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	54.90		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	54.90		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	54.90		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	54.90		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	54.90		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	54.90		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	54.90		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	54.90		1.724	60.91		3.45	G WET				T

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	ISDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	IDL
L-TS-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-380	Aroclor-1258	11100-14-4		BATD SOP 5 128	51.19	ng/g - wet wt	J	
L-TS-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-380	Total Aroclor			BATD SOP 5 128	559.93	ng/g - wet wt		
L-TS-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-380	Cl3(34)	37680-68-5		BATD SOP 5 128	44	%RECOVERY		
L-TS-89-N	W6502DUP	BATD	DUPLICATE	06/12/01	10/16/01	11/05/01		01-380	Cl5(112)	74472-36-9		BATD SOP 5 128	32	%RECOVERY	&	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	4,4'-DDO	50-29-3		BATD SOP 5 128	4.84	ng/g - wet wt		
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	4,4'-DDE	72-54-8		BATD SOP 5 128	67.28	ng/g - wet wt		
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	4,4'-DDT	72-55-9		BATD SOP 5 128	1.04	ng/g - wet wt	J	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Aldrin	309-00-2		BATD SOP 5 128	4.16	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	alpha-BHC	319-84-6		BATD SOP 5 128	4.18	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	alpha-Chlordane	5103-71-9		BATD SOP 5 128	3.13	ng/g - wet wt	J	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	beta-BHC	319-85-7		BATD SOP 5 128	4.18	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	delta-BHC	319-86-8		BATD SOP 5 128	4.18	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Dieldrin	60-57-1		BATD SOP 5 128	9.60	ng/g - wet wt		
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Endosulfan I	959-98-6		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Endosulfan II	33213-65-9		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Endosulfan Sulfate	1031-07-5		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Endrin	72-20-8		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Endrin Aldehyde	7421-93-4		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Endrin Ketone	53494-70-5		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	gamma-BHC	58-89-9		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	gamma-Chlordane	5103-74-2		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Heptachlor	76-44-6		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	7.97	ng/g - wet wt		
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Technical chlordane	57-74-9		BATD SOP 5 128	314.12	ng/g - wet wt	J	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Toxaphene	8001-35-2		BATD SOP 5 128	104.57	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Aroclor-1016	12674-11-2		BATD SOP 5 128	52.29	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Aroclor-1221	1104-28-2		BATD SOP 5 128	52.29	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Aroclor-1232	11141-16-5		BATD SOP 5 128	52.29	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Aroclor-1242	53469-21-9		BATD SOP 5 128	52.29	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Aroclor-1248	12672-29-6		BATD SOP 5 128	52.29	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Aroclor-1254	11097-69-1		BATD SOP 5 128	798.12	ng/g - wet wt		
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Aroclor-1260	11056-82-5		BATD SOP 5 128	52.29	ng/g - wet wt	U	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Aroclor-1268	11100-14-4		BATD SOP 5 128	42.69	ng/g - wet wt	J	
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Total Aroclor			BATD SOP 5 128	841.00	ng/g - wet wt		
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Cl3(34)	37680-68-5		BATD SOP 5 128	45	%RECOVERY		
L-TS-70-N	W6500	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	Cl5(112)	74472-36-9		BATD SOP 5 128	26	%RECOVERY	&	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	4,4'-DDO	50-29-3		BATD SOP 5 128	5.94	ng/g - wet wt		
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	4,4'-DDE	72-54-8		BATD SOP 5 128	49.35	ng/g - wet wt		
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	4,4'-DDT	72-55-9		BATD SOP 5 128	0.87	ng/g - wet wt	J	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	Aldrin	309-00-2		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	alpha-BHC	319-84-6		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	alpha-Chlordane	5103-71-9		BATD SOP 5 128	3.34	ng/g - wet wt	J	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	beta-BHC	319-85-7		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	delta-BHC	319-86-8		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	Dieldrin	60-57-1		BATD SOP 5 128	13.96	ng/g - wet wt		
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	Endosulfan I	959-98-6		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	Endosulfan II	33213-65-9		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	Endosulfan Sulfate	1031-07-5		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	Endrin	72-20-8		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	Endrin Aldehyde	7421-93-4		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	Endrin Ketone	53494-70-5		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	gamma-BHC	58-89-9		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	gamma-Chlordane	5103-74-2		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	Heptachlor	76-44-6		BATD SOP 5 128	4.03	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/16/01	11/05/01		01-380	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	4.54	ng/g - wet wt		

SAMPLE NO	LAB ID	MDL	CHL_ORCL	DIL_FACTOR	PCT_MOIST	COMMENTS	SAMPLE SIZE	SAMPLE_SIZE_UNITS	FINAL_RESUL	FINAL_QUAL	VALID COMMENT	IFRACTION
L-TS-89-N	W6502DUP	54.90		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP	439.24		1.724	60.91		3.45	G WET				T
L-TS-89-N	W6502DUP				60.91		3.45	G WET				T
L-TS-89-N	W6502DUP				60.91		3.45	G WET				T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	4.84	J		T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	67.28	J		T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	1.04	J		T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	4.18	UU		T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	4.18	UU		T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	3.13	J		T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	4.18	UU		T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	4.18	UU		T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	9.6	J		T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	R			T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET				T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	4.18	UU		T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	4.18	UU		T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	4.18	UU		T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	4.18	UU		T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	4.18	UU		T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	4.18	UU		T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	4.18	UU		T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	4.18	UU		T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	7.97	J		T
L-TS-70-N	W6500	4.18		1.724	60.57		3.63	G WET	4.18	UU		T
L-TS-70-N	W6500	522.86		1.724	60.57		3.63	G WET	314.12	J		T
L-TS-70-N	W6500	104.57		1.724	60.57		3.63	G WET	104.57	UU		T
L-TS-70-N	W6500	52.29		1.724	60.57		3.63	G WET	52.29	UU		T
L-TS-70-N	W6500	52.29		1.724	60.57		3.63	G WET	52.29	UU		T
L-TS-70-N	W6500	52.29		1.724	60.57		3.63	G WET	52.29	UU		T
L-TS-70-N	W6500	52.29		1.724	60.57		3.63	G WET	52.29	UU		T
L-TS-70-N	W6500	52.29		1.724	60.57		3.63	G WET	52.29	UU		T
L-TS-70-N	W6500	52.29		1.724	60.57		3.63	G WET	798.12	J		T
L-TS-70-N	W6500	52.29		1.724	60.57		3.63	G WET	52.29	UU		T
L-TS-70-N	W6500	52.29		1.724	60.57		3.63	G WET	42.89	J		T
L-TS-70-N	W6500	418.29		1.724	60.57		3.63	G WET	841.00	J		T
L-TS-70-N	W6500				60.57		3.63	G WET				T
L-TS-70-N	W6500				60.57		3.63	G WET				T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	5.94	J		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	49.35	J		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	0.87	J		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	3.94	J		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	13.96	J		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6502	4.03		1.724	60.91		3.76	G WET	4.03	UU		T
L-TS-89-N	W6											

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	ISG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	IDL
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/18/01	11/05/01		01-380	Methoxychlor	72-43-5		BATD SOP 5.128	4.00	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/18/01	11/05/01		01-380	Technical chlordane	57-74-9		BATD SOP 5.128	295.57	ng/g - wet wt	J	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/18/01	11/05/01		01-380	Toxaphene	8001-35-2		BATD SOP 5.128	100.65	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/18/01	11/05/01		01-380	Aroclor-1016	12674-11-2		BATD SOP 5.128	50.42	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/18/01	11/05/01		01-380	Aroclor-1221	1104-28-2		BATD SOP 5.128	50.42	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/18/01	11/05/01		01-380	Aroclor-1232	11141-16-5		BATD SOP 5.128	50.42	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/18/01	11/05/01		01-380	Aroclor-1242	53469-21-9		BATD SOP 5.128	50.42	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/18/01	11/05/01		01-380	Aroclor-1248	12672-29-6		BATD SOP 5.128	50.42	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/18/01	11/05/01		01-380	Aroclor-1254	11097-69-1		BATD SOP 5.128	643.90	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/18/01	11/05/01		01-380	Aroclor-1260	11096-82-5		BATD SOP 5.128	50.42	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/18/01	11/05/01		01-380	Aroclor-1268	11100-14-4		BATD SOP 5.128	64.12	ng/g - wet wt	U	
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/18/01	11/05/01		01-380	Total Aroclor			BATD SOP 5.128	708.03	ng/g - wet wt		
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/18/01	11/05/01		01-380	C13(34)	37680-68-5		BATD SOP 5.128	33	%RECOVERY		
L-TS-89-N	W6502	BATD	NORMAL	06/12/01	10/18/01	11/05/01		01-380	C15(112)	74472-36-9		BATD SOP 5.128	34	%RECOVERY		
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	4,4'-DDD	50-29-3		BATD SOP 5.128	1.75	ng/g - wet wt	J	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	4,4'-DDE	72-54-8		BATD SOP 5.128	25.81	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	4,4'-DDT	72-55-9		BATD SOP 5.128	2.50	ng/g - wet wt	J	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Alarin	309-00-2		BATD SOP 5.128	2.76	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	alpha-BHC	319-84-6		BATD SOP 5.128	2.76	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	alpha-Chlordane	5103-71-9		BATD SOP 5.128	4.36	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	beta-BHC	319-85-7		BATD SOP 5.128	2.76	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	delta-BHC	319-86-8		BATD SOP 5.128	2.76	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Dieldrin	60-57-1		BATD SOP 5.128	6.28	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Endosulfan I	959-99-8		BATD SOP 5.128	2.76	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Endosulfan II	33213-85-9		BATD SOP 5.128	2.76	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Endosulfan Sulfate	1031-07-8		BATD SOP 5.128	2.76	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Endrin	72-20-6		BATD SOP 5.128	2.76	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Endrin Aldehyde	7421-93-4		BATD SOP 5.128	2.76	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Endrin Ketone	53494-73-5		BATD SOP 5.128	2.76	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	gamma-BHC	58-80-9		BATD SOP 5.128	2.76	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	gamma-Chlordane	5103-74-2		BATD SOP 5.128	2.76	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Heptachlor	76-44-8		BATD SOP 5.128	2.76	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Heptachlor Epoxide	1024-57-3		BATD SOP 5.128	7.78	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Methoxychlor	72-43-5		BATD SOP 5.128	2.76	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Technical chlordane	57-74-9		BATD SOP 5.128	337.55	ng/g - wet wt	J	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Toxaphene	8001-35-2		BATD SOP 5.128	69.09	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Aroclor-1016	12674-11-2		BATD SOP 5.128	34.54	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Aroclor-1221	1104-28-2		BATD SOP 5.128	34.54	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Aroclor-1232	11141-16-5		BATD SOP 5.128	34.54	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Aroclor-1242	53469-21-9		BATD SOP 5.128	34.54	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Aroclor-1248	12672-29-6		BATD SOP 5.128	34.54	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Aroclor-1254	11097-69-1		BATD SOP 5.128	258.53	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Aroclor-1260	11096-82-5		BATD SOP 5.128	34.54	ng/g - wet wt	U	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Aroclor-1268	11100-14-4		BATD SOP 5.128	21.19	ng/g - wet wt	J	
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	Total Aroclor			BATD SOP 5.128	278.72	ng/g - wet wt		
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	C13(34)	37680-68-5		BATD SOP 5.128	33	%RECOVERY		
A-TS-35-N	W6488	BATD	NORMAL	06/12/01	10/18/01	11/03/01		01-380	C15(112)	74472-36-9		BATD SOP 5.128	34	%RECOVERY		
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/18/01	11/03/01		01-380	4,4'-DDD	50-29-3		BATD SOP 5.128	4.26	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/18/01	11/03/01		01-380	4,4'-DDE	72-54-8		BATD SOP 5.128	25.82	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/18/01	11/03/01		01-380	4,4'-DDT	72-55-9		BATD SOP 5.128	3.06	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/18/01	11/03/01		01-380	Alarin	309-00-2		BATD SOP 5.128	2.99	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/18/01	11/03/01		01-380	alpha-BHC	319-84-6		BATD SOP 5.128	2.99	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/18/01	11/03/01		01-380	alpha-Chlordane	5103-71-9		BATD SOP 5.128	4.60	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/18/01	11/03/01		01-380	beta-BHC	319-85-7		BATD SOP 5.128	2.99	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/18/01	11/03/01		01-380	delta-BHC	319-86-8		BATD SOP 5.128	2.99	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/18/01	11/03/01		01-380	Dieldrin	60-57-1		BATD SOP 5.128	6.28	ng/g - wet wt	U	

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	ISDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	DI
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Endosulfan I	959-98-8		BATD SOP 5 128	2.99	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Endosulfan II	33213-65-9		BATD SOP 5 128	2.99	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Endosulfan Sulfate	1031-07-8		BATD SOP 5 128	2.99	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Endrin	72-20-8		BATD SOP 5 128	2.99	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Endrin Aldehyde	7421-93-4		BATD SOP 5 128	2.99	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Endrin Ketone	53494-70-5		BATD SOP 5 128	2.99	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	gamma-BHC	58-89-9		BATD SOP 5 128	2.99	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	gamma-Chlordane	5103-74-2		BATD SOP 5 128	2.99	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Heptachlor	75-44-8		BATD SOP 5 128	2.99	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	13.57	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Methoxychlor	72-43-5		BATD SOP 5 128	2.99	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Technical chlordane	57-74-9		BATD SOP 5 128	422.37	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Toxaphene	8001-35-2		BATD SOP 5 128	74.75	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Aroclor-1016	12674-11-2		BATD SOP 5 128	37.37	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Aroclor-1221	1104-28-2		BATD SOP 5 128	37.37	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Aroclor-1232	11141-16-5		BATD SOP 5 128	37.37	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Aroclor-1242	53469-21-9		BATD SOP 5 128	37.37	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Aroclor-1248	12672-29-6		BATD SOP 5 128	37.37	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Aroclor-1254	11097-69-1		BATD SOP 5 128	633.59	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Aroclor-1260	11096-82-5		BATD SOP 5 128	37.37	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Aroclor-1268	11100-14-4		BATD SOP 5 128	36.18	ng/g - wet wt	J	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Total Aroclor			BATD SOP 5 128	969.78	ng/g - wet wt	U	
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Cl3(34)	37680-68-5		BATD SOP 5 128	48	%RECOVERY		
A-TS-46-N	W6489	BATD	NORMAL	06/09/01	10/16/01	11/03/01		01-360	Cl5(112)	74472-36-9		BATD SOP 5 128	33	%RECOVERY		
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	4,4'-DDD	50-29-3		BATD SOP 5 128	3.58	ng/g - wet wt	J	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	4,4'-DDE	72-84-8		BATD SOP 5 128	25.20	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	4,4'-DDT	72-55-9		BATD SOP 5 128	2.25	ng/g - wet wt	J	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Aldrin	308-00-2		BATD SOP 5 128	6.99	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	alpha-BHC	319-84-6		BATD SOP 5 128	6.99	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	alpha-Chlordane	5103-71-9		BATD SOP 5 128	11.99	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	beta-BHC	319-85-7		BATD SOP 5 128	6.99	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	delta-BHC	319-86-8		BATD SOP 5 128	6.99	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Dieldrin	60-57-1		BATD SOP 5 128	11.40	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Endosulfan I	959-98-8		BATD SOP 5 128	6.99	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Endosulfan II	33213-65-9		BATD SOP 5 128	6.99	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Endosulfan Sulfate	1031-07-8		BATD SOP 5 128	6.99	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Endrin	72-20-8		BATD SOP 5 128	6.99	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Endrin Aldehyde	7421-93-4		BATD SOP 5 128	6.99	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Endrin Ketone	53494-70-5		BATD SOP 5 128	6.99	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	gamma-BHC	58-89-9		BATD SOP 5 128	6.99	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	gamma-Chlordane	5103-74-2		BATD SOP 5 128	6.99	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Heptachlor	75-44-8		BATD SOP 5 128	6.99	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	19.76	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Methoxychlor	72-43-5		BATD SOP 5 128	6.99	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Technical chlordane	57-74-9		BATD SOP 5 128	626.06	ng/g - wet wt	J	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Toxaphene	8001-35-2		BATD SOP 5 128	174.75	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Aroclor-1016	12674-11-2		BATD SOP 5 128	87.38	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Aroclor-1221	1104-28-2		BATD SOP 5 128	87.38	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Aroclor-1232	11141-16-5		BATD SOP 5 128	87.38	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Aroclor-1242	53469-21-9		BATD SOP 5 128	87.38	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Aroclor-1248	12672-29-6		BATD SOP 5 128	87.38	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Aroclor-1254	11097-69-1		BATD SOP 5 128	443.93	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Aroclor-1260	11096-82-5		BATD SOP 5 128	87.38	ng/g - wet wt	U	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Aroclor-1268	11100-14-4		BATD SOP 5 128	21.04	ng/g - wet wt	J	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Total Aroclor			BATD SOP 5 128	464.97	ng/g - wet wt	J	
A-TS-48-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-360	Cl3(34)	37680-68-5		BATD SOP 5 128	30	%RECOVERY		

SAMPLE NO	LAB ID	MDL	CRDL CRQL	DIL FACTOR	PCT MOIST	COMMENTS	SAMPLE SIZE	SAMPLE SIZE UNITS	FINAL RESULT	FINAL QAL	INVALID	COMMENT	FRACTION
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2.99		1.724	59.20		5.07	G WET	2.99	UJ			T
A-TS-45-N	W6489	2											

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	IDL
A-TS-49-N	W6490	BATD	NORMAL	06/07/01	10/16/01	11/03/01		01-380	CIS(112)	74472-36-9		BATD SOP 5.128	48	%RECOVERY		
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	4,4'-DDD	50-29-3		BATD SOP 5.128	3.63	ng/g - wet wt		
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	4,4'-DDE	72-54-8		BATD SOP 5.128	25.65	ng/g - wet wt		
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	4,4'-DDT	72-55-9		BATD SOP 5.128	1.99	ng/g - wet wt	J	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Aldrin	309-00-2		BATD SOP 5.128	3.82	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	alpha-BHC	319-84-6		BATD SOP 5.128	3.82	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	alpha-Chlordane	5103-71-9		BATD SOP 5.128	3.16	ng/g - wet wt	J	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	beta-BHC	319-85-7		BATD SOP 5.128	3.82	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	delta-BHC	319-86-8		BATD SOP 5.128	3.82	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Dieldrin	60-57-1		BATD SOP 5.128	6.35	ng/g - wet wt		
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Endosulfan I	959-98-8		BATD SOP 5.128	3.82	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Endosulfan II	33213-65-9		BATD SOP 5.128	3.82	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Endosulfan Sulfate	1031-07-8		BATD SOP 5.128	3.82	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Endrin	72-20-8		BATD SOP 5.128	3.82	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Endrin Aldehyde	7421-93-4		BATD SOP 5.128	3.82	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Endrin Ketone	53494-70-5		BATD SOP 5.128	3.82	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	gamma-BHC	58-89-9		BATD SOP 5.128	3.82	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	gamma-Chlordane	5103-74-2		BATD SOP 5.128	3.82	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Heptachlor	76-44-8		BATD SOP 5.128	3.82	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Heptachlor Epoxide	1024-57-3		BATD SOP 5.128	6.62	ng/g - wet wt		
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Methoxychlor	72-43-5		BATD SOP 5.128	3.82	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Technical chlordane	57-74-9		BATD SOP 5.128	425.56	ng/g - wet wt	J	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Toxaphene	8001-35-2		BATD SOP 5.128	95.47	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Aroclor-1016	12674-11-2		BATD SOP 5.128	47.74	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Aroclor-1221	1104-28-2		BATD SOP 5.128	47.74	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Aroclor-1232	11141-16-5		BATD SOP 5.128	47.74	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Aroclor-1242	53489-21-8		BATD SOP 5.128	47.74	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Aroclor-1248	12672-29-6		BATD SOP 5.128	47.74	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Aroclor-1254	11087-69-1		BATD SOP 5.128	468.99	ng/g - wet wt		
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Aroclor-1260	11098-82-5		BATD SOP 5.128	47.74	ng/g - wet wt	U	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Aroclor-1268	11100-14-4		BATD SOP 5.128	30.71	ng/g - wet wt	J	
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Total Aroclor			BATD SOP 5.128	500.69	ng/g - wet wt		
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	Cr(34)	37680-68-5		BATD SOP 5.128	45	%RECOVERY		
A-TS-49-N	W6491	BATD	NORMAL	06/12/01	10/16/01	11/03/01		01-380	CIS(112)	74472-36-9		BATD SOP 5.128	44	%RECOVERY		
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	4,4'-DDD	50-29-3		BATD SOP 5.128	3.91	ng/g - wet wt		
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	4,4'-DDE	72-54-8		BATD SOP 5.128	21.50	ng/g - wet wt		
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	4,4'-DDT	72-55-9		BATD SOP 5.128	3.64	ng/g - wet wt		
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	Aldrin	309-00-2		BATD SOP 5.128	2.82	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	alpha-BHC	319-84-6		BATD SOP 5.128	2.82	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	alpha-Chlordane	5103-71-9		BATD SOP 5.128	30.81	ng/g - wet wt		
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	beta-BHC	319-85-7		BATD SOP 5.128	2.82	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	delta-BHC	319-86-8		BATD SOP 5.128	2.82	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	Dieldrin	60-57-1		BATD SOP 5.128	6.61	ng/g - wet wt		
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	Endosulfan I	959-98-8		BATD SOP 5.128	2.82	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	Endosulfan II	33213-65-9		BATD SOP 5.128	2.82	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	Endosulfan Sulfate	1031-07-8		BATD SOP 5.128	2.82	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	Endrin	72-20-8		BATD SOP 5.128	2.82	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	Endrin Aldehyde	7421-93-4		BATD SOP 5.128	2.82	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	Endrin Ketone	53494-70-5		BATD SOP 5.128	2.82	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	gamma-BHC	58-89-9		BATD SOP 5.128	2.82	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	gamma-Chlordane	5103-74-2		BATD SOP 5.128	1.85	ng/g - wet wt	J	
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	Heptachlor	76-44-8		BATD SOP 5.128	2.82	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	Heptachlor Epoxide	1024-57-3		BATD SOP 5.128	17.73	ng/g - wet wt		
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	Methoxychlor	72-43-5		BATD SOP 5.128	2.82	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	Technical chlordane	57-74-9		BATD SOP 5.128	635.66	ng/g - wet wt		
A-TS-57-N	W6492	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-380	Toxaphene	8001-35-2		BATD SOP 5.128	70.62	ng/g - wet wt	U	

[illegible]

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	ISDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	IDL
A-TS-57-N	W6492	BATD	NORMAL	06/06/01	10/16/01	11/04/01		01-380	Aroclor-1016	12674-11-2	BATD	SOP 5 128	35.31	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/06/01	10/16/01	11/04/01		01-380	Aroclor-1221	1104-28-2	BATD	SOP 5 128	35.31	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/06/01	10/16/01	11/04/01		01-380	Aroclor-1232	11141-16-5	BATD	SOP 5 128	35.31	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/06/01	10/16/01	11/04/01		01-380	Aroclor-1242	53469-21-9	BATD	SOP 5 128	35.31	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/06/01	10/16/01	11/04/01		01-380	Aroclor-1248	12672-29-6	BATD	SOP 5 128	35.31	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/06/01	10/16/01	11/04/01		01-380	Aroclor-1254	11097-69-1	BATD	SOP 5 128	560.77	ng/g - wet wt		
A-TS-57-N	W6492	BATD	NORMAL	06/06/01	10/16/01	11/04/01		01-380	Aroclor-1260	11096-82-5	BATD	SOP 5 128	35.31	ng/g - wet wt	U	
A-TS-57-N	W6492	BATD	NORMAL	06/06/01	10/16/01	11/04/01		01-380	Aroclor-1268	11100-14-4	BATD	SOP 5 128	27.39	ng/g - wet wt	J	
A-TS-57-N	W6492	BATD	NORMAL	06/06/01	10/16/01	11/04/01		01-380	Total Aroclor		BATD	SOP 5 128	568.15	ng/g - wet wt		
A-TS-57-N	W6492	BATD	NORMAL	06/06/01	10/16/01	11/04/01		01-380	Cl3(34)	37680-68-5	BATD	SOP 5 128	29	%RECOVERY	&	
A-TS-57-N	W6492	BATD	NORMAL	06/06/01	10/16/01	11/04/01		01-380	Cl5(112)	74472-36-9	BATD	SOP 5 128	34	%RECOVERY	&	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	4,4'-DDD	50-29-3	BATD	SOP 5 128	2.60	ng/g - wet wt		
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	4,4'-DDE	72-54-8	BATD	SOP 5 128	10.56	ng/g - wet wt		
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	4,4'-DDT	72-55-9	BATD	SOP 5 128	1.03	ng/g - wet wt	J	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Aldrin	309-00-2	BATD	SOP 5 128	2.43	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	alpha-BHC	319-84-6	BATD	SOP 5 128	2.43	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	alpha-Chlordane	5103-71-9	BATD	SOP 5 128	8.71	ng/g - wet wt		
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	beta-BHC	319-85-7	BATD	SOP 5 128	2.43	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	delta-BHC	319-86-8	BATD	SOP 5 128	2.43	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Dieldrin	60-57-1	BATD	SOP 5 128	2.43	ng/g - wet wt		
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Endosulfan I	959-98-8	BATD	SOP 5 128	2.43	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Endosulfan II	33213-65-9	BATD	SOP 5 128	2.43	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Endosulfan Sulfate	1031-07-8	BATD	SOP 5 128	2.43	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Endrin	72-20-6	BATD	SOP 5 128	2.43	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Endrin Aldehyde	7421-93-4	BATD	SOP 5 128	2.43	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Endrin Ketone	53494-70-5	BATD	SOP 5 128	2.43	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	gamma-BHC	58-89-9	BATD	SOP 5 128	2.43	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	gamma-Chlordane	5103-74-2	BATD	SOP 5 128	0.66	ng/g - wet wt	J	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Heptachlor	76-44-8	BATD	SOP 5 128	2.43	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Heptachlor Epoxide	1024-57-3	BATD	SOP 5 128	5.49	ng/g - wet wt		
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Methoxychlor	72-43-5	BATD	SOP 5 128	2.43	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Technical chlordane	57-74-9	BATD	SOP 5 128	203.97	ng/g - wet wt	J	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Toxaphene	8001-35-2	BATD	SOP 5 128	60.70	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Aroclor 1016	12674-11-2	BATD	SOP 5 128	30.35	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Aroclor-1221	1104-28-2	BATD	SOP 5 128	30.35	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Aroclor-1232	11141-16-5	BATD	SOP 5 128	30.35	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Aroclor-1242	53469-21-9	BATD	SOP 5 128	30.35	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Aroclor-1248	12672-29-6	BATD	SOP 5 128	30.35	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Aroclor-1254	11097-69-1	BATD	SOP 5 128	109.39	ng/g - wet wt		
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Aroclor-1260	11096-82-5	BATD	SOP 5 128	30.35	ng/g - wet wt	U	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Aroclor-1268	11100-14-4	BATD	SOP 5 128	24.01	ng/g - wet wt	J	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Total Aroclor		BATD	SOP 5 128	133.40	ng/g - wet wt	J	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Cl3(34)	37680-68-5	BATD	SOP 5 128	37	%RECOVERY	&	
G-TS-02-N	W6493	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Cl5(112)	74472-36-9	BATD	SOP 5 128	33	%RECOVERY	&	
G-TS-04-N	W6494	BATD	NORMAL	06/09/01	10/16/01	11/04/01		01-380	4,4'-DDD	50-29-3	BATD	SOP 5 128	2.05	ng/g - wet wt	J	
G-TS-04-N	W6494	BATD	NORMAL	06/09/01	10/16/01	11/04/01		01-380	4,4'-DDE	72-54-8	BATD	SOP 5 128	17.63	ng/g - wet wt		
G-TS-04-N	W6494	BATD	NORMAL	06/09/01	10/16/01	11/04/01		01-380	4,4'-DDT	72-55-9	BATD	SOP 5 128	2.10	ng/g - wet wt	J	
G-TS-04-N	W6494	BATD	NORMAL	06/09/01	10/16/01	11/04/01		01-380	Aldrin	309-00-2	BATD	SOP 5 128	3.70	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	06/09/01	10/16/01	11/04/01		01-380	alpha-BHC	319-84-6	BATD	SOP 5 128	3.70	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	06/09/01	10/16/01	11/04/01		01-380	alpha-Chlordane	5103-71-9	BATD	SOP 5 128	6.03	ng/g - wet wt		
G-TS-04-N	W6494	BATD	NORMAL	06/09/01	10/16/01	11/04/01		01-380	beta-BHC	319-85-7	BATD	SOP 5 128	3.70	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	06/09/01	10/16/01	11/04/01		01-380	delta-BHC	319-86-8	BATD	SOP 5 128	3.70	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	06/09/01	10/16/01	11/04/01		01-380	Dieldrin	60-57-1	BATD	SOP 5 128	6.69	ng/g - wet wt		
G-TS-04-N	W6494	BATD	NORMAL	06/09/01	10/16/01	11/04/01		01-380	Endosulfan I	959-98-8	BATD	SOP 5 128	3.70	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	06/09/01	10/16/01	11/04/01		01-380	Endosulfan II	33213-65-9	BATD	SOP 5 128	3.70	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	06/09/01	10/16/01	11/04/01		01-380	Endosulfan Sulfate	1031-07-8	BATD	SOP 5 128	3.70	ng/g - wet wt	U	

[illegible]

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	ID
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Endrin	72-20-8		BATD SOP 5 128	3.70	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Endrin Aldehyde	7421-93-4		BATD SOP 5 128	3.70	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Endrin Ketone	53494-70-5		BATD SOP 5 128	3.70	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	gamma-BHC	58-89-9		BATD SOP 5 128	3.70	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	gamma-Chlordane	5103-74-2		BATD SOP 5 128	3.70	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Heptachlor	76-44-8		BATD SOP 5 128	3.70	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	7.51	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Methoxychlor	72-43-5		BATD SOP 5 128	3.70	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Technical chlordane	57-74-9		BATD SOP 5 128	196.49	ng/g - wet wt	J	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Toxaphene	8001-35-2		BATD SOP 5 128	92.51	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Aroclor-1016	12674-11-2		BATD SOP 5 128	46.25	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Aroclor-1221	1104-28-2		BATD SOP 5 128	46.25	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Aroclor-1232	11141-16-5		BATD SOP 5 128	46.25	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Aroclor-1242	53469-21-9		BATD SOP 5 128	46.25	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Aroclor-1248	12672-29-6		BATD SOP 5 128	46.25	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Aroclor-1254	11097-69-1		BATD SOP 5 128	134.45	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Aroclor-1260	11096-82-5		BATD SOP 5 128	46.25	ng/g - wet wt	U	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Aroclor-1268	11100-14-4		BATD SOP 5 128	28.16	ng/g - wet wt	J	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Total Aroclor			BATD SOP 5 128	162.61	ng/g - wet wt	J	
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Cl3(34)	37680-68-5		BATD SOP 5 128	41	%RECOVERY		
G-TS-04-N	W6494	BATD	NORMAL	05/09/01	10/16/01	11/04/01		01-380	Cl5(112)	74472-36-9		BATD SOP 5 128	43	%RECOVERY		
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	4,4'-DDE	50-29-3		BATD SOP 5 128	3.10	ng/g - wet wt		
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	4,4'-DDE	72-54-8		BATD SOP 5 128	16.18	ng/g - wet wt		
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	4,4'-DDT	72-55-9		BATD SOP 5 128	1.39	ng/g - wet wt	J	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Aldrin	309-00-2		BATD SOP 5 128	2.26	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	alpha-BHC	319-84-6		BATD SOP 5 128	2.26	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	alpha-Chlordane	5103-71-9		BATD SOP 5 128	23.04	ng/g - wet wt		
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	beta-BHC	319-85-7		BATD SOP 5 128	2.26	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	delta-BHC	319-86-8		BATD SOP 5 128	2.26	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Dieldrin	60-57-1		BATD SOP 5 128	3.87	ng/g - wet wt		
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Endosulfan I	559-58-4		BATD SOP 5 128	2.26	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Endosulfan II	30213-65-9		BATD SOP 5 128	2.26	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Endosulfan Sulfate	1031-07-8		BATD SOP 5 128	2.26	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Endrin	72-20-8		BATD SOP 5 128	2.26	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Endrin Aldehyde	7421-93-4		BATD SOP 5 128	2.26	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Endrin Ketone	53494-70-5		BATD SOP 5 128	2.26	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	gamma-BHC	58-89-9		BATD SOP 5 128	2.26	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	gamma-Chlordane	5103-74-2		BATD SOP 5 128	1.01	ng/g - wet wt	J	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Heptachlor	76-44-8		BATD SOP 5 128	2.26	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	15.87	ng/g - wet wt		
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Methoxychlor	72-43-5		BATD SOP 5 128	2.26	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Technical chlordane	57-74-9		BATD SOP 5 128	755.50	ng/g - wet wt		
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Toxaphene	8001-35-2		BATD SOP 5 128	56.56	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Aroclor-1016	12674-11-2		BATD SOP 5 128	28.28	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Aroclor-1221	1104-28-2		BATD SOP 5 128	28.28	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Aroclor-1232	11141-16-5		BATD SOP 5 128	28.28	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Aroclor-1242	53469-21-9		BATD SOP 5 128	28.28	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Aroclor-1248	12672-29-6		BATD SOP 5 128	28.28	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Aroclor-1254	11097-69-1		BATD SOP 5 128	160.46	ng/g - wet wt		
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Aroclor-1260	11096-82-5		BATD SOP 5 128	28.28	ng/g - wet wt	U	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Aroclor-1268	11100-14-4		BATD SOP 5 128	41.35	ng/g - wet wt		
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Total Aroclor			BATD SOP 5 128	201.80	ng/g - wet wt	J	
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Cl3(34)	37680-68-5		BATD SOP 5 128	57	%RECOVERY		
G-TS-07-N	W6495	BATD	NORMAL	05/30/01	10/16/01	11/04/01		01-380	Cl5(112)	74472-36-9		BATD SOP 5 128	43	%RECOVERY		
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	4,4'-DDE	50-29-3		BATD SOP 5 128	3.22	ng/g - wet wt		
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-380	4,4'-DDE	72-54-8		BATD SOP 5 128	24.58	ng/g - wet wt		

SAMPLE NO	LAB ID	MDL	CRDL CRCL	DIL FACTOR	PCT MOIST	COMMENTS	SAMPLE SIZE	SAMPLE SIZE UNITS	FINAL RESULT	FINAL QUAL	VALID COMMENT	FRACTION
G-TS-04-N	W6494	3.70		1.724	62.44		4.10	G WET	3.70	U		T
G-TS-04-N	W6494	3.70		1.724	62.44		4.10	G WET	3.70	UJ		T
G-TS-04-N	W6494	3.70		1.724	62.44		4.10	G WET	3.70	U		T
G-TS-04-N	W6494	3.70		1.724	62.44		4.10	G WET	3.70	U		T
G-TS-04-N	W6494	3.70		1.724	62.44		4.10	G WET	3.70	U		T
G-TS-04-N	W6494	3.70		1.724	62.44		4.10	G WET	3.70	U		T
G-TS-04-N	W6494	3.70		1.724	62.44		4.10	G WET	7.51			T
G-TS-04-N	W6494	3.70		1.724	62.44		4.10	G WET	3.70	U		T
G-TS-04-N	W6494	462.54		1.724	62.44		4.10	G WET	196.49	J		T
G-TS-04-N	W6494	92.51		1.724	62.44		4.10	G WET	92.51	U		T
G-TS-04-N	W6494	46.25		1.724	62.44		4.10	G WET	46.25	U		T
G-TS-04-N	W6494	46.25		1.724	62.44		4.10	G WET	46.25	U		T
G-TS-04-N	W6494	46.25		1.724	62.44		4.10	G WET	46.25	U		T
G-TS-04-N	W6494	46.25		1.724	62.44		4.10	G WET	46.25	U		T
G-TS-04-N	W6494	46.25		1.724	62.44		4.10	G WET	46.25	U		T
G-TS-04-N	W6494	46.25		1.724	62.44		4.10	G WET	134.45			T
G-TS-04-N	W6494	46.25		1.724	62.44		4.10	G WET	46.25	U		T
G-TS-04-N	W6494	46.25		1.724	62.44		4.10	G WET	26.16	J		T
G-TS-04-N	W6494	370.03		1.724	62.44		4.10	G WET	162.61	J		T
G-TS-04-N	W6494				62.44		4.10	G WET				T
G-TS-04-N	W6494				62.44		4.10	G WET				T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	3.10			T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	16.16			T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	1.39	J		T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	2.26	U		T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	2.26	U		T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	23.04			T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	2.26	U		T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	2.26	U		T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	3.87			T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	2.26	U		T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	2.26	U		T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	2.26	U		T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	2.26	UJ		T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	2.26	U		T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	2.26	U		T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	1.01	J		T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	2.26	U		T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	15.87			T
G-TS-07-N	W6495	2.26		1.724	71.52		6.71	G WET	2.26	U		T
G-TS-07-N	W6495	282.79		1.724	71.52		6.71	G WET	755.50			T
G-TS-07-N	W6495	56.56		1.724	71.52		6.71	G WET	56.56	U		T
G-TS-07-N	W6495	28.28		1.724	71.52		6.71	G WET	28.28	U		T
G-TS-07-N	W6495	28.28		1.724	71.52		6.71	G WET	28.28	U		T
G-TS-07-N	W6495	28.28		1.724	71.52		6.71	G WET	28.28	U		T
G-TS-07-N	W6495	28.28		1.724	71.52		6.71	G WET	28.28	U		T
G-TS-07-N	W6495	28.28		1.724	71.52		6.71	G WET	28.28	U		T
G-TS-07-N	W6495	28.28		1.724	71.52		6.71	G WET	160.46			T
G-TS-07-N	W6495	28.28		1.724	71.52		6.71	G WET	28.28	U		T
G-TS-07-N	W6495	28.28		1.724	71.52		6.71	G WET	41.35			T
G-TS-07-N	W6495	226.23		1.724	71.52		6.71	G WET	201.80	J		T
G-TS-07-N	W6495				71.52		6.71	G WET				T
G-TS-07-N	W6495				71.52		6.71	G WET				T
G-TS-22-N	W6496	2.95		1.724	61.70		5.14	G WET	3.22	J		T
G-TS-22-N	W6496	2.95		1.724	61.70		5.14	G WET	24.58	J		T

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDS	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	IDL
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	4,4'-DDT	172-55-9		BATD SOP 5 128	4.06	ng/g - wet wt		
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Aldrin	309-00-2		BATD SOP 5 128	2.95	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	alpha-BHC	319-84-6		BATD SOP 5 128	2.95	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	alpha-Chlordane	5103-71-9		BATD SOP 5 128	3.55	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	beta-BHC	319-85-7		BATD SOP 5 128	2.95	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	delta-BHC	319-86-8		BATD SOP 5 128	2.95	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Dieldrin	60-57-1		BATD SOP 5 128	7.41	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Endosulfan I	959-98-8		BATD SOP 5 128	2.95	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Endosulfan II	33213-65-9		BATD SOP 5 128	2.95	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Endosulfan Sulfate	1031-07-8		BATD SOP 5 128	2.95	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Endrin	72-20-8		BATD SOP 5 128	2.95	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Enanin Aldehyde	7421-93-4		BATD SOP 5 128	2.95	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Enanin Ketone	53494-70-5		BATD SOP 5 128	2.95	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	gamma-BHC	58-69-9		BATD SOP 5 128	2.95	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	gamma-Chlordane	5103-74-2		BATD SOP 5 128	2.95	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Heptachlor	76-44-8		BATD SOP 5 128	2.95	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	3.91	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Methoxychlor	72-43-5		BATD SOP 5 128	2.95	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Technical chlordane	57-74-9		BATD SOP 5 128	352.12	ng/g - wet wt	J	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Toxaphene	8001-35-2		BATD SOP 5 128	73.73	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Aroclor-1016	12674-11-2		BATD SOP 5 128	36.87	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Aroclor-1221	1104-28-2		BATD SOP 5 128	36.87	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Aroclor-1232	11141-18-5		BATD SOP 5 128	36.87	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Aroclor-1242	53489-21-9		BATD SOP 5 128	36.87	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Aroclor-1248	12672-29-6		BATD SOP 5 128	36.87	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Aroclor-1254	11087-69-1		BATD SOP 5 128	235.66	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Aroclor-1260	11096-82-6		BATD SOP 5 128	36.87	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Aroclor-1268	11100-14-4		BATD SOP 5 128	46.11	ng/g - wet wt	U	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Total Aroclor			BATD SOP 5 128	283.97	ng/g - wet wt	J	
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	C13(34)	37680-68-5		BATD SOP 5 128	54	%RECOVERY		
G-TS-22-N	W6496	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	C15(112)	74472-36-9		BATD SOP 5 128	34	%RECOVERY		
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	4,4'-DDD	50-29-3		BATD SOP 5 128	2.44	ng/g - wet wt	J	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	4,4'-DDE	72-54-8		BATD SOP 5 128	18.31	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	4,4'-DDT	72-55-9		BATD SOP 5 128	0.58	ng/g - wet wt	J	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Aldrin	309-00-2		BATD SOP 5 128	2.71	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	alpha-BHC	319-84-6		BATD SOP 5 128	2.71	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	alpha-Chlordane	5103-71-9		BATD SOP 5 128	1.99	ng/g - wet wt	J	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	beta-BHC	319-85-7		BATD SOP 5 128	2.71	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	delta-BHC	319-86-8		BATD SOP 5 128	2.71	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Dieldrin	60-57-1		BATD SOP 5 128	8.65	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Endosulfan I	959-98-8		BATD SOP 5 128	2.71	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Endosulfan II	33213-65-9		BATD SOP 5 128	2.71	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Endosulfan Sulfate	1031-07-8		BATD SOP 5 128	2.71	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Endrin	72-20-8		BATD SOP 5 128	2.71	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Enanin Aldehyde	7421-93-4		BATD SOP 5 128	2.71	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Enanin Ketone	53494-70-5		BATD SOP 5 128	2.71	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	gamma-BHC	58-69-9		BATD SOP 5 128	2.71	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	gamma-Chlordane	5103-74-2		BATD SOP 5 128	2.71	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Heptachlor	76-44-8		BATD SOP 5 128	2.71	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	3.28	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Methoxychlor	72-43-5		BATD SOP 5 128	2.71	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Technical chlordane	57-74-9		BATD SOP 5 128	150.17	ng/g - wet wt	J	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Toxaphene	8001-35-2		BATD SOP 5 128	67.72	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Aroclor-1016	12674-11-2		BATD SOP 5 128	33.66	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Aroclor-1221	1104-28-2		BATD SOP 5 128	33.66	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Aroclor-1232	11141-18-5		BATD SOP 5 128	33.66	ng/g - wet wt	U	

[illegible]

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	ISDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	IDL
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Aroclor-1242	53469-21-9		BATD SCP 5 128	33.86	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Aroclor-1246	12672-29-6		BATD SCP 5 128	33.86	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Aroclor-1254	11097-69-1		BATD SCP 5 128	165.93	ng/g - wet wt		
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Aroclor-1260	11095-82-5		BATD SCP 5 128	33.86	ng/g - wet wt	U	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Aroclor-1268	11100-14-4		BATD SCP 5 128	39.06	ng/g - wet wt		
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	Total Aroclor			BATD SCP 5 128	203.99	ng/g - wet wt	J	
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	C13(34)	37690-68-5		BATD SCP 5 128	41	%RECOVERY		
G-TS-29-N	W6497	BATD	NORMAL	06/07/01	10/16/01	11/04/01		01-360	C15(112)	74472-36-9		BATD SCP 5 128	33	%RECOVERY	&	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	4,4'-DDD	50-29-3		BATD SCP 5 128	3.83	ng/g - wet wt		
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	4,4'-DDE	72-84-8		BATD SCP 5 128	30.91	ng/g - wet wt		
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	4,4'-DDT	72-55-9		BATD SCP 5 128	0.45	ng/g - wet wt	J	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Aldrin	309-00-2		BATD SCP 5 128	2.87	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	alpha-BHC	319-84-6		BATD SCP 5 128	2.87	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	alpha-Chlordane	5103-71-9		BATD SCP 5 128	4.26	ng/g - wet wt		
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	beta-BHC	319-85-7		BATD SCP 5 128	2.87	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	delta-BHC	319-86-8		BATD SCP 5 128	2.87	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Dieldrin	60-57-1		BATD SCP 5 128	6.14	ng/g - wet wt		
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Endosulfan I	959-98-8		BATD SCP 5 128	2.87	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Endosulfan II	33213-65-9		BATD SCP 5 128	2.87	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Endosulfan Sulfate	1031-07-8		BATD SCP 5 128	2.87	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Endrin	72-20-8		BATD SCP 5 128	2.87	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Endrin Aldehyde	7421-93-4		BATD SCP 5 128	2.87	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Endrin Ketone	53494-70-5		BATD SCP 5 128	2.87	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	gamma-BHC	68-88-9		BATD SCP 5 128	2.87	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	gamma-Chlordane	5103-74-2		BATD SCP 5 128	2.87	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Heptachlor	76-44-8		BATD SCP 5 128	2.87	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Heptachlor Epoxide	1024-57-3		BATD SCP 5 128	5.06	ng/g - wet wt		
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Methoxychlor	72-43-5		BATD SCP 5 128	2.87	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Technical chlordane	57-74-9		BATD SCP 5 128	225.62	ng/g - wet wt	J	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Toxaphene	8001-35-2		BATD SCP 5 128	71.75	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Aroclor-1016	12674-11-2		BATD SCP 5 128	35.88	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Aroclor-1221	1104-28-2		BATD SCP 5 128	35.88	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Aroclor-1232	11141-16-5		BATD SCP 5 128	35.88	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Aroclor-1242	53469-21-9		BATD SCP 5 128	35.88	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Aroclor-1246	12672-29-6		BATD SCP 5 128	35.88	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Aroclor-1254	11097-69-1		BATD SCP 5 128	754.29	ng/g - wet wt		
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Aroclor-1260	11095-82-5		BATD SCP 5 128	35.88	ng/g - wet wt	U	
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Aroclor-1268	11100-14-4		BATD SCP 5 128	40.64	ng/g - wet wt		
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Total Aroclor			BATD SCP 5 128	800.93	ng/g - wet wt		
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	C13(34)	37690-68-5		BATD SCP 5 128	45	%RECOVERY		
L-TS-62-N	W6498	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	C15(112)	74472-36-9		BATD SCP 5 128	27	%RECOVERY	&	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	4,4'-DDD	50-29-3		BATD SCP 5 128	3.61	ng/g - wet wt		
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	4,4'-DDE	72-84-8		BATD SCP 5 128	24.20	ng/g - wet wt		
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	4,4'-DDT	72-55-9		BATD SCP 5 128	1.24	ng/g - wet wt	J	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Aldrin	309-00-2		BATD SCP 5 128	3.19	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	alpha-BHC	319-84-6		BATD SCP 5 128	3.19	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	alpha-Chlordane	5103-71-9		BATD SCP 5 128	2.92	ng/g - wet wt	J	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	beta-BHC	319-85-7		BATD SCP 5 128	3.19	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	delta-BHC	319-86-8		BATD SCP 5 128	3.19	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Dieldrin	60-57-1		BATD SCP 5 128	5.24	ng/g - wet wt		
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Endosulfan I	959-98-8		BATD SCP 5 128	3.19	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Endosulfan II	33213-65-9		BATD SCP 5 128	3.19	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Endosulfan Sulfate	1031-07-8		BATD SCP 5 128	3.19	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Endrin	72-20-8		BATD SCP 5 128	3.19	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Endrin Aldehyde	7421-93-4		BATD SCP 5 128	3.19	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Endrin Ketone	53494-70-5		BATD SCP 5 128	3.19	ng/g - wet wt	U	

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	ISDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	IDL
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	gamma-BHC	58-89-9		BATD SOP 5 128	3.19	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	gamma-Chlordane	5103-74-2		BATD SOP 5 128	3.19	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Heptachlor	76-44-8		BATD SOP 5 128	3.19	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	4.65	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Methoxychlor	72-43-5		BATD SOP 5 128	3.19	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Technical chlordane	57-74-9		BATD SOP 5 128	189.28	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Toxaphene	8001-35-2		BATD SOP 5 128	79.70	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Aroclor-1016	12674-11-2		BATD SOP 5 128	39.85	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Aroclor-1221	1104-28-2		BATD SOP 5 128	39.85	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Aroclor-1232	11141-16-5		BATD SOP 5 128	39.85	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Aroclor-1242	53469-21-9		BATD SOP 5 128	39.85	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Aroclor-1248	12672-29-6		BATD SOP 5 128	39.85	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Aroclor-1254	11097-69-1		BATD SOP 5 128	521.62	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Aroclor-1260	11096-82-5		BATD SOP 5 128	39.85	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Aroclor-1268	11100-14-4		BATD SOP 5 128	31.25	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Total Aroclor			BATD SOP 5 128	552.87	ng/g - wet wt	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Cl3(34)	37680-68-5		BATD SOP 5 128	36	%RECOVERY	U	
L-TS-63-N	W6499	BATD	NORMAL	06/08/01	10/16/01	11/04/01		01-360	Cl6(112)	74472-36-9		BATD SOP 5 128	32	%RECOVERY	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	4,4-DDD	50-29-3		BATD SOP 5 128	5.80	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	4,4-DDE	72-54-8		BATD SOP 5 128	24.79	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	4,4-DDT	72-55-9		BATD SOP 5 128	1.03	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Aldrin	309-00-2		BATD SOP 5 128	2.80	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	alpha-BHC	319-84-6		BATD SOP 5 128	2.80	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	alpha-Chlordane	5103-71-9		BATD SOP 5 128	2.65	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	beta-BHC	319-85-7		BATD SOP 5 128	2.80	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	delta-BHC	319-86-8		BATD SOP 5 128	2.80	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Dieldrin	60-57-1		BATD SOP 5 128	4.14	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Endosulfan I	959-98-8		BATD SOP 5 128	2.80	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Endosulfan II	33213-65-9		BATD SOP 5 128	2.80	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Endosulfan Sulfate	1031-07-8		BATD SOP 5 128	2.80	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Endrin	72-20-8		BATD SOP 5 128	2.80	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Endrin Aldehyde	7421-93-4		BATD SOP 5 128	2.80	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Endrin Ketone	53494-70-5		BATD SOP 5 128	2.80	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	gamma-BHC	58-89-9		BATD SOP 5 128	2.80	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	gamma-Chlordane	5103-74-2		BATD SOP 5 128	2.80	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Heptachlor	76-44-8		BATD SOP 5 128	2.80	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	4.54	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Methoxychlor	72-43-5		BATD SOP 5 128	2.80	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Technical chlordane	57-74-9		BATD SOP 5 128	226.19	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Toxaphene	8001-35-2		BATD SOP 5 128	69.95	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Aroclor-1016	12674-11-2		BATD SOP 5 128	34.98	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Aroclor-1221	1104-28-2		BATD SOP 5 128	34.98	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Aroclor-1232	11141-16-5		BATD SOP 5 128	34.98	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Aroclor-1242	53469-21-9		BATD SOP 5 128	34.98	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Aroclor-1248	12672-29-6		BATD SOP 5 128	34.98	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Aroclor-1254	11097-69-1		BATD SOP 5 128	480.58	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Aroclor-1260	11096-82-5		BATD SOP 5 128	34.98	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Aroclor-1268	11100-14-4		BATD SOP 5 128	49.32	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Total Aroclor			BATD SOP 5 128	529.90	ng/g - wet wt	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Cl3(34)	37680-68-5		BATD SOP 5 128	42	%RECOVERY	U	
L-TS-84-N	W6501	BATD	NORMAL	06/09/01	10/16/01	11/05/01		01-360	Cl6(112)	74472-36-9		BATD SOP 5 128	24	%RECOVERY	U	
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-360	4,4-DDD	50-29-3		BATD SOP 5 128	NA	%RECOVERY	U	
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-360	4,4-DDE	72-54-8		BATD SOP 5 128	NA	%RECOVERY	U	
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-360	4,4-DDT	72-55-9		BATD SOP 5 128	NA	%RECOVERY	U	
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-360	Aldrin	309-00-2		BATD SOP 5 128	NA	%RECOVERY	U	
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-360	alpha-BHC	319-84-6		BATD SOP 5 128	NA	%RECOVERY	U	

[illegible]

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	IDL
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	alpha-Chlorzane	5103-71-9		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	beta-BHC	319-85-7		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	delta-BHC	319-86-8		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Dieldrin	60-57-1		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Endosulfan I	959-98-8		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Endosulfan II	33213-65-9		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Endosulfan Sulfate	1031-07-8		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Endrin	72-20-8		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Endrin Aldehyde	7421-93-4		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Endrin Ketone	53494-70-5		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	gamma-BHC	58-89-9		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	gamma-Chlordane	5103-74-2		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Heptachlor	76-44-8		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Methoxychlor	72-43-5		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Technical chlorzane	57-74-9		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Toxaphene	8001-35-2		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Aroclor-1016	12674-11-2		BATD SOP 5 128	80	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Aroclor-1221	1104-28-2		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Aroclor-1232	11141-16-5		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Aroclor-1242	53469-21-9		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Aroclor-1248	12672-29-6		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Aroclor-1254	11097-69-1		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Aroclor-1260	11096-82-5		BATD SOP 5 128	72	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Aroclor-1268	11100-14-4		BATD SOP 5 128	NA	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	Total Aroclor			BATD SOP 5 128	66	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	CB(34)	37680-68-5		BATD SOP 5 128	62	%RECOVERY		
NA	ZL77LCS#2	BATD	LCS	NA	10/16/01	11/02/01		01-380	CB(112)	174472-36-9		BATD SOP 5 128	65	%RECOVERY		

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	IDL
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	4,4'-DDD	50-29-3		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	4,4'-DDE	72-54-8		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	4,4'-DDT	72-55-9		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Aldrin	309-00-2		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	alpha-BHC	319-84-6		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	alpha-Chlordane	5103-71-9		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	beta-BHC	319-85-7		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	delta-BHC	319-86-8		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Dieldrin	60-57-1		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Endosulfan I	959-98-8		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Endosulfan II	33213-65-9		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Endosulfan Sulfate	1031-07-6		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Endrin	72-20-8		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Endrin Aldehyde	7421-93-4		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Endrin Ketone	53494-70-5		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	gamma-BHC	58-89-9		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	gamma-Chlordane	5103-74-2		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Heptachlor	76-44-8		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Methoxychlor	72-43-5		BATD SOP 5 128	8.54	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Technical chlordane	57-74-9		BATD SOP 5 128	1067.35	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Toxaphene	8001-35-2		BATD SOP 5 128	213.47	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Aroclor-1016	12674-11-2		BATD SOP 5 128	106.73	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Aroclor-1221	1104-28-2		BATD SOP 5 128	106.73	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Aroclor-1232	11141-16-6		BATD SOP 5 128	106.73	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Aroclor-1242	53469-21-9		BATD SOP 5 128	106.73	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Aroclor-1248	12672-29-8		BATD SOP 5 128	106.73	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Aroclor-1254	11067-69-1		BATD SOP 5 128	106.73	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Aroclor-1260	11096-82-5		BATD SOP 5 128	106.73	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Aroclor-1268	11100-14-4		BATD SOP 5 128	106.73	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Total Aroclor			BATD SOP 5 128	853.88	ng/g - wet wt	U	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Cl(34)	37880-68-5		BATD SOP 5 128	0	%RECOVERY	A	
INA	ZM05PB	BATD	P BLANK	NA	10/23/01	11/12/01		01-568	Cl(112)	74472-36-9		BATD SOP 5 128	0	%RECOVERY	A	
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	4,4'-DDD	50-29-3		BATD SOP 5 128	80	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	4,4'-DDE	72-54-8		BATD SOP 5 128	77	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	4,4'-DDT	72-55-9		BATD SOP 5 128	60	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Aldrin	309-00-2		BATD SOP 5 128	84	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	alpha-BHC	319-84-6		BATD SOP 5 128	60	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	alpha-Chlordane	5103-71-9		BATD SOP 5 128	72	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	beta-BHC	319-85-7		BATD SOP 5 128	70	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	delta-BHC	319-86-8		BATD SOP 5 128	67	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Dieldrin	60-57-1		BATD SOP 5 128	76	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Endosulfan I	959-98-8		BATD SOP 5 128	64	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Endosulfan II	33213-65-9		BATD SOP 5 128	63	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Endosulfan Sulfate	1031-07-6		BATD SOP 5 128	75	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Endrin	72-20-8		BATD SOP 5 128	74	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Endrin Aldehyde	7421-93-4		BATD SOP 5 128	38	%RECOVERY	A	
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Endrin Ketone	53494-70-5		BATD SOP 5 128	75	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	gamma-BHC	58-89-9		BATD SOP 5 128	83	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	gamma-Chlordane	5103-74-2		BATD SOP 5 128	75	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Heptachlor	76-44-8		BATD SOP 5 128	67	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	55	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Methoxychlor	72-43-5		BATD SOP 5 128	76	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Technical chlordane	57-74-9		BATD SOP 5 128	NA	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Toxaphene	8001-35-2		BATD SOP 5 128	NA	%RECOVERY		
INA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Aroclor-1016	12674-11-2		BATD SOP 5 128	NA	%RECOVERY		

[illegible]

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	IDL
NA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Aroclor-1221	1104-28-2		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Aroclor-1232	11141-16-6		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Aroclor-1242	53469-21-9		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Aroclor-1248	12672-29-6		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Aroclor-1254	11097-69-1		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Aroclor-1260	11096-82-5		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Aroclor-1268	11100-14-4		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	Total Aroclor			BATD SOP 5.128	NA	%RECOVERY		
NA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	CIS(34)	37680-68-5		BATD SOP 5.128	65	%RECOVERY		
NA	ZM06LCS#1	BATD	LCS	NA	10/23/01	11/12/01		01-568	CIS(112)	74472-36-9		BATD SOP 5.128	74	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	4,4'-DDD	50-29-3		BATD SOP 5.128	87	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	4,4'-DDE	72-54-8		BATD SOP 5.128	862	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	4,4'-DDT	72-55-9		BATD SOP 5.128	83	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Aldrin	308-00-2		BATD SOP 5.128	74	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	alpha-BHC	319-84-6		BATD SOP 5.128	70	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	alpha-Chlordane	5103-71-9		BATD SOP 5.128	76	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	beta-BHC	319-85-7		BATD SOP 5.128	77	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	delta-BHC	319-86-8		BATD SOP 5.128	71	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Dieldrin	60-57-1		BATD SOP 5.128	86	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Endosulfan I	669-98-8		BATD SOP 5.128	58	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Endosulfan II	33213-65-9		BATD SOP 5.128	63	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Endosulfan Sulfate	1031-07-6		BATD SOP 5.128	105	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Endrin	72-20-8		BATD SOP 5.128	77	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Endrin Aldehyde	7421-93-4		BATD SOP 5.128	48	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Endrin Ketone	53494-70-5		BATD SOP 5.128	76	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	gamma-BHC	58-89-9		BATD SOP 5.128	73	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	gamma-Chlordane	5103-74-2		BATD SOP 5.128	79	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Heptachlor	76-44-8		BATD SOP 5.128	78	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Heptachlor Epoxide	1024-57-3		BATD SOP 5.128	67	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Methoxychlor	72-43-5		BATD SOP 5.128	68	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Technical chlordane	57-74-9		BATD SOP 5.128	NA	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Toxaphene	8001-35-2		BATD SOP 5.128	NA	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Aroclor-1016	12674-11-2		BATD SOP 5.128	NA	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Aroclor-1221	1104-28-2		BATD SOP 5.128	NA	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Aroclor-1232	11141-16-6		BATD SOP 5.128	NA	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Aroclor-1242	53469-21-9		BATD SOP 5.128	NA	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Aroclor-1248	12672-29-6		BATD SOP 5.128	NA	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Aroclor-1254	11097-69-1		BATD SOP 5.128	NA	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Aroclor-1260	11096-82-5		BATD SOP 5.128	NA	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Aroclor-1268	11100-14-4		BATD SOP 5.128	NA	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	Total Aroclor			BATD SOP 5.128	NA	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	CIS(34)	37680-68-5		BATD SOP 5.128	69	%RECOVERY		
A-TS-33-P	ZM08MS	BATD	MS	06/09/01	10/23/01	11/12/01		01-568	CIS(112)	74472-36-9		BATD SOP 5.128	71	%RECOVERY		
NA	ZM09SRM	BATD	SRM	NA	10/23/01	11/13/01		01-568	4,4'-DDD	50-29-3		BATD SOP 5.128	0.0	%DIFFERENCE		
NA	ZM09SRM	BATD	SRM	NA	10/23/01	11/13/01		01-568	4,4'-DDE	72-54-8		BATD SOP 5.128	0.0	%DIFFERENCE		
NA	ZM09SRM	BATD	SRM	NA	10/23/01	11/13/01		01-568	4,4'-DDT	72-55-9		BATD SOP 5.128	29.2	%DIFFERENCE		
NA	ZM09SRM	BATD	SRM	NA	10/23/01	11/13/01		01-568	alpha-Chlordane	5103-71-9		BATD SOP 5.128	0.0	%DIFFERENCE		
NA	ZM09SRM	BATD	SRM	NA	10/23/01	11/13/01		01-568	gamma-Chlordane	5103-74-2		BATD SOP 5.128	4.0	%DIFFERENCE		
NA	ZM09SRM	BATD	SRM	NA	10/23/01	11/13/01		01-568	CIS(34)	37680-68-5		BATD SOP 5.128	66	%RECOVERY		
NA	ZM09SRM	BATD	SRM	NA	10/23/01	11/13/01		01-568	CIS(112)	74472-36-9		BATD SOP 5.128	75	%RECOVERY		
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	4,4'-DDD	50-29-3		BATD SOP 5.128	4.55	ng/g - wet wt	J	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	4,4'-DDE	72-54-8		BATD SOP 5.128	155.10	ng/g - wet wt		
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	4,4'-DDT	72-55-9		BATD SOP 5.128	5.16	ng/g - wet wt	J	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Aldrin	308-00-2		BATD SOP 5.128	6.87	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	alpha-BHC	319-84-6		BATD SOP 5.128	8.87	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	alpha-Chlordane	5103-71-9		BATD SOP 5.128	6.23	ng/g - wet wt	J	

[illegible]

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	IDA
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	beta-BHC	319-85-7		BATD SOP 5 126	8.87	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	delta-BHC	319-86-8		BATD SOP 5 126	8.87	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Dieldrin	60-57-1		BATD SOP 5 126	13.01	ng/g - wet wt		
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Endosulfan I	959-88-8		BATD SOP 5 126	8.87	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Endosulfan II	33213-65-9		BATD SOP 5 126	8.87	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Endosulfan Sulfate	1031-07-8		BATD SOP 5 126	8.87	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Endrin	72-20-8		BATD SOP 5 126	8.87	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Endrin Aldehyde	7421-93-4		BATD SOP 5 126	8.87	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Endrin Ketone	53494-70-5		BATD SOP 5 126	8.87	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	gamma-BHC	58-89-9		BATD SOP 5 126	8.87	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	gamma-Chlordane	5103-74-2		BATD SOP 5 126	8.87	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Heptachlor	76-44-8		BATD SOP 5 126	8.87	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Heptachlor Epoxide	1024-57-3		BATD SOP 5 126	12.26	ng/g - wet wt		
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Methoxychlor	72-43-5		BATD SOP 5 126	8.87	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Technical chlordane	57-74-9		BATD SOP 5 126	312.31	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Toxaphene	8001-35-2		BATD SOP 5 126	221.80	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Aroclor-1016	12674-11-2		BATD SOP 5 126	110.90	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Aroclor-1221	1104-28-2		BATD SOP 5 126	110.90	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Aroclor-1232	11141-18-5		BATD SOP 5 126	110.90	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Aroclor-1242	53489-21-9		BATD SOP 5 126	110.90	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Aroclor-1248	12672-29-6		BATD SOP 5 126	110.90	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Aroclor-1254	11097-69-1		BATD SOP 5 126	1287.08	ng/g - wet wt		
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Aroclor-1260	11096-82-5		BATD SOP 5 126	110.90	ng/g - wet wt	U	
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Aroclor-1268	11100-14-4		BATD SOP 5 126	133.97	ng/g - wet wt		
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	Total Aroclor			BATD SOP 5 126	1421.04	ng/g - wet wt		
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	C3(34)	37880-68-5		BATD SOP 5 126	74	%RECOVERY		
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	11/14/01		01-568	C8(112)	74472-36-9		BATD SOP 5 126	77	%RECOVERY		
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	4,4'-DDD	50-28-3		BATD SOP 5 126	6.06	ng/g - wet wt	J	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	4,4'-DDE	72-54-8		BATD SOP 5 126	262.34	ng/g - wet wt		
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	4,4'-DDT	72-55-9		BATD SOP 5 126	2.62	ng/g - wet wt	J	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Aldrin	309-00-2		BATD SOP 5 126	12.04	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	alpha-BHC	319-84-6		BATD SOP 5 126	12.04	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	alpha-Chlordane	5103-71-9		BATD SOP 5 126	4.43	ng/g - wet wt	J	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	beta-BHC	319-85-7		BATD SOP 5 126	12.04	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	delta-BHC	319-86-8		BATD SOP 5 126	12.04	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Dieldrin	60-57-1		BATD SOP 5 126	14.80	ng/g - wet wt		
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Endosulfan I	959-88-8		BATD SOP 5 126	12.04	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Endosulfan II	33213-65-9		BATD SOP 5 126	12.04	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Endosulfan Sulfate	1031-07-8		BATD SOP 5 126	12.04	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Endrin	72-20-8		BATD SOP 5 126	12.04	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Endrin Aldehyde	7421-93-4		BATD SOP 5 126	12.04	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Endrin Ketone	53494-70-5		BATD SOP 5 126	12.04	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	gamma-BHC	58-89-9		BATD SOP 5 126	12.04	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	gamma-Chlordane	5103-74-2		BATD SOP 5 126	12.04	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Heptachlor	76-44-8		BATD SOP 5 126	12.04	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Heptachlor Epoxide	1024-57-3		BATD SOP 5 126	20.07	ng/g - wet wt		
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Methoxychlor	72-43-5		BATD SOP 5 126	12.04	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Technical chlordane	57-74-9		BATD SOP 5 126	393.21	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Toxaphene	8001-35-2		BATD SOP 5 126	301.02	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Aroclor-1016	12674-11-2		BATD SOP 5 126	150.51	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Aroclor-1221	1104-28-2		BATD SOP 5 126	150.51	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Aroclor-1232	11141-18-5		BATD SOP 5 126	150.51	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Aroclor-1242	53489-21-9		BATD SOP 5 126	150.51	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Aroclor-1248	12672-29-6		BATD SOP 5 126	150.51	ng/g - wet wt	U	
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Aroclor-1254	11097-69-1		BATD SOP 5 126	1308.13	ng/g - wet wt		
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Aroclor-1260	11096-82-5		BATD SOP 5 126	150.51	ng/g - wet wt	U	

[illegible]

SAMPLE NO	LAB ID	LABORATORY	ICC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	ID#
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Aroclor-1268	11100-14-4		BATD SOP 5 128	373.00	ng/g - wet wt		
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	Total Aroclor			BATD SOP 5 128	1081.13	ng/g - wet wt		
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	C13(34)	37680-68-5		BATD SOP 5 128	85	%RECOVERY		
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	11/13/01		01-568	C15(112)	74472-36-9		BATD SOP 5 128	78	%RECOVERY		
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	4,4'-DDD	50-29-3		BATD SOP 5 128	3.86	ng/g - wet wt	J	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	4,4'-DDE	72-54-8		BATD SOP 5 128	151.76	ng/g - wet wt		
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	4,4'-DDT	72-55-9		BATD SOP 5 128	2.61	ng/g - wet wt	J	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Aldrin	309-00-2		BATD SOP 5 128	8.72	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	alpha-BHC	319-84-6		BATD SOP 5 128	8.72	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	alpha-Chlordane	5103-71-9		BATD SOP 5 128	2.87	ng/g - wet wt	J	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	beta-BHC	319-85-7		BATD SOP 5 128	8.72	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	delta-BHC	319-86-8		BATD SOP 5 128	8.72	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Dieldrin	60-57-1		BATD SOP 5 128	9.55	ng/g - wet wt		
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Endosulfan I	959-99-8		BATD SOP 5 128	8.72	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Endosulfan II	33213-65-9		BATD SOP 5 128	8.72	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Endosulfan Sulfate	1031-07-8		BATD SOP 5 128	8.72	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Endrin	72-20-8		BATD SOP 5 128	8.72	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Endrin Aldehyde	7421-93-4		BATD SOP 5 128	8.72	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Endrin Ketone	53494-70-5		BATD SOP 5 128	8.72	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	gamma-BHC	58-89-9		BATD SOP 5 128	8.72	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	gamma-Chlordane	5103-74-2		BATD SOP 5 128	8.72	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Heptachlor	76-44-8		BATD SOP 5 128	8.72	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	8.96	ng/g - wet wt		
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Methoxychlor	72-43-5		BATD SOP 5 128	8.72	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Technical chlordane	57-74-8		BATD SOP 5 128	232.15	ng/g - wet wt	J	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Toxaphene	8001-35-2		BATD SOP 5 128	217.98	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Aroclor-1016	12674-11-2		BATD SOP 5 128	106.99	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Aroclor-1221	1104-28-2		BATD SOP 5 128	106.99	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Aroclor-1232	11141-16-5		BATD SOP 5 128	106.99	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Aroclor-1242	53469-21-9		BATD SOP 5 128	106.99	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Aroclor-1248	12672-29-6		BATD SOP 5 128	106.99	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Aroclor-1254	11097-69-1		BATD SOP 5 128	936.74	ng/g - wet wt		
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Aroclor-1260	11096-82-5		BATD SOP 5 128	106.99	ng/g - wet wt	U	
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Aroclor-1268	11100-14-4		BATD SOP 5 128	123.83	ng/g - wet wt		
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	Total Aroclor			BATD SOP 5 128	1060.57	ng/g - wet wt		
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	C13(34)	37680-68-5		BATD SOP 5 128	68	%RECOVERY		
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	11/13/01		01-568	C15(112)	74472-36-9		BATD SOP 5 128	79	%RECOVERY		
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	4,4'-DDD	50-29-3		BATD SOP 5 128	12.68	ng/g - wet wt		
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	4,4'-DDE	72-54-8		BATD SOP 5 128	480.85	ng/g - wet wt	D	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	4,4'-DDT	72-55-9		BATD SOP 5 128	4.49	ng/g - wet wt	J	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Aldrin	309-00-2		BATD SOP 5 128	7.98	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	alpha-BHC	319-84-6		BATD SOP 5 128	7.98	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	alpha-Chlordane	5103-71-9		BATD SOP 5 128	32.92	ng/g - wet wt		
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	beta-BHC	319-85-7		BATD SOP 5 128	7.98	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	delta-BHC	319-86-8		BATD SOP 5 128	7.98	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Dieldrin	60-57-1		BATD SOP 5 128	24.41	ng/g - wet wt		
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Endosulfan I	959-99-8		BATD SOP 5 128	7.98	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Endosulfan II	33213-65-9		BATD SOP 5 128	7.98	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Endosulfan Sulfate	1031-07-8		BATD SOP 5 128	7.98	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Endrin	72-20-8		BATD SOP 5 128	7.98	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Endrin Aldehyde	7421-93-4		BATD SOP 5 128	7.98	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Endrin Ketone	53494-70-5		BATD SOP 5 128	7.98	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	gamma-BHC	58-89-9		BATD SOP 5 128	7.98	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	gamma-Chlordane	5103-74-2		BATD SOP 5 128	7.98	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Heptachlor	76-44-8		BATD SOP 5 128	7.98	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	40.61	ng/g - wet wt		

[illegible]

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	IDL
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Methoxychlor	72-43-5		BATD SOP 5 128	7.98	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Technical chlordane	57-74-9		BATD SOP 5 128	333.22	ng/g - wet wt	J	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Toxaphene	8001-35-2		BATD SOP 5 128	199.62	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Aroclor 1016	12674-11-2		BATD SOP 5 128	99.81	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Aroclor 1221	1104-28-2		BATD SOP 5 128	99.81	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Aroclor 1232	11141-16-5		BATD SOP 5 128	99.81	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Aroclor 1242	53469-21-9		BATD SOP 5 128	99.81	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Aroclor 1248	12672-29-6		BATD SOP 5 128	99.81	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Aroclor 1254	11097-89-1		BATD SOP 5 128	1206.94	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Aroclor 1260	11096-82-5		BATD SOP 5 128	99.81	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Aroclor 1268	11100-14-4		BATD SOP 5 128	177.31	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Total Aroclor			BATD SOP 5 128	1386.25	ng/g - wet wt	U	
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Cl3(34)	37680-68-5		BATD SOP 5 128	67	%RECOVERY		
A-TS-39-P	W4942	BATD	NORMAL	06/12/01	10/23/01	11/13/01		01-568	Cl5(112)	74472-36-9		BATD SOP 5 128	75	%RECOVERY		
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	4,4'-DDD	50-29-3		BATD SOP 5 128	4.70	ng/g - wet wt	J	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	4,4'-DDE	72-54-8		BATD SOP 5 128	152.94	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	4,4'-DDT	72-55-9		BATD SOP 5 128	3.35	ng/g - wet wt	J	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Aldrin	309-00-2		BATD SOP 5 128	7.86	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	alpha-BHC	319-84-6		BATD SOP 5 128	7.86	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	alpha-Chlordane	5103-71-9		BATD SOP 5 128	12.20	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	beta-BHC	319-85-7		BATD SOP 5 128	7.86	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	delta-BHC	319-86-8		BATD SOP 5 128	7.86	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Dieldrin	60-57-1		BATD SOP 5 128	14.94	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Endosulfan I	959-98-8		BATD SOP 5 128	7.86	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Endosulfan II	33213-65-9		BATD SOP 5 128	7.86	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Endosulfan Sulfate	1031-07-8		BATD SOP 5 128	7.86	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Endrin	72-20-8		BATD SOP 5 128	7.86	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Endrin Aldehyde	7421-93-4		BATD SOP 5 128	7.86	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Endrin Ketone	53494-70-5		BATD SOP 5 128	7.86	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	gamma-BHC	58-89-9		BATD SOP 5 128	7.86	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	gamma-Chlordane	5103-74-2		BATD SOP 5 128	7.86	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Heptachlor	76-44-8		BATD SOP 5 128	7.86	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	29.62	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Methoxychlor	72-43-5		BATD SOP 5 128	7.86	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Technical chlordane	57-74-9		BATD SOP 5 128	681.41	ng/g - wet wt	J	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Toxaphene	8001-35-2		BATD SOP 5 128	196.52	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Aroclor 1016	12674-11-2		BATD SOP 5 128	98.26	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Aroclor 1221	1104-28-2		BATD SOP 5 128	98.26	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Aroclor 1232	11141-16-5		BATD SOP 5 128	98.26	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Aroclor 1242	53469-21-9		BATD SOP 5 128	98.26	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Aroclor 1248	12672-29-6		BATD SOP 5 128	98.26	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Aroclor 1254	11097-89-1		BATD SOP 5 128	799.88	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Aroclor 1260	11096-82-5		BATD SOP 5 128	98.26	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Aroclor 1268	11100-14-4		BATD SOP 5 128	92.30	ng/g - wet wt	J	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Total Aroclor			BATD SOP 5 128	892.18	ng/g - wet wt	U	
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Cl3(34)	37680-68-5		BATD SOP 5 128	67	%RECOVERY		
A-TS-42B-P	W4943	BATD	NORMAL	06/07/01	10/23/01	11/13/01		01-568	Cl5(112)	74472-36-9		BATD SOP 5 128	71	%RECOVERY		
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	4,4'-DDD	50-29-3		BATD SOP 5 128	3.60	ng/g - wet wt	J	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	4,4'-DDE	72-54-8		BATD SOP 5 128	236.99	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	4,4'-DDT	72-55-9		BATD SOP 5 128	5.94	ng/g - wet wt	J	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Aldrin	309-00-2		BATD SOP 5 128	8.67	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	alpha-BHC	319-84-6		BATD SOP 5 128	8.67	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	alpha-Chlordane	5103-71-9		BATD SOP 5 128	1.18	ng/g - wet wt	J	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	beta-BHC	319-85-7		BATD SOP 5 128	8.67	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	delta-BHC	319-86-8		BATD SOP 5 128	8.67	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Dieldrin	60-57-1		BATD SOP 5 128	19.47	ng/g - wet wt	U	

[illegible]

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SEG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	REA
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Endosulfan I	959-98-8		BATD SOP 5 128	8.67	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Endosulfan II	33213-65-9		BATD SOP 5 128	8.67	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Endosulfan Sulfate	1031-07-8		BATD SOP 5 128	8.67	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Endrin	72-20-8		BATD SOP 5 128	8.67	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Endrin Aldehyde	7421-93-4		BATD SOP 5 128	8.67	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Endrin Ketone	53494-70-5		BATD SOP 5 128	8.67	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	gamma-BHC	58-89-9		BATD SOP 5 128	8.67	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	gamma-Chlordane	5103-74-2		BATD SOP 5 128	8.67	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Heptachlor	76-44-8		BATD SOP 5 128	8.67	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	7.42	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Methoxychlor	72-43-5		BATD SOP 5 128	8.67	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Technical chlordane	57-74-9		BATD SOP 5 128	187.41	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Toxaphene	8001-35-2		BATD SOP 5 128	216.73	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Aroclor-1016	12674-11-2		BATD SOP 5 128	108.37	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Aroclor-1221	1104-28-2		BATD SOP 5 128	108.37	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Aroclor-1232	11141-16-5		BATD SOP 5 128	108.37	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Aroclor-1242	53469-21-9		BATD SOP 5 128	108.37	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Aroclor-1248	12672-29-6		BATD SOP 5 128	108.37	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Aroclor-1254	11097-69-1		BATD SOP 5 128	394.22	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Aroclor-1260	11096-82-5		BATD SOP 5 128	108.37	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Aroclor-1268	11100-14-4		BATD SOP 5 128	108.12	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Total Aroclor			BATD SOP 5 128	502.34	ng/g - wet wt	U	
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Cl3(34)	37680-68-5		BATD SOP 5 128	73	%RECOVERY		
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	11/13/01		01-568	Cl3(112)	74477-38-9		BATD SOP 5 128	63	%RECOVERY		
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	4,4'-DDE	50-29-3		BATD SOP 5 128	9.58	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	4,4'-DDD	72-54-8		BATD SOP 5 128	853.18	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	4,4'-DDT	72-55-9		BATD SOP 5 128	8.16	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Aldrin	309-00-2		BATD SOP 5 128	8.16	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	alpha-BHC	319-84-6		BATD SOP 5 128	8.16	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	alpha-Chlordane	5103-71-9		BATD SOP 5 128	22.30	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	beta-BHC	319-85-7		BATD SOP 5 128	8.16	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	delta-BHC	319-86-8		BATD SOP 5 128	8.16	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Dieldrin	60-57-1		BATD SOP 5 128	21.07	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Endosulfan I	959-98-8		BATD SOP 5 128	8.16	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Endosulfan II	33213-65-9		BATD SOP 5 128	8.16	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Endosulfan Sulfate	1031-07-8		BATD SOP 5 128	8.16	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Endrin	72-20-8		BATD SOP 5 128	8.16	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Endrin Aldehyde	7421-93-4		BATD SOP 5 128	8.16	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Endrin Ketone	53494-70-5		BATD SOP 5 128	8.16	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	gamma-BHC	58-89-9		BATD SOP 5 128	8.16	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	gamma-Chlordane	5103-74-2		BATD SOP 5 128	8.16	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Heptachlor	76-44-8		BATD SOP 5 128	8.16	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Heptachlor Epoxide	1024-57-3		BATD SOP 5 128	40.76	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Methoxychlor	72-43-5		BATD SOP 5 128	8.16	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Technical chlordane	57-74-9		BATD SOP 5 128	918.43	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Toxaphene	8001-35-2		BATD SOP 5 128	203.91	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Aroclor-1016	12674-11-2		BATD SOP 5 128	101.96	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Aroclor-1221	1104-28-2		BATD SOP 5 128	101.96	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Aroclor-1232	11141-16-5		BATD SOP 5 128	101.96	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Aroclor-1242	53469-21-9		BATD SOP 5 128	101.96	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Aroclor-1248	12672-29-6		BATD SOP 5 128	101.96	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Aroclor-1254	11097-69-1		BATD SOP 5 128	1512.26	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Aroclor-1260	11096-82-5		BATD SOP 5 128	101.96	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Aroclor-1268	11100-14-4		BATD SOP 5 128	359.93	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Total Aroclor			BATD SOP 5 128	1872.18	ng/g - wet wt	U	
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	11/13/01		01-568	Cl3(34)	37680-68-5		BATD SOP 5 128	63	%RECOVERY		

SAMPLE NO	LAB ID	MOL	ORDL CRCL	DIL FACTOR	PCT MOIST	COMMENTS	SAMPLE SIZE	SAMPLE SIZE UNITS	FINAL RESULT	FINAL QUAL	VALID COMMENT	FRACTION
G-TS-01-P	W4944	8.67		1.724	NA		1.75 G WET		8.67 U			T
G-TS-01-P	W4944	8.67		1.724	NA		1.75 G WET		8.67 U			T
G-TS-01-P	W4944	8.67		1.724	NA		1.75 G WET		8.67 U			T
G-TS-01-P	W4944	8.67		1.724	NA		1.75 G WET		8.67 U			T
G-TS-01-P	W4944	8.67		1.724	NA		1.75 G WET		8.67 UU			T
G-TS-01-P	W4944	8.67		1.724	NA		1.75 G WET		8.67 U			T
G-TS-01-P	W4944	8.67		1.724	NA		1.75 G WET		8.67 U			T
G-TS-01-P	W4944	8.67		1.724	NA		1.75 G WET		8.67 U			T
G-TS-01-P	W4944	8.67		1.724	NA		1.75 G WET		8.67 U			T
G-TS-01-P	W4944	8.67		1.724	NA		1.75 G WET		8.67 U			T
G-TS-01-P	W4944	8.67		1.724	NA		1.75 G WET		8.67 U			T
G-TS-01-P	W4944	1083.66		1.724	NA		1.75 G WET		187.41 U			T
G-TS-01-P	W4944	216.73		1.724	NA		1.75 G WET		216.73 U			T
G-TS-01-P	W4944	108.37		1.724	NA		1.75 G WET		108.37 U			T
G-TS-01-P	W4944	108.37		1.724	NA		1.75 G WET		108.37 U			T
G-TS-01-P	W4944	108.37		1.724	NA		1.75 G WET		108.37 U			T
G-TS-01-P	W4944	108.37		1.724	NA		1.75 G WET		108.37 U			T
G-TS-01-P	W4944	108.37		1.724	NA		1.75 G WET		108.37 U			T
G-TS-01-P	W4944	108.37		1.724	NA		1.75 G WET		394.22 U			T
G-TS-01-P	W4944	108.37		1.724	NA		1.75 G WET		108.37 U			T
G-TS-01-P	W4944	108.37		1.724	NA		1.75 G WET		108.12 U			T
G-TS-01-P	W4944	500.93		1.724	NA		1.75 G WET		502.34 U			T
G-TS-01-P	W4944				NA		1.75 G WET		73 U			T
G-TS-01-P	W4944				NA		1.75 G WET		83 U			T
G-TS-05-P	W4945	8.16		1.724	NA		1.66 G WET		9.56 U			T
G-TS-05-P	W4945	44.86		9.482	NA		1.66 G WET		653.15 U			T
G-TS-05-P	W4945	8.16		1.724	NA		1.66 G WET		8.16 U			T
G-TS-05-P	W4945	8.16		1.724	NA		1.66 G WET		8.16 U			T
G-TS-05-P	W4945	8.16		1.724	NA		1.66 G WET		8.16 U			T
G-TS-05-P	W4945	8.16		1.724	NA		1.66 G WET		22.35 U			T
G-TS-05-P	W4945	8.16		1.724	NA		1.66 G WET		8.16 U			T
G-TS-05-P	W4945	8.16		1.724	NA		1.66 G WET		8.16 U			T
G-TS-05-P	W4945	8.16		1.724	NA		1.66 G WET		21.07 U			T
G-TS-05-P	W4945	8.16		1.724	NA		1.66 G WET		8.16 U			T
G-TS-05-P	W4945	8.16		1.724	NA		1.66 G WET		8.16 U			T
G-TS-05-P	W4945	8.16		1.724	NA		1.66 G WET		8.16 U			T
G-TS-05-P	W4945	8.16		1.724	NA		1.66 G WET		8.16 UU			T
G-TS-05-P	W4945	8.16		1.724	NA		1.66 G WET		8.16 U			T
G-TS-05-P	W4945	8.16		1.724	NA		1.66 G WET		8.16 U			T
G-TS-05-P	W4945	8.16		1.724	NA		1.66 G WET		8.16 U			T
G-TS-05-P	W4945	8.16		1.724	NA		1.66 G WET		40.78 U			T
G-TS-05-P	W4945	8.16		1.724	NA		1.66 G WET		8.16 U			T
G-TS-05-P	W4945	1019.57		1.724	NA		1.66 G WET		918.43 U			T
G-TS-05-P	W4945	203.91		1.724	NA		1.66 G WET		203.91 U			T
G-TS-05-P	W4945	101.96		1.724	NA		1.66 G WET		101.96 U			T
G-TS-05-P	W4945	101.96		1.724	NA		1.66 G WET		101.96 U			T
G-TS-05-P	W4945	101.96		1.724	NA		1.66 G WET		101.96 U			T
G-TS-05-P	W4945	101.96		1.724	NA		1.66 G WET		101.96 U			T
G-TS-05-P	W4945	101.96		1.724	NA		1.66 G WET		101.96 U			T
G-TS-05-P	W4945	101.96		1.724	NA		1.66 G WET		1512.28 U			T
G-TS-05-P	W4945	101.96		1.724	NA		1.66 G WET		101.96 U			T
G-TS-05-P	W4945	101.96		1.724	NA		1.66 G WET		359.93 U			T
G-TS-05-P	W4945	815.66		1.724	NA		1.66 G WET		1872.18 U			T
G-TS-05-P	W4945				NA		1.66 G WET		69 U			T

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB_QUAL	IDL
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	CIS(112)	74472-36-9		BATD SOP 5.128	65	%RECOVERY		
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	4,4'-DDD	50-29-3		BATD SOP 5.128	7.15	ng/g - wet wt	J	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	4,4'-DDE	72-54-8		BATD SOP 5.128	623.52	ng/g - wet wt	D	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	4,4'-DDT	72-55-9		BATD SOP 5.128	6.28	ng/g - wet wt	J	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Aldrin	309-00-2		BATD SOP 5.128	9.03	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	alpha-BHC	319-84-8		BATD SOP 5.128	9.03	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	alpha-Chlordane	5103-71-9		BATD SOP 5.128	21.38	ng/g - wet wt		
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	beta-BHC	319-85-7		BATD SOP 5.128	9.03	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	delta-BHC	319-86-8		BATD SOP 5.128	9.03	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Dieldrin	60-57-1		BATD SOP 5.128	28.59	ng/g - wet wt		
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Endosulfan I	959-98-8		BATD SOP 5.128	9.03	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Endosulfan II	33213-65-9		BATD SOP 5.128	9.03	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Endosulfan Sulfate	1031-07-8		BATD SOP 5.128	9.03	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Endrin	72-20-8		BATD SOP 5.128	9.03	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Endrin Aldehyde	7421-93-4		BATD SOP 5.128	9.03	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Endrin Ketone	53494-70-5		BATD SOP 5.128	9.03	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	gamma-BHC	58-89-9		BATD SOP 5.128	9.03	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	gamma-Chlordane	5103-74-2		BATD SOP 5.128	9.03	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Heptachlor	76-44-8		BATD SOP 5.128	9.03	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Heptachlor Epoxide	1024-57-3		BATD SOP 5.128	37.84	ng/g - wet wt		
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Methoxychlor	72-43-5		BATD SOP 5.128	9.03	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Technical chlordane	57-74-9		BATD SOP 5.128	747.25	ng/g - wet wt	J	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Toxaphene	8001-35-2		BATD SOP 5.128	225.76	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Aroclor-1016	12674-11-2		BATD SOP 5.128	112.88	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Aroclor-1221	1104-28-2		BATD SOP 5.128	112.88	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Aroclor-1232	11141-18-5		BATD SOP 5.128	112.88	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Aroclor-1242	53489-21-9		BATD SOP 5.128	112.88	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Aroclor-1248	12672-29-6		BATD SOP 5.128	112.88	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Aroclor-1254	11097-69-1		BATD SOP 5.128	1331.64	ng/g - wet wt		
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Aroclor-1260	11096-82-5		BATD SOP 5.128	112.88	ng/g - wet wt	U	
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Aroclor-1265	11100-14-4		BATD SOP 5.128	346.44	ng/g - wet wt		
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	Total Aroclor			BATD SOP 5.128	1678.09	ng/g - wet wt		
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	ICI(34)	37680-68-5		BATD SOP 5.128	72	%RECOVERY		
G-TS-19-P	W4946	BATD	NORMAL	06/11/01	10/23/01	11/13/01		01-568	CIS(112)	74472-36-9		BATD SOP 5.128	71	%RECOVERY		
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	4,4'-DDD	50-29-3		BATD SOP 5.128	6.64	ng/g - wet wt	J	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	4,4'-DDE	72-54-8		BATD SOP 5.128	294.13	ng/g - wet wt		
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	4,4'-DDT	72-55-9		BATD SOP 5.128	6.93	ng/g - wet wt	J	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Aldrin	309-00-2		BATD SOP 5.128	9.31	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	alpha-BHC	319-84-8		BATD SOP 5.128	9.31	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	alpha-Chlordane	5103-71-9		BATD SOP 5.128	18.50	ng/g - wet wt		
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	beta-BHC	319-85-7		BATD SOP 5.128	9.31	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	delta-BHC	319-86-8		BATD SOP 5.128	9.31	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Dieldrin	60-57-1		BATD SOP 5.128	13.45	ng/g - wet wt		
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Endosulfan I	959-98-8		BATD SOP 5.128	9.31	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Endosulfan II	33213-65-9		BATD SOP 5.128	9.31	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Endosulfan Sulfate	1031-07-8		BATD SOP 5.128	9.31	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Endrin	72-20-8		BATD SOP 5.128	9.31	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Endrin Aldehyde	7421-93-4		BATD SOP 5.128	9.31	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Endrin Ketone	53494-70-5		BATD SOP 5.128	9.31	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	gamma-BHC	58-89-9		BATD SOP 5.128	9.31	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	gamma-Chlordane	5103-74-2		BATD SOP 5.128	9.31	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Heptachlor	76-44-8		BATD SOP 5.128	9.31	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Heptachlor Epoxide	1024-57-3		BATD SOP 5.128	30.08	ng/g - wet wt		
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Methoxychlor	72-43-5		BATD SOP 5.128	9.31	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Technical chlordane	57-74-9		BATD SOP 5.128	720.49	ng/g - wet wt	J	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Toxaphene	8001-35-2		BATD SOP 5.128	232.69	ng/g - wet wt	U	

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	IDL
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Aroclor-1016	12674-11-2		BATD SOP 5.128	116.34	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Aroclor-1221	1104-28-2		BATD SOP 5.128	116.34	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Aroclor-1232	11141-16-5		BATD SOP 5.128	116.34	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Aroclor-1242	53469-21-9		BATD SOP 5.128	116.34	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Aroclor-1246	12672-29-6		BATD SOP 5.128	116.34	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Aroclor-1254	11097-69-1		BATD SOP 5.128	1362.90	ng/g - wet wt		
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Aroclor-1260	11096-82-5		BATD SOP 5.128	116.34	ng/g - wet wt	U	
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Aroclor-1268	11100-14-4		BATD SOP 5.128	195.91	ng/g - wet wt		
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	Total Aroclor			BATD SOP 5.128	1558.61	ng/g - wet wt		
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	C13(34)	37680-68-5		BATD SOP 5.128	63	%RECOVERY		
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	11/13/01		01-568	C15(112)	74472-36-9		BATD SOP 5.128	73	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	4,4'-DDO	50-29-3		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	4,4'-ODE	72-54-8		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	4,4'-DDT	72-55-9		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Aldrin	309-50-2		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	alpha-BHC	319-84-6		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	alpha-Chlordane	5103-71-9		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	beta-BHC	319-85-7		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	delta-BHC	319-86-8		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Dieldrin	60-57-1		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Endosulfan I	959-98-8		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Endosulfan II	33213-65-9		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Endosulfan Sulfate	1031-07-8		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Endrin	72-20-6		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Endrin Aldehyde	7421-93-4		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Endrin Ketone	53494-70-5		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	gamma-BHC	58-89-9		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	gamma-Chlordane	5103-74-2		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Heptachlor	76-44-8		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Heptachlor Epoxide	1024-67-3		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Mathoxychlor	72-43-5		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Technical chlordane	57-74-9		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Toxaphene	8001-35-2		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Aroclor-1016	12674-11-2		BATD SOP 5.128	59	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Aroclor-1221	1104-28-2		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Aroclor-1232	11141-16-5		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Aroclor-1242	53469-21-9		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Aroclor-1246	12672-29-6		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Aroclor-1254	11097-69-1		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Aroclor-1260	11096-82-5		BATD SOP 5.128	82	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Aroclor-1268	11100-14-4		BATD SOP 5.128	NA	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	Total Aroclor			BATD SOP 5.128	71	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	C13(34)	37680-68-5		BATD SOP 5.128	63	%RECOVERY		
NA	ZM07LCS#2	BATD	LCS	NA	10/23/01	11/12/01		01-568	C15(112)	74472-36-9		BATD SOP 5.128	73	%RECOVERY		

[illegible]

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	HA	HR
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	4,4'-DDD	50-29-3	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	4,4'-DDE	72-54-8	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	4,4'-DDT	72-55-9	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Aldrin	309-00-2	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	alpha-BHC	319-84-6	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	alpha-Chlordane	5103-71-9	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	beta-BHC	319-85-7	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	delta-BHC	319-86-8	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Dieldrin	60-57-1	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Endosulfan I	959-98-6	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Endosulfan II	33213-65-9	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Endosulfan Sulfate	1031-07-8	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Endrin	72-20-6	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Endrin Aldehyde	7421-93-4	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Endrin Ketone	53494-70-5	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	gamma-BHC	58-89-9	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	gamma-Chlordane	5103-74-2	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Heptachlor	76-44-8	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Heptachlor Epoxide	1024-57-3	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Methoxychlor	72-43-5	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Technical chlordane	57-74-9	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Toxaphene	8001-35-2	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Aroclor 1016	12674-11-2	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Aroclor 1221	1104-26-2	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Aroclor 1232	11141-18-5	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Aroclor 1242	53469-21-9	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Aroclor 1248	12672-29-6	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Aroclor 1254	11097-69-1	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Aroclor 1260	11093-92-3	PEST/PCB	BATD SOP 6 128	9.38	ng/g - wet wt	U		9.38
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Aroclor 1268	11100-14-4	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Total Aroclor	NA	PEST/PCB	BATD SOP 5 128	75.02	ng/g - wet wt	U		75.02
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Cis(13a)	37650-68-5	PEST/PCB	BATD SOP 5 128	60.91	%RECOVERY			
INA	ZR02PS	BATD	P Blank	NA	12/27/02	01/18/02		01-672	Cis(14a)	74472-36-9	PEST/PCB	BATD SOP 5 128	76.51	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	4,4'-DDD	50-29-3	PEST/PCB	BATD SOP 5 128	73.73	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	4,4'-DDE	72-54-8	PEST/PCB	BATD SOP 5 128	73.75	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	4,4'-DDT	72-55-9	PEST/PCB	BATD SOP 5 128	79.66	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Aldrin	309-00-2	PEST/PCB	BATD SOP 5 128	73.93	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	alpha-BHC	319-84-6	PEST/PCB	BATD SOP 5 128	68.96	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	alpha-Chlordane	5103-71-9	PEST/PCB	BATD SOP 5 128	83.03	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	beta-BHC	319-85-7	PEST/PCB	BATD SOP 5 128	74.36	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	delta-BHC	319-86-8	PEST/PCB	BATD SOP 5 128	75.22	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Dieldrin	60-57-1	PEST/PCB	BATD SOP 5 128	71.61	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Endosulfan I	959-98-6	PEST/PCB	BATD SOP 5 128	57.34	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Endosulfan II	33213-65-9	PEST/PCB	BATD SOP 5 128	55.62	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Endosulfan Sulfate	1031-07-8	PEST/PCB	BATD SOP 5 128	71.69	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Endrin	72-20-6	PEST/PCB	BATD SOP 5 128	70.95	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Endrin Aldehyde	7421-93-4	PEST/PCB	BATD SOP 5 128	44.58	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Endrin Ketone	53494-70-5	PEST/PCB	BATD SOP 5 128	79.98	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	gamma-BHC	58-89-9	PEST/PCB	BATD SOP 5 128	70.14	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	gamma-Chlordane	5103-74-2	PEST/PCB	BATD SOP 5 128	80.56	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Heptachlor	76-44-8	PEST/PCB	BATD SOP 5 128	73.08	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Heptachlor Epoxide	1024-57-3	PEST/PCB	BATD SOP 5 128	71.15	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Methoxychlor	72-43-5	PEST/PCB	BATD SOP 5 128	75.02	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Technical chlordane	57-74-9	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Toxaphene	8001-35-2	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Aroclor 1016	12674-11-2	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Aroclor 1221	1104-26-2	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Aroclor 1232	11141-18-5	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Aroclor 1242	53469-21-9	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Aroclor 1248	12672-29-6	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY			
INA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Aroclor 1254	11097-69-1	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY			

[illegible]

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL IDL	MOL
NA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Aroclor-1260	11096-82-5	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY		
NA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Aroclor-1260	11100-14-4	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY		
NA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	Total Aroclor	NA	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY		
NA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	C13(34)	37680-68-5	PEST/PCB	BATD SOP 5 128	61.91	%RECOVERY		
NA	ZR03LCS1	BATD	LCS	NA	12/27/02	01/18/02		01-672	C15(112)	74472-36-9	PEST/PCB	BATD SOP 5 128	72.96	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	4,4'-DDD	50-29-3	PEST/PCB	BATD SOP 5 128	67.80	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	4,4'-DDE	72-54-8	PEST/PCB	BATD SOP 5 128	101.75	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	4,4'-DDT	72-55-9	PEST/PCB	BATD SOP 5 128	69.83	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Adrin	309-00-2	PEST/PCB	BATD SOP 5 128	78.21	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	alpha-BHC	319-84-6	PEST/PCB	BATD SOP 5 128	72.75	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	alpha-Chlordane	5103-71-9	PEST/PCB	BATD SOP 5 128	79.55	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	beta-BHC	319-85-7	PEST/PCB	BATD SOP 5 128	73.77	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	delta-BHC	319-86-8	PEST/PCB	BATD SOP 5 128	69.05	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Dieldrin	60-57-1	PEST/PCB	BATD SOP 5 128	72.19	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Endosulfan I	959-98-8	PEST/PCB	BATD SOP 5 128	59.57	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Endosulfan II	33213-65-9	PEST/PCB	BATD SOP 5 128	45.56	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Endosulfan Sulfate	1031-07-8	PEST/PCB	BATD SOP 5 128	79.64	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Endrin	72-20-6	PEST/PCB	BATD SOP 5 128	69.08	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Endrin Aldehyde	7421-93-4	PEST/PCB	BATD SOP 5 128	35.66	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Endrin Ketone	53494-70-5	PEST/PCB	BATD SOP 5 128	67.85	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	gamma-BHC	58-89-9	PEST/PCB	BATD SOP 5 128	74.91	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	gamma-Chlordane	5103-74-2	PEST/PCB	BATD SOP 5 128	77.35	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Heptachlor	76-44-8	PEST/PCB	BATD SOP 5 128	72.97	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Heptachlor Epoxide	1024-57-3	PEST/PCB	BATD SOP 5 128	73.22	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Methoxychlor	72-43-5	PEST/PCB	BATD SOP 5 128	58.27	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Technical chlordane	57-74-9	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Toxaphene	8001-35-2	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Aroclor-1016	12674-11-2	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Aroclor-1221	1104-28-2	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Aroclor-1232	11141-16-5	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Aroclor-1242	53499-21-9	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Aroclor-1246	12672-29-6	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Aroclor-1254	11097-69-1	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Aroclor-1260	11096-82-5	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Aroclor-1268	11100-14-4	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	Total Aroclor	NA	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	C13(34)	37680-68-5	PEST/PCB	BATD SOP 5 128	61.84	%RECOVERY		
LPX-LB-4003-0000-01	ZR05MS1	BATD	MS	5/21/2001	12/27/02	01/18/02		01-672	C15(112)	74472-36-9	PEST/PCB	BATD SOP 5 128	59.12	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	4,4'-DDD	50-29-3	PEST/PCB	BATD SOP 5 128	69.88	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	4,4'-DDE	72-54-8	PEST/PCB	BATD SOP 5 128	109.77	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	4,4'-DDT	72-55-9	PEST/PCB	BATD SOP 5 128	74.58	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	Adrin	309-00-2	PEST/PCB	BATD SOP 5 128	81.60	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	alpha-BHC	319-84-6	PEST/PCB	BATD SOP 5 128	80.15	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	alpha-Chlordane	5103-71-9	PEST/PCB	BATD SOP 5 128	88.19	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	beta-BHC	319-85-7	PEST/PCB	BATD SOP 5 128	75.76	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	delta-BHC	319-86-8	PEST/PCB	BATD SOP 5 128	77.81	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	Dieldrin	60-57-1	PEST/PCB	BATD SOP 5 128	72.68	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	Endosulfan I	959-98-8	PEST/PCB	BATD SOP 5 128	66.77	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	Endosulfan II	33213-65-9	PEST/PCB	BATD SOP 5 128	52.39	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	Endosulfan Sulfate	1031-07-8	PEST/PCB	BATD SOP 5 128	85.47	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	Endrin	72-20-6	PEST/PCB	BATD SOP 5 128	71.16	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	Endrin Aldehyde	7421-93-4	PEST/PCB	BATD SOP 5 128	35.80	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	Endrin Ketone	53494-70-5	PEST/PCB	BATD SOP 5 128	69.42	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	gamma-BHC	58-89-9	PEST/PCB	BATD SOP 5 128	81.18	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	gamma-Chlordane	5103-74-2	PEST/PCB	BATD SOP 5 128	83.66	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	Heptachlor	76-44-8	PEST/PCB	BATD SOP 5 128	80.80	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	Heptachlor Epoxide	1024-57-3	PEST/PCB	BATD SOP 5 128	75.19	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	Methoxychlor	72-43-5	PEST/PCB	BATD SOP 5 128	59.57	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	Technical chlordane	57-74-9	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	Toxaphene	8001-35-2	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY		
LPX-LB-4003-0000-01	ZR06MSD1	BATD	MSD	5/21/2001	12/27/02	01/18/02		01-672	Aroclor-1016	12674-11-2	PEST/PCB	BATD SOP 5 128	NA	%RECOVERY		

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	IDL	MDL
LPX-18-4003-0000-01	ZR06MSD1	BATD	MSD	6/21/2001	12/27/02	01/18/02		01-672	Aroclor-1221	1104-28-2	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
LPX-18-4003-0000-01	ZR06MSD1	BATD	MSD	6/21/2001	12/27/02	01/18/02		01-672	Aroclor-1232	11141-16-5	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
LPX-18-4003-0000-01	ZR06MSD1	BATD	MSD	6/21/2001	12/27/02	01/18/02		01-672	Aroclor-1242	53459-21-9	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
LPX-18-4003-0000-01	ZR06MSD1	BATD	MSD	6/21/2001	12/27/02	01/18/02		01-672	Aroclor-1248	12672-29-6	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
LPX-18-4003-0000-01	ZR06MSD1	BATD	MSD	6/21/2001	12/27/02	01/18/02		01-672	Aroclor-1254	11097-59-1	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
LPX-18-4003-0000-01	ZR06MSD1	BATD	MSD	6/21/2001	12/27/02	01/18/02		01-672	Aroclor-1260	11098-82-5	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
LPX-18-4003-0000-01	ZR06MSD1	BATD	MSD	6/21/2001	12/27/02	01/18/02		01-672	Aroclor-1268	11100-14-4	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
LPX-18-4003-0000-01	ZR06MSD1	BATD	MSD	6/21/2001	12/27/02	01/18/02		01-672	Total Aroclor	NA	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
LPX-18-4003-0000-01	ZR06MSD1	BATD	MSD	6/21/2001	12/27/02	01/18/02		01-672	C13(34)	37660-68-5	PEST/PCB	BATD SOP 5.128	60.86	%RECOVERY			
LPX-18-4003-0000-01	ZR06MSD1	BATD	MSD	6/21/2001	12/27/02	01/18/02		01-672	C15(112)	74472-36-9	PEST/PCB	BATD SOP 5.128	56.74	%RECOVERY			
NA	ZR04SRM	BATD	SRM	NA	12/27/02	01/18/02		01-672	4,4'-DDD	50-29-3	PEST/PCB	BATD SOP 5.128	7.44	%DIFFERENCE			
NA	ZR04SRM	BATD	SRM	NA	12/27/02	01/18/02		01-672	4,4'-DDE	72-54-6	PEST/PCB	BATD SOP 5.128	1.34	%DIFFERENCE			
NA	ZR04SRM	BATD	SRM	NA	12/27/02	01/18/02		01-672	4,4'-DDT	72-55-9	PEST/PCB	BATD SOP 5.128	16.56	%DIFFERENCE			
NA	ZR04SRM	BATD	SRM	NA	12/27/02	01/18/02		01-672	alpha-Chlordane	5103-71-9	PEST/PCB	BATD SOP 5.128	11.06	%DIFFERENCE			
NA	ZR04SRM	BATD	SRM	NA	12/27/02	01/18/02		01-672	gamma-Chlordane	5103-74-2	PEST/PCB	BATD SOP 5.128	0.00	%DIFFERENCE			
NA	ZR04SRM	BATD	SRM	NA	12/27/02	01/18/02		01-672	C13(34)	37660-68-5	PEST/PCB	BATD SOP 5.128	70.79	%RECOVERY			
NA	ZR04SRM	BATD	SRM	NA	12/27/02	01/18/02		01-672	C15(112)	74472-36-9	PEST/PCB	BATD SOP 5.128	73.91	%RECOVERY			
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	4,4'-DDD	50-29-3	PEST/PCB	BATD SOP 5.128	3.13	ng/g - wet wt			1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	4,4'-DDE	72-54-6	PEST/PCB	BATD SOP 5.128	63.86	ng/g - wet wt			1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	4,4'-DDT	72-55-9	PEST/PCB	BATD SOP 5.128	3.34	ng/g - wet wt			1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Aldrin	309-00-2	PEST/PCB	BATD SOP 5.128	1.53	ng/g - wet wt	U		1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	alpha-BHC	319-84-6	PEST/PCB	BATD SOP 5.128	1.53	ng/g - wet wt	U		1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	alpha-Chlordane	5103-71-9	PEST/PCB	BATD SOP 5.128	11.57	ng/g - wet wt			1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	beta-BHC	319-85-7	PEST/PCB	BATD SOP 5.128	1.53	ng/g - wet wt	U		1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	delta-BHC	319-86-8	PEST/PCB	BATD SOP 5.128	1.53	ng/g - wet wt	U		1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Dieldrin	60-57-1	PEST/PCB	BATD SOP 5.128	11.00	ng/g - wet wt			1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Endosulfan I	959-98-8	PEST/PCB	BATD SOP 5.128	1.53	ng/g - wet wt	U		1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Endosulfan II	33213-65-9	PEST/PCB	BATD SOP 5.128	1.53	ng/g - wet wt	U		1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Endosulfan Sulfate	1031-07-6	PEST/PCB	BATD SOP 5.128	1.53	ng/g - wet wt	U		1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Endrin	72-20-9	PEST/PCB	BATD SOP 5.128	1.53	ng/g - wet wt	U		1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Endrin Aldehyde	7421-93-4	PEST/PCB	BATD SOP 5.128	1.53	ng/g - wet wt	U		1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Endrin Ketone	53494-70-5	PEST/PCB	BATD SOP 5.128	1.53	ng/g - wet wt	U		1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	gamma-BHC	58-89-5	PEST/PCB	BATD SOP 5.128	1.53	ng/g - wet wt	U		1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	gamma-Chlordane	5103-74-2	PEST/PCB	BATD SOP 5.128	9.26	ng/g - wet wt			1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Heptachlor	76-44-8	PEST/PCB	BATD SOP 5.128	1.53	ng/g - wet wt	U		1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Heptachlor Epoxide	1024-57-3	PEST/PCB	BATD SOP 5.128	19.66	ng/g - wet wt			1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Methoxychlor	72-43-5	PEST/PCB	BATD SOP 5.128	1.53	ng/g - wet wt	U		1.53
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Technical chlordane	57-74-9	PEST/PCB	BATD SOP 5.128	365.27	ng/g - wet wt			19.15
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Toxaphene	6001-35-2	PEST/PCB	BATD SOP 5.128	19.15	ng/g - wet wt	U		19.15
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Aroclor-1016	12674-11-2	PEST/PCB	BATD SOP 5.128	19.15	ng/g - wet wt	U		19.15
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Aroclor-1221	1104-28-2	PEST/PCB	BATD SOP 5.128	19.15	ng/g - wet wt	U		19.15
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Aroclor-1232	11141-16-5	PEST/PCB	BATD SOP 5.128	19.15	ng/g - wet wt	U		19.15
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Aroclor-1242	53459-21-9	PEST/PCB	BATD SOP 5.128	19.15	ng/g - wet wt	U		19.15
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Aroclor-1248	12672-29-6	PEST/PCB	BATD SOP 5.128	19.15	ng/g - wet wt	U		19.15
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Aroclor-1254	11097-59-1	PEST/PCB	BATD SOP 5.128	420.47	ng/g - wet wt			19.15
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Aroclor-1260	11098-82-5	PEST/PCB	BATD SOP 5.128	19.15	ng/g - wet wt	U		19.15
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Aroclor-1268	11100-14-4	PEST/PCB	BATD SOP 5.128	35.29	ng/g - wet wt			19.15
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	Total Aroclor	NA	PEST/PCB	BATD SOP 5.128	435.76	ng/g - wet wt			153.17
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	C13(34)	37660-68-5	PEST/PCB	BATD SOP 5.128	59.20	%RECOVERY			
A-TS-35-N	W6498-1	BATD	Normal	06/12/01	12/27/02	01/22/02		01-672	C15(112)	74472-36-9	PEST/PCB	BATD SOP 5.128	60.95	%RECOVERY			
A-TS-57-N	W6492-1	BATD	Normal	06/08/01	12/27/02	01/22/02		01-672	4,4'-DDD	50-29-3	PEST/PCB	BATD SOP 5.128	6.07	ng/g - wet wt			2.41
A-TS-57-N	W6492-1	BATD	Normal	06/08/01	12/27/02	01/22/02		01-672	4,4'-DDE	72-54-6	PEST/PCB	BATD SOP 5.128	51.43	ng/g - wet wt			2.41
A-TS-57-N	W6492-1	BATD	Normal	06/08/01	12/27/02	01/22/02		01-672	4,4'-DDT	72-55-9	PEST/PCB	BATD SOP 5.128	5.59	ng/g - wet wt			2.41
A-TS-57-N	W6492-1	BATD	Normal	06/08/01	12/27/02	01/22/02		01-672	Aldrin	309-00-2	PEST/PCB	BATD SOP 5.128	2.41	ng/g - wet wt	U		2.41
A-TS-57-N	W6492-1	BATD	Normal	06/08/01	12/27/02	01/22/02		01-672	alpha-BHC	319-84-6	PEST/PCB	BATD SOP 5.128	2.41	ng/g - wet wt	U		2.41
A-TS-57-N	W6492-1	BATD	Normal	06/08/01	12/27/02	01/22/02		01-672	alpha-Chlordane	5103-71-9	PEST/PCB	BATD SOP 5.128	70.50	ng/g - wet wt			2.41
A-TS-57-N	W6492-1	BATD	Normal	06/08/01	12/27/02	01/22/02		01-672	beta-BHC	319-85-7	PEST/PCB	BATD SOP 5.128	2.41	ng/g - wet wt	U		2.41
A-TS-57-N	W6492-1	BATD	Normal	06/08/01	12/27/02	01/22/02		01-672	delta-BHC	319-86-8	PEST/PCB	BATD SOP 5.128	2.41	ng/g - wet wt	U		2.41
A-TS-57-N	W6492-1	BATD	Normal	06/08/01	12/27/02	01/22/02		01-672	Dieldrin	60-57-1	PEST/PCB	BATD SOP 5.128	16.42	ng/g - wet wt			2.41
A-TS-57-N	W6492-1	BATD	Normal	06/08/01	12/27/02	01/22/02		01-672	Endosulfan I	959-98-8	PEST/PCB	BATD SOP 5.128	2.41	ng/g - wet wt	U		2.41
A-TS-57-N	W6492-1	BATD	Normal	06/08/01	12/27/02	01/22/02		01-672	Endosulfan II	33213-65-9	PEST/PCB	BATD SOP 5.128	2.41	ng/g - wet wt	U		2.41

SAMPLE NO	LAB ID	ORGL CRCL	DIL FACTOR	PCT MOIST	COMMENTS	SAMPLE SIZE	SAMPLE SIZE UNITS	FINAL RESULT	FINAL QUAL	VALID COMMENT	FRACTION
LFX-1B-4003-0000-01	ZR06MSD1		1.667	60.17	Matrix Fish	5.02	G WET				F
LFX-1B-4003-0000-01	ZR06MSD1		1.667	60.17	Matrix Fish	5.02	G WET				F
LFX-1B-4003-0000-01	ZR06MSD1		1.667	60.17	Matrix Fish	5.02	G WET				F
LFX-1B-4003-0000-01	ZR06MSD1		1.667	60.17	Matrix Fish	5.02	G WET				F
LFX-1B-4003-0000-01	ZR06MSD1		1.667	60.17	Matrix Fish	5.02	G WET				F
LFX-1B-4003-0000-01	ZR06MSD1		1.667	60.17	Matrix Fish	5.02	G WET				F
LFX-1B-4003-0000-01	ZR06MSD1		1.667	60.17	Matrix Fish	5.02	G WET				F
LFX-1B-4003-0000-01	ZR06MSD1		1.667	60.17	Matrix Fish	5.02	G WET				F
LFX-1B-4003-0000-01	ZR06MSD1		1.667	60.17	Matrix Fish	5.02	G WET				F
LFX-1B-4003-0000-01	ZR06MSD1		1.667	60.17	Matrix Fish	5.02	G WET				F
NA	ZR04SRM		1.667	69.40		7.94	G WET				T
NA	ZR04SRM		1.667	69.40		7.94	G WET				T
NA	ZR04SRM		1.667	69.40		7.94	G WET				T
NA	ZR04SRM		1.667	69.40		7.94	G WET				T
NA	ZR04SRM		1.667	69.40		7.94	G WET				T
NA	ZR04SRM		1.667	69.40		7.94	G WET				T
NA	ZR04SRM		1.667	69.40		7.94	G WET				T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	3.13			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	63.95			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	3.34			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	1.53:U			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	1.53:U			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	11.57			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	1.53:U			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	1.53:UJ			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	11.00			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	1.53:U			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	1.53:U			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	1.53:U			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	1.53:U			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	1.53:U			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	1.53:UJ			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	9.28			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	1.53:U			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	19.66			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	1.53:U			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	385.27			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	19.15:U			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	19.15:U			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	19.15:U			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	19.15:U			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	19.15:U			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	420.47			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	19.15:U			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	35.29			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	455.76			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	59.20			T
A-TS-35-N	W6488-1		1.667	59.93	Re-extract result	3.92	G WET	60.95			T
A-TS-57-N	W6492-1		1.667	64.25	Re-extract result	2.49	G WET	6.07			T
A-TS-57-N	W6492-1		1.667	64.25	Re-extract result	2.49	G WET	51.43			T
A-TS-57-N	W6492-1		1.667	64.25	Re-extract result	2.49	G WET	5.69			T
A-TS-57-N	W6492-1		1.667	64.25	Re-extract result	2.49	G WET	2.41:U			T
A-TS-57-N	W6492-1		1.667	64.25	Re-extract result	2.49	G WET	2.41:U			T
A-TS-57-N	W6492-1		1.667	64.25	Re-extract result	2.49	G WET	70.60			T
A-TS-57-N	W6492-1		1.667	64.25	Re-extract result	2.49	G WET	2.41:U			T
A-TS-57-N	W6492-1		1.667	64.25	Re-extract result	2.49	G WET	2.41:UJ			T
A-TS-57-N	W6492-1		1.667	64.25	Re-extract result	2.49	G WET	18.42			T
A-TS-57-N	W6492-1		1.667	64.25	Re-extract result	2.49	G WET	2.41:U			T
A-TS-57-N	W6492-1		1.667	64.25	Re-extract result	2.49	G WET	2.41:U			T

SAMPLE NO	LAS ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAS RESULT	UNITS	LAB QUAL	ROL	MDL
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Endosulfan Sulfate	1031-07-8	PEST/PCB	BATD SOP 5 128	13.12	info - wet wt				2.41
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Endosulfan	173-20-8	PEST/PCB	BATD SOP 5 128	2.41	info - wet wt	U			2.41
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Endrin Aldehyde	1421-93-4	PEST/PCB	BATD SOP 5 128	2.41	info - wet wt	U			2.41
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Endrin Ketone	53494-70-5	PEST/PCB	BATD SOP 5 128	2.41	info - wet wt	U			2.41
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	gamma-BHC	58-09-9	PEST/PCB	BATD SOP 5 128	2.41	info - wet wt	U			2.41
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	gamma-Chlordane	5103-74-2	PEST/PCB	BATD SOP 5 128	18.80	info - wet wt				2.41
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Heptachlor	76-44-8	PEST/PCB	BATD SOP 5 128	2.41	info - wet wt	U			2.41
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Heptachlor Epoxide	1024-57-3	PEST/PCB	BATD SOP 5 128	42.16	info - wet wt				2.41
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Methoxychlor	72-43-5	PEST/PCB	BATD SOP 5 128	2.41	info - wet wt	U			2.41
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Technical chlordane	57-74-9	PEST/PCB	BATD SOP 5 128	1827.25	info - wet wt				30.13
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Toxaphene	8001-35-2	PEST/PCB	BATD SOP 5 128	30.13	info - wet wt	U			30.13
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Aroclor-1016	12674-11-2	PEST/PCB	BATD SOP 5 128	30.13	info - wet wt	U			30.13
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Aroclor-1221	1104-28-2	PEST/PCB	BATD SOP 5 128	30.13	info - wet wt	U			30.13
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Aroclor-1232	11141-15-5	PEST/PCB	BATD SOP 5 128	30.13	info - wet wt	U			30.13
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Aroclor-1242	53465-21-8	PEST/PCB	BATD SOP 5 128	30.13	info - wet wt	U			30.13
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Aroclor-1248	12672-29-8	PEST/PCB	BATD SOP 5 128	30.13	info - wet wt	U			30.13
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Aroclor-1254	11097-59-1	PEST/PCB	BATD SOP 5 128	984.85	info - wet wt				30.13
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Aroclor-1260	11009-82-5	PEST/PCB	BATD SOP 5 128	30.13	info - wet wt	U			30.13
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Aroclor-1268	11100-14-4	PEST/PCB	BATD SOP 5 128	36.45	info - wet wt				30.13
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Total Aroclor	NA	PEST/PCB	BATD SOP 5 128	1021.41	info - wet wt				241.01
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	C13(34)	37680-68-5	PEST/PCB	BATD SOP 5 128	80.33	RECOVERY				
A-TS-57-N	WE492-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	C15(112)	74472-36-9	PEST/PCB	BATD SOP 5 128	88.37	RECOVERY				
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	4,4-DDD	50-29-3	PEST/PCB	BATD SOP 5 128	2.24	info - wet wt				2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	4,4-DDE	72-54-8	PEST/PCB	BATD SOP 5 128	18.73	info - wet wt				2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	4,4-DDT	72-55-9	PEST/PCB	BATD SOP 5 128	2.01	info - wet wt	U			2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Aldrin	305-90-2	PEST/PCB	BATD SOP 5 128	2.01	info - wet wt	U			2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	alpha-BHC	319-84-9	PEST/PCB	BATD SOP 5 128	2.01	info - wet wt	U			2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	alpha-Chlordane	5103-71-9	PEST/PCB	BATD SOP 5 128	17.40	info - wet wt				2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	beta-BHC	319-85-7	PEST/PCB	BATD SOP 5 128	2.01	info - wet wt	U			2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	delta-BHC	319-86-9	PEST/PCB	BATD SOP 5 128	2.01	info - wet wt	U			2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Dieldrin	60-57-1	PEST/PCB	BATD SOP 5 128	4.42	info - wet wt				2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Endosulfan I	959-98-8	PEST/PCB	BATD SOP 5 128	2.01	info - wet wt	U			2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Endosulfan II	33213-65-9	PEST/PCB	BATD SOP 5 128	2.01	info - wet wt	U			2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Endosulfan Sulfate	1031-07-8	PEST/PCB	BATD SOP 5 128	2.01	info - wet wt	U			2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Endrin	72-20-8	PEST/PCB	BATD SOP 5 128	2.01	info - wet wt	U			2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Endrin Aldehyde	1421-93-4	PEST/PCB	BATD SOP 5 128	2.01	info - wet wt	U			2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Endrin Ketone	53494-70-5	PEST/PCB	BATD SOP 5 128	2.01	info - wet wt	U			2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	gamma-BHC	58-09-9	PEST/PCB	BATD SOP 5 128	2.01	info - wet wt	U			2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	gamma-Chlordane	5103-74-2	PEST/PCB	BATD SOP 5 128	2.01	info - wet wt	U			2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Heptachlor	76-44-8	PEST/PCB	BATD SOP 5 128	2.01	info - wet wt	U			2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Heptachlor Epoxide	1024-57-3	PEST/PCB	BATD SOP 5 128	2.01	info - wet wt	U			2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Methoxychlor	72-43-5	PEST/PCB	BATD SOP 5 128	2.01	info - wet wt	U			2.01
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Technical chlordane	57-74-9	PEST/PCB	BATD SOP 5 128	184.85	info - wet wt				25.09
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Toxaphene	8001-35-2	PEST/PCB	BATD SOP 5 128	25.09	info - wet wt	U			25.09
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Aroclor-1016	12674-11-2	PEST/PCB	BATD SOP 5 128	25.09	info - wet wt	U			25.09
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Aroclor-1221	1104-28-2	PEST/PCB	BATD SOP 5 128	25.09	info - wet wt	U			25.09
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Aroclor-1232	11141-15-5	PEST/PCB	BATD SOP 5 128	25.09	info - wet wt	U			25.09
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Aroclor-1242	53465-21-8	PEST/PCB	BATD SOP 5 128	25.09	info - wet wt	U			25.09
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Aroclor-1248	12672-29-8	PEST/PCB	BATD SOP 5 128	25.09	info - wet wt	U			25.09
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Aroclor-1254	11097-59-1	PEST/PCB	BATD SOP 5 128	108.28	info - wet wt				25.09
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Aroclor-1260	11009-82-5	PEST/PCB	BATD SOP 5 128	25.09	info - wet wt	U			25.09
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Aroclor-1268	11100-14-4	PEST/PCB	BATD SOP 5 128	42.29	info - wet wt				25.09
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	Total Aroclor	NA	PEST/PCB	BATD SOP 5 128	150.54	info - wet wt	J			200.71
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	C13(34)	37680-68-5	PEST/PCB	BATD SOP 5 128	80.33	RECOVERY				
G-TS-02-N	WE493-1	BATD	Normal	05/30/01	12/27/02	01/22/02	01-672	C15(112)	74472-36-9	PEST/PCB	BATD SOP 5 128	88.21	RECOVERY				
L-TS-63-N	WE495-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	4,4-DDD	50-29-3	PEST/PCB	BATD SOP 5 128	4.03	info - wet wt				2.41
L-TS-63-N	WE495-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	4,4-DDE	72-54-8	PEST/PCB	BATD SOP 5 128	44.56	info - wet wt				2.41
L-TS-63-N	WE495-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	4,4-DDT	72-55-9	PEST/PCB	BATD SOP 5 128	2.41	info - wet wt	U			2.41
L-TS-63-N	WE495-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	Aldrin	305-90-2	PEST/PCB	BATD SOP 5 128	2.41	info - wet wt	U			2.41
L-TS-63-N	WE495-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	alpha-BHC	319-84-9	PEST/PCB	BATD SOP 5 128	2.41	info - wet wt	U			2.41
L-TS-63-N	WE495-1	BATD	Normal	06/08/01	12/27/02	01/22/02	01-672	alpha-Chlordane	5103-71-9	PEST/PCB	BATD SOP 5 128	9.82	info - wet wt				2.41

SAMPLE NO	LAB ID	CRDL CRQL	DEL FACTOR	PCT MOIST	COMMENTS	SAMPLE SIZE	SAMPLE SIZE UNITS	FINAL RESULT	FINAL QUAL	VALID COMMENT	FRACTION
A-TS-57-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WET	13.12			T
A-TS-57-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WET	2.41 U			T
A-TS-57-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WET	2.41 U			T
A-TS-57-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WET	2.41 U			T
A-TS-57-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WET	2.41 UU			T
A-TS-57-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WET	18.80			T
A-TS-57-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WET	2.41 U			T
A-TS-57-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WEY	42.18			T
A-TS-57-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WET	2.41 U			T
A-TS-67-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WET	627.25			T
A-TS-67-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WET	30.13 U			T
A-TS-67-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WET	30.13 U			T
A-TS-67-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WET	30.13 U			T
A-TS-67-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WET	30.13 U			T
A-TS-67-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WET	30.13 U			T
A-TS-67-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WET	30.13 U			T
A-TS-67-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WET	984.96			T
A-TS-67-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WET	30.13 U			T
A-TS-67-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WET	36.45			T
A-TS-67-N	WB492-1		1.067	64.25	Re-extract result	2.49	G WEY	1021.41			T
A-TS-67-N	WB492-1			64.25	Re-extract result	2.49	G WET	58.28			T
A-TS-67-N	WB492-1			64.25	Re-extract result	2.49	G WET	68.37			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.24			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	19.73			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	17.40			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 UU			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	4.42			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WEY	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WEY	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WEY	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 UU			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2.01 U			T
G-TS-02-N	WB493-1		1.067	73.59	Re-extract result	2.99	G WET	2			

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SIG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	MR	MOL
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	beta-BHC	319-85-7	PEST/PCB	BATD SOP 5 128	2.41	ng/g - wet wt	U		2.41
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	delta-BHC	319-86-8	PEST/PCB	BATD SOP 5 128	2.41	ng/g - wet wt	U		2.41
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Endrin	50-67-1	PEST/PCB	BATD SOP 5 128	7.20	ng/g - wet wt	U		2.41
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Endosulfan I	959-98-8	PEST/PCB	BATD SOP 5 128	2.41	ng/g - wet wt	U		2.41
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Endosulfan II	33213-65-9	PEST/PCB	BATD SOP 5 128	2.41	ng/g - wet wt	U		2.41
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Endosulfan Sulfate	1031-07-5	PEST/PCB	BATD SOP 5 128	10.22	ng/g - wet wt	U		2.41
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Endrin	72-20-6	PEST/PCB	BATD SOP 5 128	2.41	ng/g - wet wt	U		2.41
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Endrin Aldehyde	7421-93-4	PEST/PCB	BATD SOP 5 128	2.41	ng/g - wet wt	U		2.41
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Endrin Ketone	53494-70-5	PEST/PCB	BATD SOP 5 128	2.41	ng/g - wet wt	U		2.41
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	gamma-BHC	58-89-9	PEST/PCB	BATD SOP 5 128	2.41	ng/g - wet wt	U		2.41
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	gamma-Chlordane	5103-74-2	PEST/PCB	BATD SOP 5 128	3.29	ng/g - wet wt	U		2.41
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Heptachlor	76-44-8	PEST/PCB	BATD SOP 5 128	2.41	ng/g - wet wt	U		2.41
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Heptachlor Epoxide	1024-57-3	PEST/PCB	BATD SOP 5 128	2.41	ng/g - wet wt	U		2.41
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Methoxychlor	72-43-5	PEST/PCB	BATD SOP 5 128	2.41	ng/g - wet wt	U		2.41
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Technical chlordane	57-74-9	PEST/PCB	BATD SOP 5 128	160.68	ng/g - wet wt	U		30.19
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Toxaphene	6001-35-2	PEST/PCB	BATD SOP 5 128	30.19	ng/g - wet wt	U		30.19
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Aroclor-1018	12674-11-2	PEST/PCB	BATD SOP 5 128	30.19	ng/g - wet wt	U		30.19
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Aroclor-1221	1104-28-2	PEST/PCB	BATD SOP 5 128	30.19	ng/g - wet wt	U		30.19
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Aroclor-1232	11141-16-5	PEST/PCB	BATD SOP 5 128	30.19	ng/g - wet wt	U		30.19
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Aroclor-1242	53469-21-9	PEST/PCB	BATD SOP 5 128	30.19	ng/g - wet wt	U		30.19
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Aroclor-1248	12672-29-6	PEST/PCB	BATD SOP 5 128	30.19	ng/g - wet wt	U		30.19
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Aroclor-1254	11097-89-1	PEST/PCB	BATD SOP 5 128	870.67	ng/g - wet wt	U		30.19
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Aroclor-1260	11096-82-5	PEST/PCB	BATD SOP 5 128	30.19	ng/g - wet wt	U		30.19
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Aroclor-1268	11100-14-4	PEST/PCB	BATD SOP 5 128	43.50	ng/g - wet wt	U		30.19
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	Total Aroclor	NA	PEST/PCB	BATD SOP 5 128	914.28	ng/g - wet wt	U		241.50
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	CIS(34)	37680-68-5	PEST/PCB	BATD SOP 5 128	66.53	%RECOVERY			
L-TS-63-H	W5499-1	BATD	Normal	06/05/01	12/27/02	01/22/02		01-672	CIS(112)	74472-36-9	PEST/PCB	BATD SOP 5 128	61.13	%RECOVERY			
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	4,4'-DDE	50-29-3	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	4,4'-DDE	72-54-6	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	4,4'-DDE	72-55-9	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Aldrin	308-00-2	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	alpha-BHC	319-84-6	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	alpha-Chlordane	5103-71-9	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	beta-BHC	319-85-7	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	delta-BHC	319-86-8	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Dieldrin	50-57-1	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Endosulfan I	959-98-8	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Endosulfan II	33213-65-9	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Endosulfan Sulfate	1031-07-5	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Endrin	72-20-6	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Endrin Aldehyde	7421-93-4	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Endrin Ketone	53494-70-5	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	gamma-BHC	58-89-9	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	gamma-Chlordane	5103-74-2	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Heptachlor	76-44-8	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Heptachlor Epoxide	1024-57-3	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Methoxychlor	72-43-5	PEST/PCB	BATD SOP 5 128	0.75	ng/g - wet wt	U		0.75
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Technical chlordane	57-74-9	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Toxaphene	6001-35-2	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Aroclor-1018	12674-11-2	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Aroclor-1221	1104-28-2	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Aroclor-1232	11141-16-5	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Aroclor-1242	53469-21-9	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Aroclor-1248	12672-29-6	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Aroclor-1254	11097-89-1	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Aroclor-1260	11096-82-5	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Aroclor-1268	11100-14-4	PEST/PCB	BATD SOP 5 128	9.38	ng/g - wet wt	U		9.38
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	Total Aroclor	NA	PEST/PCB	BATD SOP 5 128	75.02	ng/g - wet wt	U		75.02
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	CIS(34)	37680-68-5	PEST/PCB	BATD SOP 5 128	67.41	%RECOVERY			
NA	ZR19PB2	BATD	P Blank	NA	12/28/02	01/23/02		01-672	CIS(112)	74472-36-9	PEST/PCB	BATD SOP 5 128	67.44	%RECOVERY			
NA	ZR14LQ52	BATD	LCS	NA	12/27/02	01/21/02		01-672	4,4'-DDE	50-29-3	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	IDL	MDL
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	4,4'-DDE	72-54-8	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	4,4'-DDT	72-55-9	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Aldrin	309-00-2	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	alpha-BHC	319-84-6	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	alpha-Chlordane	5103-71-9	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	beta-BHC	319-85-7	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	delta-BHC	319-86-8	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Dieldrin	60-57-1	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Endosulfan I	959-98-8	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Endosulfan II	33213-65-9	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Endosulfan Sulfate	1031-07-8	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Endrin	72-20-8	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Endrin Alddehyde	7421-93-4	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Endrin Ketone	53494-70-5	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	gamma-BHC	58-89-9	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	gamma-Chlordane	5103-74-2	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Heptachlor	76-44-8	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Heptachlor Epoxide	1024-57-3	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Methoxychlor	72-43-5	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Technical chlordane	57-74-9	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Toxaphene	8001-35-2	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Aroclor-1016	12674-11-2	PEST/PCB	BATD SOP 5 128	161.21	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Aroclor-1221	1104-28-2	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Aroclor-1232	11141-16-5	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Aroclor-1242	53469-21-9	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Aroclor-1248	12672-29-6	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Aroclor-1254	11097-69-1	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Aroclor-1260	11096-82-5	PEST/PCB	BATD SOP 5 128	76.84	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Aroclor-1268	11100-14-4	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	Total Aroclor	NA	PEST/PCB	BATD SOP 5 128	169.01	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	GIS(34)	37680-68-5	PEST/PCB	BATD SOP 5 128	162.56	%RECOVERY			
INA	ZR14LC82	BATD	LCS	NA	12/27/02	01/21/02		01-672	GIS(112)	74472-36-9	PEST/PCB	BATD SOP 5 128	172.56	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	4,4'-DDP	50-29-3	PEST/PCB	BATD SOP 5 128	74.04	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	4,4'-DDE	72-54-8	PEST/PCB	BATD SOP 5 128	175.96	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	4,4'-DDT	72-55-9	PEST/PCB	BATD SOP 5 128	73.97	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Aldrin	309-00-2	PEST/PCB	BATD SOP 5 128	73.71	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	alpha-BHC	319-84-6	PEST/PCB	BATD SOP 5 128	68.82	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	alpha-Chlordane	5103-71-9	PEST/PCB	BATD SOP 5 128	85.95	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	beta-BHC	319-85-7	PEST/PCB	BATD SOP 5 128	69.25	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	delta-BHC	319-86-8	PEST/PCB	BATD SOP 5 128	68.83	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Dieldrin	60-57-1	PEST/PCB	BATD SOP 5 128	71.85	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Endosulfan I	959-98-8	PEST/PCB	BATD SOP 5 128	34.08	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Endosulfan II	33213-65-9	PEST/PCB	BATD SOP 5 128	32.55	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Endosulfan Sulfate	1031-07-8	PEST/PCB	BATD SOP 5 128	68.03	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Endrin	72-20-8	PEST/PCB	BATD SOP 5 128	70.89	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Endrin Alddehyde	7421-93-4	PEST/PCB	BATD SOP 5 128	32.57	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Endrin Ketone	53494-70-5	PEST/PCB	BATD SOP 5 128	161.43	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	gamma-BHC	58-89-9	PEST/PCB	BATD SOP 5 128	73.39	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	gamma-Chlordane	5103-74-2	PEST/PCB	BATD SOP 5 128	76.72	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Heptachlor	76-44-8	PEST/PCB	BATD SOP 5 128	63.71	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Heptachlor Epoxide	1024-57-3	PEST/PCB	BATD SOP 5 128	69.65	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Methoxychlor	72-43-5	PEST/PCB	BATD SOP 5 128	65.10	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Technical chlordane	57-74-9	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Toxaphene	8001-35-2	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Aroclor-1016	12674-11-2	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Aroclor-1221	1104-28-2	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Aroclor-1232	11141-16-5	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Aroclor-1242	53469-21-9	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Aroclor-1248	12672-29-6	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Aroclor-1254	11097-69-1	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			
GMPLB-5005-0000-01	ZR00MS2	BATD	MS	6/25/2001	12/27/02	01/18/02		01-672	Aroclor-1260	11096-82-5	PEST/PCB	BATD SOP 5 128	INA	%RECOVERY			

[illegible]

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	REL	MDL
GMP-LB-5005-0000-01	ZR09MS2	BATD	MS	6/25/2001	12/27/02	01/19/02		01-672	Aroclor-1268	11100-14-4	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MS	6/25/2001	12/27/02	01/19/02		01-672	Total Aroclor	NA	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MS	6/25/2001	12/27/02	01/19/02		01-672	Cl3(34)	37880-68-5	PEST/PCB	BATD SOP 5.128	56.28	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MS	6/25/2001	12/27/02	01/19/02		01-672	Cl5(112)	74472-36-9	PEST/PCB	BATD SOP 5.128	56.45	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	4,4'-DDD	50-29-3	PEST/PCB	BATD SOP 5.128	76.73	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	4,4'-DDE	72-54-8	PEST/PCB	BATD SOP 5.128	143.28	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	4,4'-DDT	72-55-9	PEST/PCB	BATD SOP 5.128	76.97	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Aldrin	309-00-2	PEST/PCB	BATD SOP 5.128	63.70	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	alpha-BHC	319-84-6	PEST/PCB	BATD SOP 5.128	61.62	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	alpha-Chlordane	5103-71-9	PEST/PCB	BATD SOP 5.128	62.81	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	beta-BHC	319-85-7	PEST/PCB	BATD SOP 5.128	57.24	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	delta-BHC	319-86-8	PEST/PCB	BATD SOP 5.128	61.25	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Dieldrin	60-57-1	PEST/PCB	BATD SOP 5.128	76.51	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Endosulfan I	299-98-8	PEST/PCB	BATD SOP 5.128	41.96	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Endosulfan II	33213-65-9	PEST/PCB	BATD SOP 5.128	41.02	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Endosulfan Sulfate	1031-07-8	PEST/PCB	BATD SOP 5.128	70.48	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Endrin	72-20-8	PEST/PCB	BATD SOP 5.128	79.59	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Endrin Aldehyde	7421-93-4	PEST/PCB	BATD SOP 5.128	40.67	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Endrin Ketone	53494-70-5	PEST/PCB	BATD SOP 5.128	66.80	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	gamma-BHC	58-89-6	PEST/PCB	BATD SOP 5.128	63.18	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	gamma-Chlordane	5103-74-2	PEST/PCB	BATD SOP 5.128	66.66	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Heptachlor	76-44-8	PEST/PCB	BATD SOP 5.128	76.55	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Heptachlor Epoxide	1024-57-3	PEST/PCB	BATD SOP 5.128	73.79	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Methoxychlor	72-43-5	PEST/PCB	BATD SOP 5.128	61.66	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Technical chlordane	57-74-9	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Toxaphene	8001-35-2	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Aroclor-1016	12674-11-2	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Aroclor-1221	1104-28-2	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Aroclor-1242	1141-16-4	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Aroclor-1248	63469-21-9	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Aroclor-1254	12672-29-6	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Aroclor-1260	11097-49-1	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Aroclor-1268	11098-82-5	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Aroclor-1268	11100-14-4	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Total Aroclor	NA	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Cl3(34)	37880-68-5	PEST/PCB	BATD SOP 5.128	51.31	%RECOVERY			
GMP-LB-5005-0000-01	ZR09MS2	BATD	MSD	6/25/2001	12/27/02	01/19/02		01-672	Cl5(112)	74472-36-9	PEST/PCB	BATD SOP 5.128	65.22	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	4,4'-DDD	50-29-3	PEST/PCB	BATD SOP 5.128	56.16	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	4,4'-DDE	72-54-8	PEST/PCB	BATD SOP 5.128	66.95	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	4,4'-DDT	72-55-9	PEST/PCB	BATD SOP 5.128	74.47	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	Aldrin	309-00-2	PEST/PCB	BATD SOP 5.128	62.07	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	alpha-BHC	319-84-6	PEST/PCB	BATD SOP 5.128	74.35	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	alpha-Chlordane	5103-71-9	PEST/PCB	BATD SOP 5.128	76.39	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	beta-BHC	319-85-7	PEST/PCB	BATD SOP 5.128	67.62	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	delta-BHC	319-86-8	PEST/PCB	BATD SOP 5.128	74.21	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	Dieldrin	60-57-1	PEST/PCB	BATD SOP 5.128	66.51	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	Endosulfan I	299-98-8	PEST/PCB	BATD SOP 5.128	62.95	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	Endosulfan II	33213-65-9	PEST/PCB	BATD SOP 5.128	29.68	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	Endosulfan Sulfate	1031-07-8	PEST/PCB	BATD SOP 5.128	48.24	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	Endrin	72-20-8	PEST/PCB	BATD SOP 5.128	67.61	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	Endrin Aldehyde	7421-93-4	PEST/PCB	BATD SOP 5.128	36.20	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	Endrin Ketone	53494-70-5	PEST/PCB	BATD SOP 5.128	63.67	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	gamma-BHC	58-89-6	PEST/PCB	BATD SOP 5.128	60.93	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	gamma-Chlordane	5103-74-2	PEST/PCB	BATD SOP 5.128	64.66	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	Heptachlor	76-44-8	PEST/PCB	BATD SOP 5.128	71.50	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	Heptachlor Epoxide	1024-57-3	PEST/PCB	BATD SOP 5.128	73.79	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	Methoxychlor	72-43-5	PEST/PCB	BATD SOP 5.128	60.38	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	Technical chlordane	57-74-9	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	Toxaphene	8001-35-2	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	Aroclor-1016	12674-11-2	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02		01-672	Aroclor-1221	1104-28-2	PEST/PCB	BATD SOP 5.128	NA	%RECOVERY			

[illegible]

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	REL	MDL
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02	01-672	Arcochlor-1232	11144-18-5	PEST/PCB	BATD SOP 5.126	NA	%RECOVERY				
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02	01-672	Arcochlor-1242	53469-21-9	PEST/PCB	BATD SOP 5.126	NA	%RECOVERY				
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02	01-672	Arcochlor-1246	12672-29-6	PEST/PCB	BATD SOP 5.126	NA	%RECOVERY				
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02	01-672	Arcochlor-1254	11097-69-1	PEST/PCB	BATD SOP 5.126	NA	%RECOVERY				
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02	01-672	Arcochlor-1260	11095-82-5	PEST/PCB	BATD SOP 5.126	NA	%RECOVERY				
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02	01-672	Arcochlor-1266	11100-14-4	PEST/PCB	BATD SOP 5.126	NA	%RECOVERY				
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02	01-672	Total Arcochlor	NA	PEST/PCB	BATD SOP 5.126	NA	%RECOVERY				
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02	01-672	Cl3(34)	37660-66-5	PEST/PCB	BATD SOP 5.126	56.57	%RECOVERY				
CMS-EW-4003-0000-01	ZR11MS3	BATD	MS	07/19/01	12/27/02	01/19/02	01-672	Cl3(112)	74472-36-9	PEST/PCB	BATD SOP 5.126	52.34	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	4,4'-DDD	50-28-3	PEST/PCB	BATD SOP 5.126	56.40	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	4,4'-DDE	72-64-6	PEST/PCB	BATD SOP 5.126	69.76	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	4,4'-DDT	72-66-9	PEST/PCB	BATD SOP 5.126	75.27	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Aldrin	309-00-2	PEST/PCB	BATD SOP 5.126	74.05	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	alpha-BHC	319-84-6	PEST/PCB	BATD SOP 5.126	66.40	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	alpha-Chlordane	5103-71-9	PEST/PCB	BATD SOP 5.126	71.23	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	beta-BHC	319-85-7	PEST/PCB	BATD SOP 5.126	60.67	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	delta-BHC	319-86-6	PEST/PCB	BATD SOP 5.126	66.86	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Dielskin	60-57-1	PEST/PCB	BATD SOP 5.126	66.06	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Endosulfan I	959-99-8	PEST/PCB	BATD SOP 5.126	59.09	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Endosulfan II	33213-65-9	PEST/PCB	BATD SOP 5.126	37.49	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Endosulfan Sulfate	1031-07-6	PEST/PCB	BATD SOP 5.126	52.05	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Endrin	72-20-8	PEST/PCB	BATD SOP 5.126	66.09	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Endrin Aldehyde	7421-93-4	PEST/PCB	BATD SOP 5.126	34.37	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Endrin Ketone	53494-70-5	PEST/PCB	BATD SOP 5.126	56.57	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	gamma-BHC	58-89-9	PEST/PCB	BATD SOP 5.126	70.15	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	gamma-Chlordane	5103-74-2	PEST/PCB	BATD SOP 5.126	75.59	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Hepachlor	76-44-6	PEST/PCB	BATD SOP 5.126	57.51	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Hepachlor Epoxide	1024-67-3	PEST/PCB	BATD SOP 5.126	57.96	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Heptachlor	72-49-5	PEST/PCB	BATD SOP 5.126	60.81	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Technical chlordane	57-74-9	PEST/PCB	BATD SOP 5.126	NA	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Toxaphene	6001-35-2	PEST/PCB	BATD SOP 5.126	NA	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Arcochlor-1016	12674-11-2	PEST/PCB	BATD SOP 5.126	NA	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Arcochlor-1221	1104-28-2	PEST/PCB	BATD SOP 5.126	NA	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Arcochlor-1233	11141-16-5	PEST/PCB	BATD SOP 5.126	NA	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Arcochlor-1242	53469-21-9	PEST/PCB	BATD SOP 5.126	NA	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Arcochlor-1246	12672-29-6	PEST/PCB	BATD SOP 5.126	NA	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Arcochlor-1254	11097-69-1	PEST/PCB	BATD SOP 5.126	NA	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Arcochlor-1260	11095-82-5	PEST/PCB	BATD SOP 5.126	NA	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Arcochlor-1266	11100-14-4	PEST/PCB	BATD SOP 5.126	NA	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Total Arcochlor	NA	PEST/PCB	BATD SOP 5.126	NA	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Cl3(34)	37660-66-5	PEST/PCB	BATD SOP 5.126	54.55	%RECOVERY				
CMS-EW-4003-0000-01	ZR12MSD3	BATD	MSD	07/19/01	12/27/02	01/21/02	01-672	Cl3(112)	74472-36-9	PEST/PCB	BATD SOP 5.126	56.64	%RECOVERY				
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	4,4'-DDD	50-28-3	PEST/PCB	BATD SOP 5.126	1.96	ng/g - wet wt			0.60	
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	4,4'-DDE	72-64-6	PEST/PCB	BATD SOP 5.126	1.97	ng/g - wet wt			0.60	
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	4,4'-DDT	72-66-9	PEST/PCB	BATD SOP 5.126	4.49	ng/g - wet wt			0.60	
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	Aldrin	309-00-2	PEST/PCB	BATD SOP 5.126	0.60	ng/g - wet wt	U		0.60	
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	alpha-BHC	319-84-6	PEST/PCB	BATD SOP 5.126	0.60	ng/g - wet wt	U		0.60	
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	alpha-Chlordane	5103-71-9	PEST/PCB	BATD SOP 5.126	5.76	ng/g - wet wt			0.60	
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	beta-BHC	319-85-7	PEST/PCB	BATD SOP 5.126	0.60	ng/g - wet wt	U		0.60	
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	delta-BHC	319-86-6	PEST/PCB	BATD SOP 5.126	0.60	ng/g - wet wt	U		0.60	
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	Dielskin	60-57-1	PEST/PCB	BATD SOP 5.126	2.76	ng/g - wet wt			0.60	
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	Endosulfan I	959-99-8	PEST/PCB	BATD SOP 5.126	0.60	ng/g - wet wt	U		0.60	
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	Endosulfan II	33213-65-9	PEST/PCB	BATD SOP 5.126	0.60	ng/g - wet wt	U		0.60	
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	Endosulfan Sulfate	1031-07-6	PEST/PCB	BATD SOP 5.126	1.79	ng/g - wet wt			0.60	
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	Endrin	72-20-8	PEST/PCB	BATD SOP 5.126	0.60	ng/g - wet wt	U		0.60	
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	Endrin Aldehyde	7421-93-4	PEST/PCB	BATD SOP 5.126	0.60	ng/g - wet wt	U		0.60	
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	Endrin Ketone	53494-70-5	PEST/PCB	BATD SOP 5.126	0.60	ng/g - wet wt	U		0.60	
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	gamma-BHC	58-89-9	PEST/PCB	BATD SOP 5.126	0.60	ng/g - wet wt	U		0.60	
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	gamma-Chlordane	5103-74-2	PEST/PCB	BATD SOP 5.126	4.58	ng/g - wet wt			0.60	
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	Hepachlor	76-44-6	PEST/PCB	BATD SOP 5.126	0.60	ng/g - wet wt	U		0.60	
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02	01-672	Hepachlor Epoxide	1024-67-3	PEST/PCB	BATD SOP 5.126	0.60	ng/g - wet wt	U		0.60	

[illegible]

SAMPLE NO	LAB ID	LABORATORY	GC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS NO	CLASS	METHOD	LAB RESULT	UNITS	LAB QUAL	REL MOL
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02		01-872	Methoxychlor	72-43-5	PEST/PCB	BATD SOP 5 128	0.90	mg/g - wet wt	U	0.90
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02		01-872	Technical chlordane	57-74-8	PEST/PCB	BATD SOP 5 128	149.65	mg/g - wet wt	DJ	151.09
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02		01-872	Toxaphene	8001-35-2	PEST/PCB	BATD SOP 5 128	7.55	mg/g - wet wt	U	7.55
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02		01-872	Aroclor-1016	12674-11-2	PEST/PCB	BATD SOP 5 128	7.55	mg/g - wet wt	U	7.55
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02		01-872	Aroclor-1221	1104-26-2	PEST/PCB	BATD SOP 5 128	7.55	mg/g - wet wt	U	7.55
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02		01-872	Aroclor-1232	11141-18-5	PEST/PCB	BATD SOP 5 128	7.55	mg/g - wet wt	U	7.55
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02		01-872	Aroclor-1242	53469-21-9	PEST/PCB	BATD SOP 5 128	7.55	mg/g - wet wt	U	7.55
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02		01-872	Aroclor-1248	12672-29-5	PEST/PCB	BATD SOP 5 128	7.55	mg/g - wet wt	U	7.55
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02		01-872	Aroclor-1254	11097-69-1	PEST/PCB	BATD SOP 5 128	131.93	mg/g - wet wt	DJ	151.09
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02		01-872	Aroclor-1260	11098-62-5	PEST/PCB	BATD SOP 5 128	7.55	mg/g - wet wt	U	7.55
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02		01-872	Aroclor-1268	11100-14-4	PEST/PCB	BATD SOP 5 128	31.14	mg/g - wet wt	DJ	151.09
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02		01-872	Total Aroclor	NA	PEST/PCB	BATD SOP 5 128	183.08	mg/g - wet wt		80.44
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02		01-872	C13(34)	37590-66-6	PEST/PCB	BATD SOP 5 128	48.64	%RECOVERY		
CMS-EW-4005-0000-01	W6546DUP	BATD	Duplicate	07/20/01	12/27/02	01/23/02		01-872	C15(112)	74472-36-6	PEST/PCB	BATD SOP 5 128	39.37	%RECOVERY		

SAMPLE NO	LAB ID	CRDL CRCL	DIL FACTOR	PCT MOIST	COMMENTS	SAMPLE SIZE	SAMPLE SIZE UNITS	FINAL RESULT	FINAL QUAL	VALID COMMENT	FRACTION
CMS-EW-4005-0000-01	WS546DUP		1.667	80.36	Matrix Earthworm	9.93	G WET				T
CMS-EW-4005-0000-01	WS546DUP		33.340	80.36	Matrix Earthworm	9.93	G WET				T
CMS-EW-4005-0000-01	WS546DUP		1.667	80.36	Matrix Earthworm	9.93	G WET				T
CMS-EW-4005-0000-01	WS546DUP		1.667	80.36	Matrix Earthworm	9.93	G WET				T
CMS-EW-4005-0000-01	WS546DUP		1.667	80.36	Matrix Earthworm	9.93	G WET				T
CMS-EW-4005-0000-01	WS546DUP		1.667	80.36	Matrix Earthworm	9.93	G WET				T
CMS-EW-4005-0000-01	WS546DUP		1.667	80.36	Matrix Earthworm	9.93	G WET				T
CMS-EW-4005-0000-01	WS546DUP		1.667	80.36	Matrix Earthworm	9.93	G WET				T
CMS-EW-4005-0000-01	WS546DUP		33.340	80.36	Matrix Earthworm	9.93	G WET				T
CMS-EW-4005-0000-01	WS546DUP		1.667	80.36	Matrix Earthworm	9.93	G WET				T
CMS-EW-4005-0000-01	WS546DUP		33.340	80.36	Matrix Earthworm	9.93	G WET				T
CMS-EW-4005-0000-01	WS546DUP		1.667	80.36	Matrix Earthworm	9.93	G WET				T
CMS-EW-4005-0000-01	WS546DUP			80.36	Matrix Earthworm	9.93	G WET				T
CMS-EW-4005-0000-01	WS546DUP			80.36	Matrix Earthworm	9.93	G WET				T

Section 4

Metal and Methyl Mercury Results

QA/QC Narrative

Tree Swallow Tissue and QC Results

QA/QC Narrative

METALS QA/QC SUMMARY
QC Batch 3 -- Tree Swallow Nestling Liver

PROGRAM: Centredale Manor, Tissues

PARAMETER: Metals and Methyl Mercury

LABORATORY: Battelle/Marine Sciences Laboratory, Sequim, Washington

MATRIX: Tree Swallow Nestling Livers

SAMPLE CUSTODY: Nestlings were collected by USGS between May 30 and June 12, 2001. Samples (15) were received at Battelle MSL on July 11, 2001 and were logged into Battelle's sample tracking system. Samples were held frozen until processing and analysis.

QA/QC DATA QUALITY OBJECTIVES

	Reference Method	Range of Recovery	SRM Accuracy	Relative Precision	Quantitation Limit (µg/g dry)
Beryllium	ICP/MS	70-130%	±25%	±30%	0.016
Aluminum	ICP/AES	70-130%	±25%	±30%	4.0
Vanadium	ICP/AES	70-130%	±25%	±30%	0.64
Chromium	ICP/AES	70-130%	±25%	±30%	0.96
Manganese	ICP/AES	70-130%	±25%	±30%	0.064
Iron	ICP/AES	70-130%	±25%	±30%	1.12
Cobalt	ICP/MS	70-130%	±25%	±30%	1.34
Nickel	ICP/MS	70-130%	±25%	±30%	1.14
Copper	ICP/MS	70-130%	±25%	±30%	0.26
Zinc	ICP/AES	70-130%	±25%	±30%	0.384
Arsenic	ICP/MS	70-130%	±25%	±30%	0.12
Selenium	FIAS	70-130%	±25%	±30%	1.6
Molybdenum	ICP/MS	70-130%	±25%	±30%	1.152
Silver	ICP/AES	70-130%	±25%	±30%	0.22
Cadmium	ICP/MS	70-130%	±25%	±30%	0.712
Antimony	ICP/MS	70-130%	±25%	±30%	0.12
Barium	ICP/MS	70-130%	±25%	±30%	0.04
Thallium	ICP/MS	70-130%	±25%	±30%	0.08
Lead	ICP/MS	70-130%	±25%	±30%	0.08
Mercury	CVAA	70-130%	±25%	±30%	0.008
MeHg	CVAf	70-130%	±25%	±30%	0.01

METHOD

Twenty metals were analyzed: aluminum (Al), vanadium (V), chromium (Cr), manganese (Mn), iron (Fe), zinc (Zn), and silver (Ag) by inductively coupled plasma atomic emission spectroscopy (ICP/AES) according to Method L-44; Selenium (Se) by FIAS by SOP MSL-I-001; beryllium (Be), cobalt (Co), nickel (Ni), copper (Cu), arsenic (As), molybdenum (Mo), cadmium (Cd), antimony (Sb), barium (Ba), thallium (Tl), and lead (Pb) by inductively

METALS QA/QC SUMMARY
QC Batch 3 – Tree Swallow Nestling Liver

METHOD (continued)

coupled plasma mass spectrometry (ICP/MS) following method L-42; mercury (Hg) using cold-vapor atomic absorption (CVAAS) according Method L-41. Methyl mercury (MeHg) was also analyzed according to Method L-40.

To prepare tissue samples for analysis, each was frozen then freeze-dried and homogenized using a Spex mixer-mill.

Approximately 0.3 gram aliquots of dried homogenous sample were digested for metals using SOP MSL-I-024, where concentrated nitric and hydrofluoric acids were used. Samples for MeHg were digested following method L-40.

All data were initially reported on a dry weight basis and converted to wet weight in spreadsheet. Dry weight results are included in the project file. Results for all study samples and laboratory duplicates are reported in the electronic data deliverable (EDD) on a µg/g wet weight basis. Results for other laboratory QC (e.g., MS, SRM) are reported in the project file on a dry weight basis, and provided in the EDD on a percent recovery or percent difference basis. Blank data are also reported on a dry weight basis, as reporting these data on a wet weight basis is not appropriate given that there is no applicable percent dry weight for the blank. A percent dry weight is necessary to convert data from a dry to wet weight basis.

HOLDING TIMES

Samples were held frozen until freeze-dried, followed by digestion and analysis. All samples were digested and analyzed within the six month holding time for metals and the 28-day holding time for Hg (defined as beginning from the time that tissue samples were removed from the freezer for processing and ending once tissue homogenates were placed in the freeze-dryer). The following list summarizes all drying, digestion and analysis dates:

Task	Date Digested	Date Analyzed
HF:HNO ₃	8/27/01	
Hg		8/30/01
ICP-MS		8/31/01
ICP/AES		11/10/01
FIAS-Se		11/7/01
MeHg	8/30/01	9/4-5/01

METALS QA/QC SUMMARY
QC Batch 3 -- Tree Swallow Nestling Liver

DETECTION LIMITS

The target quantitation limit was met for all metals. The MDL was determined by multiplying the standard deviation of the results of a minimum of 7 replicate low level spikes by the Student's t value at the 99th percentile. The QL was determined by multiplying the MDL by 4. The MDL has been provided on a wet weight basis.

METHOD BLANKS

One blank was analyzed. Results were less than the QL for all metals, except As, Ba, and Pb. Sample results for these metals were not greater than ten times blank values and data have been B flagged on the final report tables.

Results are reported on a dry weight basis.

BLANK SPIKES

One reagent water sample was spiked with all metals, except MeHg. All recoveries met the required QC criteria, except Fe.

Results are provided in $\mu\text{g/g}$ dry weight in the studyfile and on a percent recovery basis in the EDD.

MATRIX SPIKES

One sample was spiked with all metals; a matrix spike and matrix spike duplicate was also prepared for MeHg. A matrix spike duplicate was not prepared for all metals due to limited sample volumes.

All recoveries met the required QC criteria, except Zn and Hg. For Zn, the spiking level was inappropriate to the native concentration. Hg was lost during digestion when a small crack developed in the Teflon bomb and Hg escaped. Other metals were not affected. Due to the small amount of sample available, there was not sufficient sample to redigest and reanalyze. Note that Hg results from other QC samples (blank spike and SRM) were acceptable, suggesting the procedure was in control.

Results are provided in $\mu\text{g/g}$ dry weight in the studyfile and on a percent recovery basis in the EDD.

REPLICATES

One sample was analyzed in duplicate. RPD values for all metals were within the QC limits of $\pm 30\%$, except Al, Cr, Ni, As and Sb. All results were less than the reporting limit and some less than the detection limit for these metals. Due to the limited amount and texture of the samples, this could be an indication of poor homogeneity.

Results are provided in $\mu\text{g/g}$ dry weight in the studyfile and on a wet weight basis in the EDD.

METALS QA/QC SUMMARY
QC Batch 3 – Tree Swallow Nestling Liver

SRM

One matrix-appropriate standard reference material (SRM) was analyzed; DOLT-2, Dogfish liver, obtained from the National Research Council of Canada (NRCC). DORM-2 was analyzed for MeHg.

SRM DOLT-2 has 14 certified metals. Recoveries for all metals except Cr were within the required criteria. The certified value for Cr is less than the reporting limit. Other QC for this metal are within the required criteria. No corrective action was taken. MeHg recovery was within the accepted criteria for DORM-2.

Results are provided in µg/g dry weight in the studyfile and on a percent difference basis in the EDC.

SAMPLE_NO	LAB_ID	LABORATORY	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	CASE	SQG	PARAMETER	CAS_NO	CLASS	METHOD	LAB_RESULT	UNITS	LAB_QUAL	IDL	MOL
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	08/31/01		3	BERYLLIUM	7440-41-7	M	L-42	0.005	UG/G WET	J		0.005
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	11/10/01		3	ALUMINUM	7429-90-5	M	L-44	0.974	UG/G WET	J		1.13
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	11/10/01		3	VANADIUM	7440-62-2	M	L-44	0.0183	UG/G WET	J		0.180
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	11/10/01		3	CHROMIUM	7440-47-3	M	L-44	0.0904	UG/G WET	J		0.271
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	11/10/01		3	MANGANESE	7439-96-5	M	L-44	1.43	UG/G WET	J		0.018
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	11/10/01		3	IRON	7439-89-6	M	L-44	255	UG/G WET	J		0.320
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	08/31/01		3	COBALT	7440-48-4	M	L-42	0.0112	UG/G WET	J		0.379
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	08/31/01		3	NICKEL	7440-02-0	M	L-42	0.0105	UG/G WET	J		0.323
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	08/31/01		3	COPPER	7440-50-8	M	L-42	4.45	UG/G WET	J		0.073
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	11/10/01		3	ZINC	7440-66-6	M	L-44	19.5	UG/G WET	J		0.108
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	08/31/01		3	ARSENIC	7440-38-2	M	L-42	0.0207	UG/G WET	J		0.034
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	11/07/01		3	SELENIUM	7782-49-2	M	MSL-1-30	0.423	UG/G WET	J		0.451
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	08/31/01		3	MOLYBDENUM	13039-06-5	M	L-42	0.478	UG/G WET	J		0.325
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	11/10/01		3	SILVER	7440-22-4	M	L-44	0.00424	UG/G WET	J		0.061
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	08/31/01		3	CADMIUM	7440-43-9	M	L-42	0.0123	UG/G WET	J		0.201
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	08/31/01		3	ANTIMONY	7440-36-0	M	L-42	0.00704	UG/G WET	J		0.034
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	08/31/01		3	BARIUM	7440-39-3	M	L-42	0.0398	UG/G WET	J		0.011
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	08/31/01		3	THALLIUM	7440-28-0	M	L-42	0.00788	UG/G WET	J		0.023
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	08/31/01		3	LEAD	7439-92-1	M	L-42	0.0618	UG/G WET	J		0.023
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/27/01	08/30/01		3	MERCURY	7439-97-6	M	L-41	0.0401	UG/G WET	J		0.0023
A-TS-35-L	1678*139	MSL	NORMAL	06/12/01	08/30/01	09/04/01		3	METHYL MERCURY	22967-92-8	M	L-40	0.0329	UG/G WET	J		0.0037
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	BERYLLIUM	7440-41-7	M	L-42	0.005	UG/G WET	J		0.005
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	11/10/01		3	ALUMINUM	7429-90-5	M	L-44	0.884	UG/G WET	J		1.13
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	11/10/01		3	VANADIUM	7440-62-2	M	L-44	0.180	UG/G WET	J		0.180
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	11/10/01		3	CHROMIUM	7440-47-3	M	L-44	0.0314	UG/G WET	J		0.271
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	11/10/01		3	MANGANESE	7439-96-5	M	L-44	1.35	UG/G WET	J		0.018
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	11/10/01		3	IRON	7439-89-6	M	L-44	233	UG/G WET	J		0.320
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	COBALT	7440-48-4	M	L-42	0.0105	UG/G WET	J		0.379
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	NICKEL	7440-02-0	M	L-42	0.0301	UG/G WET	J		0.323
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	COPPER	7440-50-8	M	L-42	3.65	UG/G WET	J		0.073
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	11/10/01		3	ZINC	7440-66-6	M	L-44	19.5	UG/G WET	J		0.108
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	ARSENIC	7440-38-2	M	L-42	0.0774	UG/G WET	J		0.034
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	11/07/01		3	SELENIUM	7782-49-2	M	MSL-1-30	0.535	UG/G WET	J		0.451
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	MOLYBDENUM	13039-06-5	M	L-42	0.593	UG/G WET	J		0.325
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	11/10/01		3	SILVER	7440-22-4	M	L-44	0.0165	UG/G WET	J		0.061
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	CADMIUM	7440-43-9	M	L-42	0.0165	UG/G WET	J		0.201
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	ANTIMONY	7440-36-0	M	L-42	0.0112	UG/G WET	J		0.034
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	BARIUM	7440-39-3	M	L-42	0.0321	UG/G WET	J		0.011
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	THALLIUM	7440-28-0	M	L-42	0.0110	UG/G WET	J		0.023
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	LEAD	7439-92-1	M	L-42	0.168	UG/G WET	J		0.023
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/27/01	08/30/01		3	MERCURY	7439-97-6	M	L-41	0.0501	UG/G WET	J		0.0023
A-TS-46-L	1678*140	MSL	NORMAL	06/09/01	08/30/01	09/04/01		3	METHYL MERCURY	22967-92-8	M	L-40	0.0375	UG/G WET	J		0.0037
A-TS-48-L	1678*141	MSL	NORMAL	06/07/01	08/27/01	08/31/01		3	BERYLLIUM	7440-41-7	M	L-42	0.005	UG/G WET	J		0.005
A-TS-48-L	1678*141	MSL	NORMAL	06/07/01	08/27/01	11/10/01		3	ALUMINUM	7429-90-5	M	L-44	0.285	UG/G WET	J		1.13
A-TS-48-L	1678*141	MSL	NORMAL	06/07/01	08/27/01	11/10/01		3	VANADIUM	7440-62-2	M	L-44	0.0260	UG/G WET	J		0.180
A-TS-48-L	1678*141	MSL	NORMAL	06/07/01	08/27/01	11/10/01		3	CHROMIUM	7440-47-3	M	L-44	0.0750	UG/G WET	J		0.271
A-TS-48-L	1678*141	MSL	NORMAL	06/07/01	08/27/01	11/10/01		3	MANGANESE	7439-96-5	M	L-44	1.65	UG/G WET	J		0.018
A-TS-48-L	1678*141	MSL	NORMAL	06/07/01	08/27/01	11/10/01		3	IRON	7439-89-6	M	L-44	255	UG/G WET	J		0.320
A-TS-48-L	1678*141	MSL	NORMAL	06/07/01	08/27/01	08/31/01		3	COBALT	7440-48-4	M	L-42	0.0820	UG/G WET	J		0.379
A-TS-48-L	1678*141	MSL	NORMAL	06/07/01	08/27/01	08/31/01		3	NICKEL	7440-02-0	M	L-42	0.0127	UG/G WET	J		0.323
A-TS-48-L	1678*141	MSL	NORMAL	06/07/01	08/27/01	08/31/01		3	COPPER	7440-50-8	M	L-42	3.83	UG/G WET	J		0.073
A-TS-48-L	1678*141	MSL	NORMAL	06/07/01	08/27/01	11/10/01		3	ZINC	7440-66-6	M	L-44	20.1	UG/G WET	J		0.108
A-TS-48-L	1678*141	MSL	NORMAL	06/07/01	08/27/01	08/31/01		3	ARSENIC	7440-38-2	M	L-42	0.0540	UG/G WET	J		0.034
A-TS-48-L	1678*141	MSL	NORMAL	06/07/01	08/27/01	11/07/01		3	SELENIUM	7782-49-2	M	MSL-1-30	0.555	UG/G WET	J		0.451
A-TS-48-L	1678*141	MSL	NORMAL	06/07/01	08/27/01	08/31/01		3	MOLYBDENUM	13039-06-5	M	L-42	0.509	UG/G WET	J		0.325
A-TS-48-L	1678*141	MSL	NORMAL	06/07/01	08/27/01	11/10/01		3	SILVER	7440-22-4	M	L-44	0.00535	UG/G WET	J		0.061
A-TS-48-L	1678*141	MSL	NORMAL	06/07/01	08/27/01	08/31/01		3	CADMIUM	7440-43-9	M	L-42	0.0160	UG/G WET	J		0.201
A-TS-48-L	1678*141	MSL	NORMAL	06/07/01	08/27/01	08/31/01		3	ANTIMONY	7440-36-0	M	L-42	0.00483	UG/G WET	J		0.034
A-TS-48-L	1678*141	MSL	NORMAL	06/07/01	08/27/01	08/31/01		3	BARIUM	7440-39-3	M	L-42	0.0105	UG/G WET	J		0.011

SAMPLE_NO	LAB_ID	ORDL_CROL	DIL_FACTOR	PCF_MOST	COMMENTS	SAMPLE_SIZE	SAMPLE_SIZE_UNITS	FINAL_RESULT	FINAL_QUAL	VALID_COMMENT	FRACTION
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, ICP-MS	0.299	G_DRY	0.005	U		T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, AES	0.299	G_DRY	1.13	U		T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, AES	0.299	G_DRY	0.18	U		T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, AES	0.299	G_DRY	0.271	U		T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, AES	0.299	G_DRY	1.43			T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, AES	0.299	G_DRY	285	J		T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, ICP-MS	0.299	G_DRY	0.379	U		T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, ICP-MS	0.299	G_DRY	0.323	U		T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, ICP-MS	0.299	G_DRY	4.45			T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, AES	0.299	G_DRY	19.6	J		T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, ICPMS	0.299	G_DRY	0.034	U		T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, FIAS	0.299	G_DRY	0.493	U		T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, ICP-MS	0.299	G_DRY	0.478			T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, AES	0.299	G_DRY	0.061	U		T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, ICP-MS	0.299	G_DRY	0.201	U		T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, ICP-MS	0.299	G_DRY	0.034	U		T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, ICPMS	0.299	G_DRY	0.0308	U		T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, ICP-MS	0.299	G_DRY	0.023	U		T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, ICP-MS	0.299	G_DRY	0.0519	U		T
A-TS-35-L	1678*139		0.690	74.3	Tree Swallow Nestling Liver, CVAA	0.299	G_DRY	0.0401			T
A-TS-35-L	1678*139		1.00	74.3	Tree Swallow Nestling Liver, CVAF	0.077	G_DRY	0.0329			T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, ICP-MS	0.197	G_DRY	0.005	U		T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, AES	0.197	G_DRY	0.884	U		T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, AES	0.197	G_DRY	0.18	U		T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, AES	0.197	G_DRY	0.271	U		T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, AES	0.197	G_DRY	1.35			T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, AES	0.197	G_DRY	233	J		T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, ICP-MS	0.197	G_DRY	0.379	U		T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, ICP-MS	0.197	G_DRY	0.323	U		T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, ICP-MS	0.197	G_DRY	3.85			T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, AES	0.197	G_DRY	19.6	J		T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, ICPMS	0.197	G_DRY	0.0774	U		T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, FIAS	0.197	G_DRY	0.535	U		T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, ICP-MS	0.197	G_DRY	0.589			T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, AES	0.197	G_DRY	0.081	U		T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, ICP-MS	0.197	G_DRY	0.201	U		T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, ICP-MS	0.197	G_DRY	0.034	U		T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, ICPMS	0.197	G_DRY	0.0221	U		T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, ICP-MS	0.197	G_DRY	0.023	U		T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, ICP-MS	0.197	G_DRY	0.198	U		T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, CVAA	0.197	G_DRY	0.0501			T
A-TS-45-L	1678*140		1.02	70.5	Tree Swallow Nestling Liver, CVAF	0.079	G_DRY	0.0375			T
A-TS-45-L	1678*141		0.810	69.5	Tree Swallow Nestling Liver, ICP-MS	0.247	G_DRY	0.005	U		T
A-TS-45-L	1678*141		0.810	69.5	Tree Swallow Nestling Liver, AES	0.247	G_DRY	1.13	U		T
A-TS-45-L	1678*141		0.810	69.5	Tree Swallow Nestling Liver, AES	0.247	G_DRY	0.18	U		T
A-TS-45-L	1678*141		0.810	69.5	Tree Swallow Nestling Liver, AES	0.247	G_DRY	0.271	U		T
A-TS-45-L	1678*141		0.810	69.5	Tree Swallow Nestling Liver, AES	0.247	G_DRY	1.88			T
A-TS-45-L	1678*141		0.810	69.5	Tree Swallow Nestling Liver, AES	0.247	G_DRY	288	J		T
A-TS-45-L	1678*141		0.810	69.5	Tree Swallow Nestling Liver, ICP-MS	0.247	G_DRY	0.379	U		T
A-TS-45-L	1678*141		0.810	69.5	Tree Swallow Nestling Liver, ICP-MS	0.247	G_DRY	0.323	U		T
A-TS-45-L	1678*141		0.810	69.5	Tree Swallow Nestling Liver, ICP-MS	0.247	G_DRY	3.83			T
A-TS-45-L	1678*141		0.810	69.5	Tree Swallow Nestling Liver, AES	0.247	G_DRY	20.1	J		T
A-TS-45-L	1678*141		0.810	69.5	Tree Swallow Nestling Liver, ICPMS	0.247	G_DRY	0.034	U		T
A-TS-45-L	1678*141		0.810	69.5	Tree Swallow Nestling Liver, FIAS	0.247	G_DRY	0.535	U		T
A-TS-45-L	1678*141		0.810	69.5	Tree Swallow Nestling Liver, ICP-MS	0.247	G_DRY	0.609			T
A-TS-45-L	1678*141		0.810	69.5	Tree Swallow Nestling Liver, AES	0.247	G_DRY	0.081	U		T
A-TS-45-L	1678*141		0.810	69.5	Tree Swallow Nestling Liver, ICP-MS	0.247	G_DRY	0.201	U		T
A-TS-45-L	1678*141		0.810	69.5	Tree Swallow Nestling Liver, ICP-MS	0.247	G_DRY	0.034	U		T
A-TS-45-L	1678*141		0.810	69.5	Tree Swallow Nestling Liver, ICP-MS	0.247	G_DRY	0.011	U		T

SAMPLE_NO	LAB_ID	LABORATORY	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	CASE	SDG	PARAMETER	CAS_NO	CLASS	METHOD	LAB_RESULT	UNITS	LAB_QUAL	IDL	MDL
A-TS-48-L	1678-141	MSL	NORMAL	06/07/01	06/27/01	06/31/01			3 THALLIUM	7440-28-0	M	L-42	0.0066	UG/G WET	J		0.023
A-TS-48-L	1678-141	MSL	NORMAL	06/07/01	06/27/01	06/31/01			3 LEAD	7439-92-1	M	L-42	0.0106	UG/G WET	J		0.023
A-TS-48-L	1678-141	MSL	NORMAL	06/07/01	06/27/01	06/31/01			3 MERCURY	7439-97-6	M	L-41	0.0421	UG/G WET			0.0023
A-TS-48-L	1678-141	MSL	NORMAL	06/07/01	06/30/01	06/04/01			3 METHYL MERCURY	22967-82-6	M	L-40	0.0342	UG/G WET			0.0037
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	06/31/01			3 BERYLLIUM	7440-41-7	M	L-42	0.00105	UG/G WET	J		0.005
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	11/10/01			3 ALUMINUM	7429-90-5	M	L-44	0.207	UG/G WET	J		1.13
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	11/10/01			3 VANADIUM	7440-62-2	M	L-44	0.000478	UG/G WET	J		0.180
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	11/10/01			3 CHROMIUM	7440-47-3	M	L-44	0.0736	UG/G WET	J		0.271
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	11/10/01			3 MANGANESE	7439-96-5	M	L-44	1.32	UG/G WET			0.018
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	11/10/01			3 IRON	7439-89-6	M	L-44	445	UG/G WET			0.320
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	06/31/01			3 COBALT	7440-48-4	M	L-42	0.00912	UG/G WET	J		0.379
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	06/31/01			3 NICKEL	7440-02-0	M	L-42	0.0141	UG/G WET	J		0.323
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	06/31/01			3 COPPER	7440-50-8	M	L-42	3.82	UG/G WET			0.073
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	11/10/01			3 ZINC	7440-66-6	M	L-44	18.2	UG/G WET			0.106
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	06/31/01			3 ARSENIC	7440-38-2	M	L-42	0.0214	UG/G WET	JB		0.034
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	11/07/01			3 SELENIUM	7782-49-2	M	MSL L-30	0.553	UG/G WET			0.451
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	06/31/01			3 POLYBODENUM	13939-06-5	M	L-42	0.825	UG/G WET			0.325
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	11/10/01			3 SILVER	7440-22-4	M	L-44	0.061	UG/G WET	J		0.061
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	06/31/01			3 CADMIUM	7440-43-8	M	L-42	0.0262	UG/G WET	J		0.201
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	06/31/01			3 ANTIMONY	7440-36-0	M	L-42	0.00310	UG/G WET	J		0.034
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	06/31/01			3 BARIUM	7440-39-3	M	L-42	0.0352	UG/G WET	JB		0.011
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	06/31/01			3 THALLIUM	7440-28-0	M	L-42	0.00735	UG/G WET	J		0.023
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	06/31/01			3 LEAD	7439-92-1	M	L-42	0.0263	UG/G WET			0.023
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/27/01	06/30/01			3 MERCURY	7439-97-6	M	L-41	0.0450	UG/G WET			0.0023
A-TS-49-L	1678-142	MSL	NORMAL	06/12/01	06/30/01	06/04/01			3 METHYL MERCURY	22967-82-6	M	L-40	0.0363	UG/G WET			0.0037
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	06/31/01			3 BERYLLIUM	7440-41-7	M	L-42	0.005	UG/G WET	J		0.005
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	11/10/01			3 ALUMINUM	7429-90-5	M	L-44	1.06	UG/G WET	J		1.13
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	11/10/01			3 VANADIUM	7440-62-2	M	L-44	0.0048	UG/G WET	J		0.180
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	11/10/01			3 CHROMIUM	7440-47-3	M	L-44	0.226	UG/G WET	J		0.271
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	11/10/01			3 MANGANESE	7439-96-5	M	L-44	1.84	UG/G WET			0.018
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	11/10/01			3 IRON	7439-89-6	M	L-44	166	UG/G WET			0.320
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	06/31/01			3 COBALT	7440-48-4	M	L-42	0.0142	UG/G WET	J		0.379
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	06/31/01			3 NICKEL	7440-02-0	M	L-42	0.0666	UG/G WET	J		0.323
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	06/31/01			3 COPPER	7440-50-8	M	L-42	5.83	UG/G WET			0.073
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	11/10/01			3 ZINC	7440-66-6	M	L-44	26.2	UG/G WET			0.106
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	06/31/01			3 ARSENIC	7440-38-2	M	L-42	0.0673	UG/G WET	JB		0.034
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	11/07/01			3 SELENIUM	7782-49-2	M	MSL L-30	0.774	UG/G WET			0.451
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	06/31/01			3 POLYBODENUM	13939-06-5	M	L-42	0.758	UG/G WET			0.325
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	11/10/01			3 SILVER	7440-22-4	M	L-44	0.0173	UG/G WET	J		0.061
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	06/31/01			3 CADMIUM	7440-43-8	M	L-42	0.0529	UG/G WET	J		0.201
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	06/31/01			3 ANTIMONY	7440-36-0	M	L-42	0.00157	UG/G WET	J		0.034
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	06/31/01			3 BARIUM	7440-39-3	M	L-42	0.0746	UG/G WET	JB		0.011
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	06/31/01			3 THALLIUM	7440-28-0	M	L-42	0.00915	UG/G WET	J		0.023
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	06/31/01			3 LEAD	7439-92-1	M	L-42	0.0265	UG/G WET			0.023
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/27/01	06/30/01			3 MERCURY	7439-97-6	M	L-41	0.0527	UG/G WET			0.0023
A-TS-57-L	1678-143	MSL	NORMAL	06/06/01	06/30/01	06/04/01			3 METHYL MERCURY	22967-82-6	M	L-40	0.0447	UG/G WET			0.0037
G-TS-02-L	1678-144	MSL	NORMAL	05/30/01	06/27/01	06/31/01			3 BERYLLIUM	7440-41-7	M	L-42	0.00619	UG/G WET	J		0.005
G-TS-02-L	1678-144	MSL	NORMAL	05/30/01	06/27/01	11/10/01			3 ALUMINUM	7429-90-5	M	L-44	0.661	UG/G WET	J		1.13
G-TS-02-L	1678-144	MSL	NORMAL	05/30/01	06/27/01	11/10/01			3 VANADIUM	7440-62-2	M	L-44	0.180	UG/G WET	J		0.180
G-TS-02-L	1678-144	MSL	NORMAL	05/30/01	06/27/01	11/10/01			3 CHROMIUM	7440-47-3	M	L-44	0.118	UG/G WET	J		0.271
G-TS-02-L	1678-144	MSL	NORMAL	05/30/01	06/27/01	11/10/01			3 MANGANESE	7439-96-5	M	L-44	1.08	UG/G WET			0.018
G-TS-02-L	1678-144	MSL	NORMAL	05/30/01	06/27/01	11/10/01			3 IRON	7439-89-6	M	L-44	186	UG/G WET			0.320
G-TS-02-L	1678-144	MSL	NORMAL	05/30/01	06/27/01	06/31/01			3 COBALT	7440-48-4	M	L-42	0.00619	UG/G WET	J		0.379
G-TS-02-L	1678-144	MSL	NORMAL	05/30/01	06/27/01	06/31/01			3 NICKEL	7440-02-0	M	L-42	0.0134	UG/G WET	J		0.323
G-TS-02-L	1678-144	MSL	NORMAL	05/30/01	06/27/01	06/31/01			3 COPPER	7440-50-8	M	L-42	6.09	UG/G WET			0.073
G-TS-02-L	1678-144	MSL	NORMAL	05/30/01	06/27/01	11/10/01			3 ZINC	7440-66-6	M	L-44	22.9	UG/G WET			0.106
G-TS-02-L	1678-144	MSL	NORMAL	05/30/01	06/27/01	06/31/01			3 ARSENIC	7440-38-2	M	L-42	0.0283	UG/G WET	JB		0.034
G-TS-02-L	1678-144	MSL	NORMAL	05/30/01	06/27/01	11/07/01			3 SELENIUM	7782-49-2	M	MSL L-30	0.493	UG/G WET			0.451
G-TS-02-L	1678-144	MSL	NORMAL	05/30/01	06/27/01	06/31/01			3 POLYBODENUM	13939-06-5	M	L-42	0.540	UG/G WET			0.325

SAMPLE NO	LAB ID	CRDL CRQL	DIL FACTOR	PCT MOIST	COMMENTS	SAMPLE SIZE	SAMPLE SIZE UNITS	FINAL RESULT	FINAL QUAL	VALID	COMMENT	FRACTION
A-TS-48-L	1678*141		0.610	66.5	Tree Swallow Nestling Liver; ICP-MS	0.247	G DRY	0.023	U			T
A-TS-48-L	1678*141		0.610	66.5	Tree Swallow Nestling Liver; ICP-MS	0.247	G DRY	0.023	U			T
A-TS-48-L	1678*141		0.610	66.5	Tree Swallow Nestling Liver; CVAA	0.247	G DRY	0.042	U			T
A-TS-48-L	1678*141		1.00	66.5	Tree Swallow Nestling Liver; CVAF	0.064	G DRY	0.042	U			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; ICP-MS	0.266	G DRY	0.005	U			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; AES	0.266	G DRY	1.13	U			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; AES	0.266	G DRY	0.18	U			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; AES	0.266	G DRY	0.271	U			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; AES	0.266	G DRY	1.52	U			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; AES	0.266	G DRY	445	J			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; ICP-MS	0.266	G DRY	0.379	U			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; ICP-MS	0.266	G DRY	0.323	U			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; ICP-MS	0.266	G DRY	3.52	U			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; AES	0.266	G DRY	16.2	J			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; ICP-MS	0.266	G DRY	0.034	U			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; FIAS	0.266	G DRY	0.553	U			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; ICP-MS	0.266	G DRY	0.636	U			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; AES	0.266	G DRY	0.081	U			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; ICP-MS	0.266	G DRY	0.201	U			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; ICP-MS	0.266	G DRY	0.034	U			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; ICP-MS	0.266	G DRY	0.0362	U			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; ICP-MS	0.266	G DRY	0.023	U			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; ICP-MS	0.266	G DRY	0.0283	U			T
A-TS-48-L	1678*142		0.671	61.7	Tree Swallow Nestling Liver; CVAA	0.266	G DRY	0.0450	U			T
A-TS-48-L	1678*142		1.00	61.7	Tree Swallow Nestling Liver; CVAF	0.075	G DRY	0.0383	U			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; ICP-MS	0.066	G DRY	0.005	U			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; AES	0.066	G DRY	1.13	U			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; AES	0.066	G DRY	0.18	U			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; AES	0.066	G DRY	0.228	J			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; AES	0.066	G DRY	1.84	U			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; AES	0.066	G DRY	189	J			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; ICP-MS	0.066	G DRY	0.379	U			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; ICP-MS	0.066	G DRY	0.323	U			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; ICP-MS	0.066	G DRY	5.83	U			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; AES	0.066	G DRY	26.2	J			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; ICP-MS	0.066	G DRY	0.0573	U			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; FIAS	0.066	G DRY	0.774	J			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; ICP-MS	0.066	G DRY	0.758	U			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; AES	0.066	G DRY	0.061	U			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; ICP-MS	0.066	G DRY	0.0529	J			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; ICP-MS	0.066	G DRY	0.034	U			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; ICP-MS	0.066	G DRY	0.074	U			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; ICP-MS	0.066	G DRY	0.023	U			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; ICP-MS	0.066	G DRY	0.0285	U			T
A-TS-57-L	1678*143		2.32	76.5	Tree Swallow Nestling Liver; CVAA	0.066	G DRY	0.0527	U			T
A-TS-57-L	1678*143		1.00	76.5	Tree Swallow Nestling Liver; CVAF	0.047	G DRY	0.0447	U			T
G-TS-02-L	1678*144		0.659	74.4	Tree Swallow Nestling Liver; ICP-MS	0.300	G DRY	0.005	U			T
G-TS-02-L	1678*144		0.659	74.4	Tree Swallow Nestling Liver; AES	0.300	G DRY	1.13	U			T
G-TS-02-L	1678*144		0.659	74.4	Tree Swallow Nestling Liver; AES	0.300	G DRY	0.18	U			T
G-TS-02-L	1678*144		0.659	74.4	Tree Swallow Nestling Liver; AES	0.300	G DRY	0.271	U			T
G-TS-02-L	1678*144		0.659	74.4	Tree Swallow Nestling Liver; AES	0.300	G DRY	1.06	U			T
G-TS-02-L	1678*144		0.659	74.4	Tree Swallow Nestling Liver; AES	0.300	G DRY	188	J			T
G-TS-02-L	1678*144		0.659	74.4	Tree Swallow Nestling Liver; ICP-MS	0.300	G DRY	0.379	U			T
G-TS-02-L	1678*144		0.659	74.4	Tree Swallow Nestling Liver; ICP-MS	0.300	G DRY	0.323	U			T
G-TS-02-L	1678*144		0.659	74.4	Tree Swallow Nestling Liver; ICP-MS	0.300	G DRY	6.09	U			T
G-TS-02-L	1678*144		0.659	74.4	Tree Swallow Nestling Liver; AES	0.300	G DRY	22.9	J			T
G-TS-02-L	1678*144		0.659	74.4	Tree Swallow Nestling Liver; ICP-MS	0.300	G DRY	0.034	U			T
G-TS-02-L	1678*144		0.659	74.4	Tree Swallow Nestling Liver; FIAS	0.300	G DRY	0.493	U			T
G-TS-02-L	1678*144		0.659	74.4	Tree Swallow Nestling Liver; ICP-MS	0.300	G DRY	0.54	U			T

SAMPLE_NO	LAB_ID	LABORATORY	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	CASE	SDG	PARAMETER	CAS_NO	CLASS	METHOD	LAB_RESULT	UNITS	LAB_QUAL	IDL	MDL
G-TS-02-L	1678*144	MSL	NORMAL	05/30/01	08/27/01	11/10/01		3	SILVER	7440-22-4	M	L-44	0.0057	UG/G WET	J		0.061
G-TS-02-L	1678*144	MSL	NORMAL	05/30/01	08/27/01	08/31/01		3	CADMIUM	7440-43-9	M	L-42	0.00609	UG/G WET	J		0.201
G-TS-02-L	1678*144	MSL	NORMAL	05/30/01	08/27/01	08/31/01		3	ANTIMONY	7440-36-0	M	L-42	0.00102	UG/G WET	J		0.034
G-TS-02-L	1678*144	MSL	NORMAL	05/30/01	08/27/01	08/31/01		3	BARIUM	7440-39-3	M	L-42	0.0411	UG/G WET	JB		0.011
G-TS-02-L	1678*144	MSL	NORMAL	05/30/01	08/27/01	08/31/01		3	THALLIUM	7440-28-0	M	L-42	0.00529	UG/G WET	J		0.023
G-TS-02-L	1678*144	MSL	NORMAL	05/30/01	08/27/01	08/31/01		3	LEAD	7439-92-1	M	L-42	0.00553	UG/G WET	J		0.023
G-TS-02-L	1678*144	MSL	NORMAL	05/30/01	08/27/01	08/30/01		3	MERCURY	7439-97-6	M	L-41	0.0485	UG/G WET			0.0020
G-TS-02-L	1678*144	MSL	NORMAL	05/30/01	08/30/01	08/04/01		3	METHYL MERCURY	22967-92-8	M	L-40	0.0378	UG/G WET			0.0037
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	BERYLLIUM	7440-41-7	M	L-42	0.005	UG/G WET	U		0.005
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	11/10/01		3	ALUMINUM	7429-90-5	M	L-44	0.411	UG/G WET	J		1.13
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	11/10/01		3	VANADIUM	7440-62-2	M	L-44	0.00707	UG/G WET	J		0.180
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	11/10/01		3	CHROMIUM	7440-47-3	M	L-44	0.0804	UG/G WET	J		0.271
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	11/10/01		3	MANGANESE	7439-96-5	M	L-44	1.34	UG/G WET			0.016
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	11/10/01		3	IRON	7439-89-6	M	L-44	360	UG/G WET			0.320
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	COBALT	7440-48-4	M	L-42	0.00691	UG/G WET	J		0.379
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	NICKEL	7440-02-0	M	L-42	0.0144	UG/G WET	J		0.323
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	COPPER	7440-50-8	M	L-42	4.70	UG/G WET			0.073
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	11/10/01		3	ZINC	7440-66-8	M	L-44	19.5	UG/G WET			0.108
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	ARSENIC	7440-38-2	M	L-42	0.0352	UG/G WET	JB		0.034
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	11/07/01		3	SELENIUM	7782-49-2	M	MSL-I-30	0.439	UG/G WET	J		0.451
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	MOLYBDENUM	13939-06-5	M	L-42	0.508	UG/G WET			0.325
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	11/10/01		3	SILVER	7440-22-4	M	L-44	0.061	UG/G WET	U		0.061
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	CADMIUM	7440-43-9	M	L-42	0.0127	UG/G WET	J		0.201
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	ANTIMONY	7440-36-0	M	L-42	0.000779	UG/G WET	J		0.034
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	BARIUM	7440-39-3	M	L-42	0.0167	UG/G WET	JB		0.011
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	THALLIUM	7440-28-0	M	L-42	0.00488	UG/G WET	J		0.023
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	08/31/01		3	LEAD	7439-92-1	M	L-42	0.0105	UG/G WET	J		0.023
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/27/01	08/30/01		3	MERCURY	7439-97-6	M	L-41	0.0399	UG/G WET			0.0020
G-TS-04-L	1678*145	MSL	NORMAL	06/09/01	08/30/01	08/04/01		3	METHYL MERCURY	22967-92-8	M	L-40	0.0242	UG/G WET			0.0037
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	08/31/01		3	BERYLLIUM	7440-41-7	M	L-42	0.005	UG/G WET	U		0.005
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	11/10/01		3	ALUMINUM	7429-90-5	M	L-44	0.0923	UG/G WET	J		1.13
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	11/10/01		3	VANADIUM	7440-62-2	M	L-44	0.180	UG/G WET	U		0.180
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	11/10/01		3	CHROMIUM	7440-47-3	M	L-44	0.103	UG/G WET	J		0.271
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	11/10/01		3	MANGANESE	7439-96-5	M	L-44	0.897	UG/G WET			0.016
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	11/10/01		3	IRON	7439-89-6	M	L-44	217	UG/G WET			0.320
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	08/31/01		3	COBALT	7440-48-4	M	L-42	0.00483	UG/G WET	J		0.379
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	08/31/01		3	NICKEL	7440-02-0	M	L-42	0.0160	UG/G WET	J		0.323
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	08/31/01		3	COPPER	7440-50-8	M	L-42	6.40	UG/G WET			0.073
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	11/10/01		3	ZINC	7440-66-8	M	L-44	19.5	UG/G WET			0.108
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	08/31/01		3	ARSENIC	7440-38-2	M	L-42	0.0348	UG/G WET	JB		0.034
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	11/07/01		3	SELENIUM	7782-49-2	M	MSL-I-30	0.524	UG/G WET			0.451
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	08/31/01		3	MOLYBDENUM	13939-06-5	M	L-42	0.508	UG/G WET			0.325
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	11/10/01		3	SILVER	7440-22-4	M	L-44	0.0177	UG/G WET	J		0.061
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	08/31/01		3	CADMIUM	7440-43-9	M	L-42	0.00779	UG/G WET	J		0.201
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	08/31/01		3	ANTIMONY	7440-36-0	M	L-42	0.000727	UG/G WET	J		0.034
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	08/31/01		3	BARIUM	7440-39-3	M	L-42	0.00743	UG/G WET	JB		0.011
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	08/31/01		3	THALLIUM	7440-28-0	M	L-42	0.00343	UG/G WET	J		0.023
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	08/31/01		3	LEAD	7439-92-1	M	L-42	0.00854	UG/G WET	J		0.023
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/27/01	08/30/01		3	MERCURY	7439-97-6	M	L-41	0.0450	UG/G WET			0.0020
G-TS-07-L	1678*146	MSL	NORMAL	05/30/01	08/30/01	08/04/01		3	METHYL MERCURY	22967-92-8	M	L-40	0.0357	UG/G WET			0.0037
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	08/27/01	08/31/01		3	BERYLLIUM	7440-41-7	M	L-42	0.000750	UG/G WET	J		0.005
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	08/27/01	11/10/01		3	ALUMINUM	7429-90-5	M	L-44	0.180	UG/G WET	J		1.13
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	08/27/01	11/10/01		3	VANADIUM	7440-62-2	M	L-44	0.180	UG/G WET	U		0.180
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	08/27/01	11/10/01		3	CHROMIUM	7440-47-3	M	L-44	0.108	UG/G WET	J		0.271
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	08/27/01	11/10/01		3	MANGANESE	7439-96-5	M	L-44	1.21	UG/G WET			0.016
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	08/27/01	11/10/01		3	IRON	7439-89-6	M	L-44	356	UG/G WET			0.320
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	08/27/01	08/31/01		3	COBALT	7440-48-4	M	L-42	0.00789	UG/G WET	J		0.379
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	08/27/01	08/31/01		3	NICKEL	7440-02-0	M	L-42	0.0144	UG/G WET	J		0.323
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	08/27/01	08/31/01		3	COPPER	7440-50-8	M	L-42	3.32	UG/G WET			0.073

SAMPLE_NO	LAB_ID	CRDL_CRCL	DIL_FACTOR	PCY_MOIST	COMMENTS	SAMPLE_SIZE	SAMPLE_SIZE_UNITS	FINAL_RESULT	FINAL_QUAL	VALID_COMMENT	FRACTION
G-TS-02-L	1678*144			0.659	74.4 Tree Swallow Nestling Liver, AES	0.300	G_DRY	0.061	U		T
G-TS-02-L	1678*144			0.659	74.4 Tree Swallow Nestling Liver, ICP-MS	0.300	G_DRY	0.201	U		T
G-TS-02-L	1678*144			0.659	74.4 Tree Swallow Nestling Liver, ICP-MS	0.300	G_DRY	0.034	U		T
G-TS-02-L	1678*144			0.659	74.4 Tree Swallow Nestling Liver, ICP-MS	0.300	G_DRY	0.0411	U		T
G-TS-02-L	1678*144			0.659	74.4 Tree Swallow Nestling Liver, ICP-MS	0.300	G_DRY	0.023	U		T
G-TS-02-L	1678*144			0.659	74.4 Tree Swallow Nestling Liver, ICP-MS	0.300	G_DRY	0.023	U		T
G-TS-02-L	1678*144			0.659	74.4 Tree Swallow Nestling Liver, CVAA	0.300	G_DRY	0.0496			T
G-TS-02-L	1678*144			1.00	74.4 Tree Swallow Nestling Liver, CVAF	0.093	G_DRY	0.0378			T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, ICP-MS	0.296	G_DRY	0.005	U		T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, AES	0.296	G_DRY	1.13	U		T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, AES	0.296	G_DRY	0.18	U		T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, AES	0.296	G_DRY	0.271	U		T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, AES	0.296	G_DRY	1.34			T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, AES	0.296	G_DRY	380	J		T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, ICP-MS	0.296	G_DRY	0.379	U		T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, ICP-MS	0.296	G_DRY	0.323	U		T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, ICP-MS	0.296	G_DRY	4.70			T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, AES	0.296	G_DRY	19.5	J		T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, ICP-MS	0.296	G_DRY	0.0352	U		T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, FIAS	0.296	G_DRY	0.451	U		T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, ICP-MS	0.296	G_DRY	0.535			T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, AES	0.296	G_DRY	0.061	U		T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, ICP-MS	0.296	G_DRY	0.201	U		T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, ICP-MS	0.296	G_DRY	0.034	U		T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, ICP-MS	0.296	G_DRY	0.0167	U		T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, ICP-MS	0.296	G_DRY	0.023	U		T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, ICP-MS	0.296	G_DRY	0.023	U		T
G-TS-04-L	1678*145			0.652	66.7 Tree Swallow Nestling Liver, CVAA	0.296	G_DRY	0.0296			T
G-TS-04-L	1678*145			1.00	66.7 Tree Swallow Nestling Liver, CVAF	0.097	G_DRY	0.0242			T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, ICP-MS	0.298	G_DRY	0.005	U		T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, AES	0.298	G_DRY	1.13	U		T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, AES	0.298	G_DRY	0.18	U		T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, AES	0.298	G_DRY	0.271	U		T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, AES	0.298	G_DRY	0.897			T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, AES	0.298	G_DRY	217	J		T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, ICP-MS	0.298	G_DRY	0.379	U		T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, ICP-MS	0.298	G_DRY	0.323	U		T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, ICP-MS	0.298	G_DRY	6.40			T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, AES	0.298	G_DRY	19.5	J		T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, ICP-MS	0.298	G_DRY	0.034	U		T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, FIAS	0.298	G_DRY	0.524	U		T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, ICP-MS	0.298	G_DRY	0.508			T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, AES	0.298	G_DRY	0.061	U		T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, ICP-MS	0.298	G_DRY	0.201	U		T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, ICP-MS	0.298	G_DRY	0.034	U		T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, ICP-MS	0.298	G_DRY	0.174	U		T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, ICP-MS	0.298	G_DRY	0.023	U		T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, ICP-MS	0.298	G_DRY	0.023	U		T
G-TS-07-L	1678*146			0.677	66.6 Tree Swallow Nestling Liver, CVAA	0.298	G_DRY	0.0450			T
G-TS-07-L	1678*146			1.00	66.6 Tree Swallow Nestling Liver, CVAF	0.082	G_DRY	0.0357			T
G-TS-22-L	1678*147			0.654	66.2 Tree Swallow Nestling Liver, ICP-MS	0.303	G_DRY	0.005	U		T
G-TS-22-L	1678*147			0.654	66.2 Tree Swallow Nestling Liver, AES	0.303	G_DRY	1.13	U		T
G-TS-22-L	1678*147			0.654	66.2 Tree Swallow Nestling Liver, AES	0.303	G_DRY	0.18	U		T
G-TS-22-L	1678*147			0.654	66.2 Tree Swallow Nestling Liver, AES	0.303	G_DRY	0.271	U		T
G-TS-22-L	1678*147			0.654	66.2 Tree Swallow Nestling Liver, AES	0.303	G_DRY	1.21			T
G-TS-22-L	1678*147			0.654	66.2 Tree Swallow Nestling Liver, AES	0.303	G_DRY	356	J		T
G-TS-22-L	1678*147			0.654	66.2 Tree Swallow Nestling Liver, ICP-MS	0.303	G_DRY	0.379	U		T
G-TS-22-L	1678*147			0.654	66.2 Tree Swallow Nestling Liver, ICP-MS	0.303	G_DRY	0.323	U		T
G-TS-22-L	1678*147			0.654	66.2 Tree Swallow Nestling Liver, ICP-MS	0.303	G_DRY	3.32			T

SAMPLE_NO	LAB_ID	LABORATORY	GC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	CASE	SDG	PARAMETER	CAS_NO	CLASS	METHOD	LAB_RESULT	UNITS	LAB_QUAL	REL	MCCL
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	06/27/01	11/10/01		3	ZINC	7440-06-6	M	L-42		16.2 UG/G WET			0.106
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	06/27/01	06/31/01		3	ARSENIC	7440-38-2	M	L-42		0.0042 UG/G WET	B		0.004
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	06/27/01	11/07/01		3	SELENIUM	7782-49-2	M	MSL-I-30		0.571 UG/G WET			0.451
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	06/27/01	06/31/01		3	MOLYBDENUM	13638-06-5	M	L-42		0.501 UG/G WET			0.325
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	06/27/01	11/10/01		3	SILVER	7440-22-4	M	L-44		0.00648 UG/G WET	J		0.061
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	06/27/01	06/31/01		3	CADMIUM	7440-43-9	M	L-42		0.00615 UG/G WET	J		0.201
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	06/27/01	06/31/01		3	ANTIMONY	7440-36-0	M	L-42		0.000368 UG/G WET	J		0.004
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	06/27/01	06/31/01		3	BARIUM	7440-39-3	M	L-42		0.0174 UG/G WET	B		0.011
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	06/27/01	06/31/01		3	THALLIUM	7440-28-0	M	L-42		0.00470 UG/G WET	J		0.023
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	06/27/01	06/31/01		3	LEAD	7439-92-1	M	L-42		0.0106 UG/G WET	J		0.023
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	06/27/01	06/30/01		3	MERCURY	7439-97-6	M	L-41		0.0419 UG/G WET			0.0023
G-TS-22-L	1678*147	MSL	NORMAL	06/07/01	06/30/01	06/04/01		3	METHYL MERCURY	22967-92-6	M	L-40		0.0360 UG/G WET			0.0037
G-TS-29-L	1678*148	MSL	NORMAL	06/07/01	06/27/01	06/31/01		3	BERYLLIUM	7440-41-7	M	L-42		0.000342 UG/G WET	J		0.006
G-TS-29-L	1678*148	MSL	NORMAL	06/07/01	06/27/01	11/10/01		3	ALUMINIUM	7429-90-5	M	L-44		0.637 UG/G WET	J		1.13
G-TS-29-L	1678*148	MSL	NORMAL	06/07/01	06/27/01	11/10/01		3	VANADIUM	7440-62-2	M	L-44		0.00532 UG/G WET	J		0.160
G-TS-29-L	1678*148	MSL	NORMAL	06/07/01	06/27/01	11/10/01		3	CHROMIUM	7440-47-3	M	L-44		0.0707 UG/G WET	J		0.271
G-TS-29-L	1678*148	MSL	NORMAL	06/07/01	06/27/01	11/10/01		3	MANGANESE	7439-96-5	M	L-44		1.22 UG/G WET			0.018
G-TS-29-L	1678*148	MSL	NORMAL	06/07/01	06/27/01	11/10/01		3	IRON	7439-89-6	M	L-44		321 UG/G WET			0.320
G-TS-29-L	1678*148	MSL	NORMAL	06/07/01	06/27/01	06/31/01		3	COBALT	7440-48-4	M	L-42		0.00520 UG/G WET	J		0.379
G-TS-29-L	1678*148	MSL	NORMAL	06/07/01	06/27/01	06/31/01		3	NICKEL	7440-02-0	M	L-42		0.0157 UG/G WET	J		0.329
G-TS-29-L	1678*148	MSL	NORMAL	06/07/01	06/27/01	06/31/01		3	COPPER	7440-50-8	M	L-42		5.60 UG/G WET			0.070
G-TS-29-L	1678*148	MSL	NORMAL	06/07/01	06/27/01	11/10/01		3	ZINC	7440-06-6	M	L-44		19.5 UG/G WET			0.106
G-TS-29-L	1678*148	MSL	NORMAL	06/07/01	06/27/01	06/31/01		3	ARSENIC	7440-38-2	M	L-42		0.0073 UG/G WET	B		0.004
G-TS-29-L	1678*148	MSL	NORMAL	06/07/01	06/27/01	11/07/01		3	SELENIUM	7782-49-2	M	MSL-I-30		0.506 UG/G WET			0.451

SAMPLE_NO	LAB_ID	CRCL_CRCL	DIL_FACTOR	PCT_MOIST	COMMENTS	SAMPLE_SIZE	SAMPLE_SIZE_UNITS	FINAL_RESULT	FINAL_QUAL	VALID_COMMENT	FRACTION
G-TS-22-L	1678*147		0.654	69.2	Tree Swallow Nestling Liver, AES	0.303	G_DRY	16.2	U		T
G-TS-22-L	1678*147		0.654	69.2	Tree Swallow Nestling Liver, ICPAAS	0.303	G_DRY	0.034	U		T
G-TS-22-L	1678*147		0.654	69.2	Tree Swallow Nestling Liver, RAS	0.303	G_DRY	0.571	U		T
G-TS-22-L	1678*147		0.654	69.2	Tree Swallow Nestling Liver, ICPAAS	0.303	G_DRY	0.601	U		T
G-TS-22-L	1678*147		0.654	69.2	Tree Swallow Nestling Liver, AES	0.303	G_DRY	0.061	U		T
G-TS-22-L	1678*147		0.654	69.2	Tree Swallow Nestling Liver, ICPAAS	0.303	G_DRY	0.201	U		T
G-TS-22-L	1678*147		0.654	69.2	Tree Swallow Nestling Liver, ICPAAS	0.303	G_DRY	0.034	U		T
G-TS-22-L	1678*147		0.654	69.2	Tree Swallow Nestling Liver, ICPAAS	0.303	G_DRY	0.011	U		T
G-TS-22-L	1678*147		0.654	69.2	Tree Swallow Nestling Liver, ICPAAS	0.303	G_DRY	0.023	U		T
G-TS-22-L	1678*147		0.654	69.2	Tree Swallow Nestling Liver, ICPAAS	0.303	G_DRY	0.023	U		T
G-TS-22-L	1678*147		0.654	69.2	Tree Swallow Nestling Liver, CVAA	0.303	G_DRY	0.0419	U		T
G-TS-22-L	1678*147		1.00	69.2	Tree Swallow Nestling Liver, CVAF	0.076	G_DRY	0.0360	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, ICPAAS	0.295	G_DRY	0.005	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, AES	0.295	G_DRY	1.13	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, AES	0.295	G_DRY	0.18	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, AES	0.295	G_DRY	0.271	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, AES	0.295	G_DRY	1.22	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, AES	0.295	G_DRY	0.21	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, ICPAAS	0.295	G_DRY	0.979	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, ICPAAS	0.295	G_DRY	0.323	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, ICPAAS	0.295	G_DRY	5.60	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, AES	0.295	G_DRY	16.5	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, ICPAAS	0.295	G_DRY	0.0573	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, RAS	0.295	G_DRY	0.506	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, ICPAAS	0.295	G_DRY	0.537	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, AES	0.295	G_DRY	0.061	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, ICPAAS	0.295	G_DRY	0.201	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, ICPAAS	0.295	G_DRY	0.034	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, ICPAAS	0.295	G_DRY	0.0163	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, ICPAAS	0.295	G_DRY	0.023	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, ICPAAS	0.295	G_DRY	0.023	U		T
G-TS-29-L	1678*148		0.705	68.5	Tree Swallow Nestling Liver, CVAA	0.295	G_DRY	0.0366	U		T
G-TS-29-L	1678*148		1.00	68.5	Tree Swallow Nestling Liver, CVAF	0.088	G_DRY	0.0357	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, ICPAAS	0.297	G_DRY	0.006	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, AES	0.297	G_DRY	1.3	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, AES	0.297	G_DRY	0.16	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, AES	0.297	G_DRY	0.271	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, AES	0.297	G_DRY	1.15	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, AES	0.297	G_DRY	244	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, ICPAAS	0.297	G_DRY	0.379	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, ICPAAS	0.297	G_DRY	0.323	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, ICPAAS	0.297	G_DRY	4.60	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, AES	0.297	G_DRY	20.2	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, ICPAAS	0.297	G_DRY	0.0414	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, RAS	0.297	G_DRY	0.576	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, ICPAAS	0.297	G_DRY	0.506	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, AES	0.297	G_DRY	0.061	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, ICPAAS	0.297	G_DRY	0.201	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, ICPAAS	0.297	G_DRY	0.034	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, ICPAAS	0.297	G_DRY	0.0376	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, ICPAAS	0.297	G_DRY	0.023	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, ICPAAS	0.297	G_DRY	0.181	U		T
L-TS-62-L	1678*149		0.665	71.5	Tree Swallow Nestling Liver, CVAA	0.297	G_DRY	0.0511	U		T
L-TS-62-L	1678*149		1.00	71.5	Tree Swallow Nestling Liver, CVAF	0.082	G_DRY	0.0363	U		T
L-TS-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver, ICPAAS	0.301	G_DRY	0.005	U		T
L-TS-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver, AES	0.301	G_DRY	1.13	U		T
L-TS-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver, AES	0.301	G_DRY	0.16	U		T
L-TS-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver, AES	0.301	G_DRY	0.271	U		T
L-TS-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver, AES	0.301	G_DRY	1.27	U		T

SAMPLE_NO	LAB_ID	LABORATORY	OC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	CASE	SDG	PARAMETER	CAS_NO	CLASS	METHOD	LAB_RESULT	UNITS	LAB_QUAL	IDL	MDL
L-TS-63-L	1678*150	MSL	NORMAL	08/08/01	08/27/01	11/10/01			3IRON	7439-89-6	M	L-44		100 UG/G WET			0.320
L-TS-63-L	1678*150	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3COBALT	7440-48-4	M	L-42	0.00930	UG/G WET	J		0.379
L-TS-63-L	1678*150	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3NICKEL	7440-02-0	M	L-42	0.0121	UG/G WET	J		0.323
L-TS-63-L	1678*150	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3COPPER	7440-50-6	M	L-42	5.19	UG/G WET			0.073
L-TS-63-L	1678*150	MSL	NORMAL	08/08/01	08/27/01	11/10/01			3ZINC	7440-66-6	M	L-44	21.4	UG/G WET			0.106
L-TS-63-L	1678*150	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3ARSENIC	7440-38-2	M	L-42	0.0265	UG/G WET	JB		0.034
L-TS-63-L	1678*150	MSL	NORMAL	08/08/01	08/27/01	11/07/01			3SELENIUM	7782-49-2	M	MSL-4-30	0.540	UG/G WET			0.451
L-TS-63-L	1678*150	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3MOLYBDENUM	13638-06-5	M	L-42	0.560	UG/G WET			0.326
L-TS-63-L	1678*150	MSL	NORMAL	08/08/01	08/27/01	11/10/01			3SILVER	7440-22-4	M	L-44	0.00781	UG/G WET	J		0.061
L-TS-63-L	1678*150	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3CADMIUM	7440-43-8	M	L-42	0.00968	UG/G WET	J		0.201
L-TS-63-L	1678*150	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3ANTIMONY	7440-36-0	M	L-42	0.00485	UG/G WET	J		0.034
L-TS-63-L	1678*150	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3BARIUM	7440-39-3	M	L-42	0.00822	UG/G WET	JB		0.011
L-TS-63-L	1678*150	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3THALLIUM	7440-28-0	M	L-42	0.00496	UG/G WET	J		0.023
L-TS-63-L	1678*150	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3LEAD	7439-92-1	M	L-42	0.0126	UG/G WET	J		0.023
L-TS-63-L	1678*150	MSL	NORMAL	08/08/01	08/27/01	08/30/01			3MERCURY	7439-97-6	M	L-41	0.0511	UG/G WET			0.0023
L-TS-63-L	1678*150	MSL	NORMAL	08/08/01	08/30/01	09/06/01			3METHYL MERCURY	22967-92-6	M	L-40	0.0357	UG/G WET			0.0037
L-TS-70-L	1678*151	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3BERYLLIUM	7440-41-7	M	L-42	0.006	UG/G WET	U		0.006
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	11/10/01			3ALUMINUM	7429-90-5	M	L-44	0.856	UG/G WET	J		1.13
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	11/10/01			3VANADIUM	7440-62-2	M	L-44	0.0240	UG/G WET	J		0.180
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	11/10/01			3CHROMIUM	7440-47-3	M	L-44	0.139	UG/G WET	J		0.271
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	11/10/01			3MANGANESE	7439-95-5	M	L-44	1.27	UG/G WET			0.018
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	11/10/01			3IRON	7439-89-6	M	L-44	367	UG/G WET			0.320
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	08/31/01			3COBALT	7440-48-4	M	L-42	0.00861	UG/G WET	J		0.379
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	08/31/01			3NICKEL	7440-02-0	M	L-42	0.0179	UG/G WET	J		0.323
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	08/31/01			3COPPER	7440-50-6	M	L-42	8.32	UG/G WET			0.073
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	11/10/01			3ZINC	7440-66-6	M	L-44	21.4	UG/G WET			0.106
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	08/31/01			3ARSENIC	7440-38-2	M	L-42	0.0332	UG/G WET	JB		0.034
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	11/07/01			3SELENIUM	7782-49-2	M	MSL-4-30	0.563	UG/G WET			0.451
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	08/31/01			3MOLYBDENUM	13638-06-5	M	L-42	0.604	UG/G WET			0.326
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	11/10/01			3SILVER	7440-22-4	M	L-44	0.008	UG/G WET	J		0.061
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	08/31/01			3CADMIUM	7440-43-8	M	L-42	0.0109	UG/G WET	J		0.201
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	08/31/01			3ANTIMONY	7440-36-0	M	L-42	0.000807	UG/G WET	J		0.034
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	08/31/01			3BARIUM	7440-39-3	M	L-42	0.0236	UG/G WET	B		0.011
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	08/31/01			3THALLIUM	7440-28-0	M	L-42	0.00439	UG/G WET	J		0.023
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	08/31/01			3LEAD	7439-92-1	M	L-42	0.0126	UG/G WET	J		0.023
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/27/01	08/30/01			3MERCURY	7439-97-6	M	L-41	0.0550	UG/G WET			0.0023
L-TS-70-L	1678*151	MSL	NORMAL	08/07/01	08/30/01	09/06/01			3METHYL MERCURY	22967-92-6	M	L-40	0.0470	UG/G WET			0.0037
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3BERYLLIUM	7440-41-7	M	L-42	0.000468	UG/G WET	J		0.006
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	11/10/01			3ALUMINUM	7429-90-5	M	L-44	0.105	UG/G WET	J		1.13
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	11/10/01			3VANADIUM	7440-62-2	M	L-44	0.180	UG/G WET	U		0.180
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	11/10/01			3CHROMIUM	7440-47-3	M	L-44	0.0596	UG/G WET	J		0.271
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	11/10/01			3MANGANESE	7439-95-5	M	L-44	1.03	UG/G WET			0.018
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	11/10/01			3IRON	7439-89-6	M	L-44	293	UG/G WET			0.320
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3COBALT	7440-48-4	M	L-42	0.00506	UG/G WET	J		0.379
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3NICKEL	7440-02-0	M	L-42	0.0181	UG/G WET	J		0.323
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3COPPER	7440-50-6	M	L-42	5.27	UG/G WET			0.073
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	11/10/01			3ZINC	7440-66-6	M	L-44	17.8	UG/G WET			0.106
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3ARSENIC	7440-38-2	M	L-42	0.0321	UG/G WET	JB		0.034
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	11/07/01			3SELENIUM	7782-49-2	M	MSL-4-30	0.463	UG/G WET			0.451
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3MOLYBDENUM	13638-06-5	M	L-42	0.473	UG/G WET			0.326
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	11/10/01			3SILVER	7440-22-4	M	L-44	0.061	UG/G WET	U		0.061
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3CADMIUM	7440-43-8	M	L-42	0.00732	UG/G WET	J		0.201
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3ANTIMONY	7440-36-0	M	L-42	0.000828	UG/G WET	J		0.034
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3BARIUM	7440-39-3	M	L-42	0.0111	UG/G WET	B		0.011
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3THALLIUM	7440-28-0	M	L-42	0.00342	UG/G WET	J		0.023
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	08/31/01			3LEAD	7439-92-1	M	L-42	0.0388	UG/G WET			0.023
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/27/01	08/30/01			3MERCURY	7439-97-6	M	L-41	0.0265	UG/G WET			0.0023
L-TS-84-L	1678*152	MSL	NORMAL	08/08/01	08/30/01	09/06/01			3METHYL MERCURY	22967-92-6	M	L-40	0.0231	UG/G WET			0.0037
L-TS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	08/31/01			3BERYLLIUM	7440-41-7	M	L-42	0.00105	UG/G WET	J		0.006

SAMPLE_NO	LAB_ID	CRDL_CRQL	DIL_FACTOR	PCT_MOIST	COMMENTS	SAMPLE_SIZE	SAMPLE_SIZE_UNITS	FINAL_RESULT	FINAL_QUAL	VALID_COMMENT	FRACTION
L-7S-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver; AES	0.301	G_DRY	100.0			T
L-7S-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver; ICP-MS	0.301	G_DRY	0.379			T
L-7S-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver; ICP-MS	0.301	G_DRY	0.323			T
L-7S-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver; ICP-MS	0.301	G_DRY	5.19			T
L-7S-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver; AES	0.301	G_DRY	21.4			T
L-7S-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver; ICP-MS	0.301	G_DRY	0.034			T
L-7S-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver; FIAS	0.301	G_DRY	0.54			T
L-7S-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver; ICP-MS	0.301	G_DRY	0.55			T
L-7S-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver; AES	0.301	G_DRY	0.061			T
L-7S-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver; ICP-MS	0.301	G_DRY	0.201			T
L-7S-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver; ICP-MS	0.301	G_DRY	0.034			T
L-7S-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver; ICP-MS	0.301	G_DRY	0.041			T
L-7S-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver; ICP-MS	0.301	G_DRY	0.023			T
L-7S-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver; ICP-MS	0.301	G_DRY	0.023			T
L-7S-63-L	1678*150		0.655	71.4	Tree Swallow Nestling Liver; CVAA	0.301	G_DRY	0.0511			T
L-7S-63-L	1678*150		1.00	71.4	Tree Swallow Nestling Liver; CVAF	0.076	G_DRY	0.0367			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; ICP-MS	0.296	G_DRY	0.005			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; AES	0.296	G_DRY	1.13			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; AES	0.296	G_DRY	0.18			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; AES	0.296	G_DRY	0.271			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; AES	0.296	G_DRY	1.27			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; AES	0.296	G_DRY	367			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; ICP-MS	0.296	G_DRY	0.379			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; ICP-MS	0.296	G_DRY	0.323			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; ICP-MS	0.296	G_DRY	5.32			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; AES	0.296	G_DRY	21.4			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; ICP-MS	0.296	G_DRY	0.034			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; FIAS	0.296	G_DRY	0.553			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; ICP-MS	0.296	G_DRY	0.604			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; AES	0.296	G_DRY	0.061			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; ICP-MS	0.296	G_DRY	0.201			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; ICP-MS	0.296	G_DRY	0.034			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; ICP-MS	0.296	G_DRY	0.023			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; ICP-MS	0.296	G_DRY	0.023			T
L-7S-70-L	1678*151		0.674	70.7	Tree Swallow Nestling Liver; CVAA	0.296	G_DRY	0.0550			T
L-7S-70-L	1678*151		1.00	70.7	Tree Swallow Nestling Liver; CVAF	0.079	G_DRY	0.0470			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; ICP-MS	0.297	G_DRY	0.005			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; AES	0.297	G_DRY	1.13			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; AES	0.297	G_DRY	0.18			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; AES	0.297	G_DRY	0.271			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; AES	0.297	G_DRY	1.03			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; AES	0.297	G_DRY	293			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; ICP-MS	0.297	G_DRY	0.379			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; ICP-MS	0.297	G_DRY	0.323			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; ICP-MS	0.297	G_DRY	5.27			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; AES	0.297	G_DRY	17.8			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; ICP-MS	0.297	G_DRY	0.034			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; FIAS	0.297	G_DRY	0.463			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; ICP-MS	0.297	G_DRY	0.473			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; AES	0.297	G_DRY	0.061			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; ICP-MS	0.297	G_DRY	0.201			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; ICP-MS	0.297	G_DRY	0.034			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; ICP-MS	0.297	G_DRY	0.011			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; ICP-MS	0.297	G_DRY	0.023			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; ICP-MS	0.297	G_DRY	0.0366			T
L-7S-84-L	1678*152		0.672	66.0	Tree Swallow Nestling Liver; CVAA	0.297	G_DRY	0.0265			T
L-7S-84-L	1678*152		1.00	66.0	Tree Swallow Nestling Liver; CVAF	0.085	G_DRY	0.0231			T
L-7S-86-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; ICP-MS	0.296	G_DRY	0.005			T

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS_NO	CLASS	METHOD	LAB_RES/AT	UNITS	LAB_QUAL	IDL	MDL
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	11/10/01			3 ALUMINUM	7429-90-5	M	L-44	0.774	UG/G WET	J		1.19
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	11/10/01			3 VANADIUM	7440-62-2	M	L-44	0.0237	UG/G WET	J		0.190
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	11/10/01			3 CHROMIUM	7440-47-3	M	L-44	0.0807	UG/G WET	J		0.271
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	11/10/01			3 MANGANESE	7439-96-5	M	L-44	1.04	UG/G WET			0.018
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	11/10/01			3 IRON	7439-89-6	M	L-44	429	UG/G WET			0.320
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	08/31/01			3 COBALT	7440-48-4	M	L-42	0.00594	UG/G WET	J		0.378
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	08/31/01			3 NICKEL	7440-02-0	M	L-42	0.0187	UG/G WET	J		0.328
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	08/31/01			3 COPPER	7440-50-8	M	L-42	7.61	UG/G WET			0.073
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	11/10/01			3 ZINC	7440-68-6	M	L-44	21.8	UG/G WET			0.108
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	08/31/01			3 ARSENIC	7440-38-2	M	L-42	0.0243	UG/G WET	J		0.034
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	11/07/01			3 SELENIUM	7782-49-2	M	MSL-4-30	0.485	UG/G WET			0.651
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	08/31/01			3 MOLYBDENUM	13938-06-5	M	L-42	0.583	UG/G WET			0.325
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	11/10/01			3 SILVER	7440-22-4	M	L-44	0.0314	UG/G WET	J		0.061
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	08/31/01			3 CADMIUM	7440-43-8	M	L-42	0.0121	UG/G WET	J		0.201
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	08/31/01			3 ANTIMONY	7440-36-0	M	L-42	0.00752	UG/G WET	J		0.034
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	08/31/01			3 BARIUM	7440-39-3	M	L-42	0.0143	UG/G WET	B		0.011
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	08/31/01			3 THALLIUM	7440-28-0	M	L-42	0.00445	UG/G WET	J		0.029
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	08/31/01			3 LEAD	7439-92-1	M	L-42	0.0112	UG/G WET	J		0.029
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/27/01	08/30/01			3 MERCURY	7439-97-6	M	L-41	0.0316	UG/G WET			0.0029
LTS-89-L	1678*153	MSL	NORMAL	08/12/01	08/30/01	08/30/01			3 METHYL MERCURY	22967-82-6	M	L-40	0.0090	UG/G WET			0.0007
BLANK R1		MSL	P BLANK		08/27/01	08/31/01			3 BERYLLIUM	7440-41-7	M	L-42	0.00449	UG/G DRY	J		0.016
BLANK R1		MSL	P BLANK		08/27/01	11/10/01			3 ALUMINUM	7429-90-5	M	L-44	0.970	UG/G DRY	J		4.0
BLANK R1		MSL	P BLANK		08/27/01	11/10/01			3 VANADIUM	7440-62-2	M	L-44	0.0138	UG/G DRY	J		0.64
BLANK R1		MSL	P BLANK		08/27/01	11/10/01			3 CHROMIUM	7440-47-3	M	L-44	0.0287	UG/G DRY	J		0.88
BLANK R1		MSL	P BLANK		08/27/01	11/10/01			3 MANGANESE	7439-96-5	M	L-44	0.084	UG/G DRY	U		0.064
BLANK R1		MSL	P BLANK		08/27/01	11/10/01			3 IRON	7439-89-6	M	L-44	0.0821	UG/G DRY	J		1.12
BLANK R1		MSL	P BLANK		08/27/01	08/31/01			3 COBALT	7440-48-4	M	L-42	0.00347	UG/G DRY	J		1.34
BLANK R1		MSL	P BLANK		08/27/01	08/31/01			3 NICKEL	7440-02-0	M	L-42	0.0188	UG/G DRY	J		1.14
BLANK R1		MSL	P BLANK		08/27/01	08/31/01			3 COPPER	7440-50-8	M	L-42	0.00118	UG/G DRY	J		0.28
BLANK R1		MSL	P BLANK		08/27/01	11/10/01			3 ZINC	7440-68-6	M	L-44	0.374	UG/G DRY	J		0.354
BLANK R1		MSL	P BLANK		08/27/01	08/31/01			3 ARSENIC	7440-38-2	M	L-42	0.184	UG/G DRY	B		0.12
BLANK R1		MSL	P BLANK		08/27/01	11/07/01			3 SELENIUM	7782-49-2	M	MSL-4-30	0.149	UG/G DRY	J		1.8
BLANK R1		MSL	P BLANK		08/27/01	08/31/01			3 MOLYBDENUM	13938-06-5	M	L-42	0.614	UG/G DRY	J		1.01
BLANK R1		MSL	P BLANK		08/27/01	11/10/01			3 SILVER	7440-22-4	M	L-44	0.0284	UG/G DRY	J		0.216
BLANK R1		MSL	P BLANK		08/27/01	08/31/01			3 CADMIUM	7440-43-8	M	L-42	0.00688	UG/G DRY	J		0.712
BLANK R1		MSL	P BLANK		08/27/01	08/31/01			3 ANTIMONY	7440-36-0	M	L-42	0.0521	UG/G DRY	J		0.12
BLANK R1		MSL	P BLANK		08/27/01	08/31/01			3 BARIUM	7440-39-3	M	L-42	0.0571	UG/G DRY	B		0.04
BLANK R1		MSL	P BLANK		08/27/01	08/31/01			3 THALLIUM	7440-28-0	M	L-42	0.0118	UG/G DRY	J		0.08
BLANK R1		MSL	P BLANK		08/27/01	08/31/01			3 LEAD	7439-92-1	M	L-42	0.0899	UG/G DRY	B		0.08
BLANK R1		MSL	P BLANK		08/27/01	08/30/01			3 MERCURY	7439-97-6	M	L-41	0.008	UG/G DRY	U		0.008
BLANK R1		MSL	P BLANK		08/30/01	08/30/01			3 METHYL MERCURY	22967-82-6	M	L-40	0.01	UG/G DRY	U		0.013
DOLT-2 R1		MSL	SRM		08/27/01	11/10/01			3 ALUMINUM	7429-90-5	M	L-44		30% DIFFERENCE			4.0
DOLT-2 R1		MSL	SRM		08/27/01	11/10/01			3 CHROMIUM	7440-47-3	M	L-44		20% DIFFERENCE			0.98
DOLT-2 R1		MSL	SRM		08/27/01	11/10/01			3 MANGANESE	7439-96-5	M	L-44		3% DIFFERENCE			0.064
DOLT-2 R1		MSL	SRM		08/27/01	11/10/01			3 IRON	7439-89-6	M	L-44		8% DIFFERENCE			1.12
DOLT-2 R1		MSL	SRM		08/27/01	08/31/01			3 COBALT	7440-48-4	M	L-42		14% DIFFERENCE			1.34
DOLT-2 R1		MSL	SRM		08/27/01	08/31/01			3 NICKEL	7440-02-0	M	L-42		18% DIFFERENCE			1.14
DOLT-2 R1		MSL	SRM		08/27/01	08/31/01			3 COPPER	7440-50-8	M	L-42		5% DIFFERENCE			0.28
DOLT-2 R1		MSL	SRM		08/27/01	11/10/01			3 ZINC	7440-68-6	M	L-44		5% DIFFERENCE			0.354
DOLT-2 R1		MSL	SRM		08/27/01	08/31/01			3 ARSENIC	7440-38-2	M	L-42		11% DIFFERENCE			0.12
DOLT-2 R1		MSL	SRM		08/27/01	11/07/01			3 SELENIUM	7782-49-2	M	MSL-4-30		18% DIFFERENCE			1.8
DOLT-2 R1		MSL	SRM		08/27/01	11/10/01			3 SILVER	7440-22-4	M	L-44		0% DIFFERENCE			0.216
DOLT-2 R1		MSL	SRM		08/27/01	08/31/01			3 CADMIUM	7440-43-8	M	L-42		11% DIFFERENCE			0.712
DOLT-2 R1		MSL	SRM		08/27/01	08/31/01			3 LEAD	7439-92-1	M	L-42		9% DIFFERENCE			0.08
DOLT-2 R1		MSL	SRM		08/27/01	08/30/01			3 MERCURY	7439-97-6	M	L-41		11% DIFFERENCE			0.008
DOLT-2 R1		MSL	SRM		08/30/01	08/30/01			3 METHYL MERCURY	22967-82-6	M	L-40		3% DIFFERENCE			0.013
DOLT-2 R2		MSL	SRM		08/30/01	08/30/01			3 METHYL MERCURY	22967-82-6	M	L-40		2% DIFFERENCE			0.013
BLANK SPIKE		MSL	LOS		08/27/01	08/31/01			3 BERYLLIUM	7440-41-7	M	L-42		92% RECOVERY			0.016
BLANK SPIKE		MSL	LOS		08/27/01	11/10/01			3 ALUMINUM	7429-90-5	M	L-44		82% RECOVERY			4.0

SAMPLE_NO	LAB_ID	CRDL_CRCL	DL_FACTOR	PCT_MOIST	COMMENTS	SAMPLE_SIZE	SAMPLE_SIZE_UNITS	FINAL_RESULT	FINAL_QUAL	VALID	COMMENT	FRACTION
L-TS-89-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; AES	0.298	G_DRY	1.151U				T
L-TS-89-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; AES	0.298	G_DRY	0.150U				T
L-TS-89-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; AES	0.298	G_DRY	0.271U				T
L-TS-89-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; AES	0.298	G_DRY	1.04				T
L-TS-89-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; AES	0.298	G_DRY	429J				T
L-TS-89-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; ICP-MS	0.298	G_DRY	0.379U				T
L-TS-89-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; ICP-MS	0.298	G_DRY	0.323U				T
L-TS-89-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; ICP-MS	0.298	G_DRY	7.81				T
L-TS-89-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; AES	0.298	G_DRY	21.6J				T
L-TS-89-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; ICP-MS	0.298	G_DRY	0.034U				T
L-TS-89-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; FIAS	0.298	G_DRY	0.465U				T
L-TS-89-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; ICP-MS	0.298	G_DRY	0.563J				T
L-TS-89-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; AES	0.298	G_DRY	0.051U				T
L-TS-89-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; ICP-MS	0.298	G_DRY	0.201U				T
L-TS-89-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; ICP-MS	0.298	G_DRY	0.024U				T
L-TS-89-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; ICP-MS	0.298	G_DRY	0.0143U				T
L-TS-89-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; ICP-MS	0.298	G_DRY	0.023U				T
L-TS-89-L	1678*153		0.664	70.1	Tree Swallow Nestling Liver; CVAA	0.298	G_DRY	0.0316				T
L-TS-89-L	1678*153		1.00	70.1	Tree Swallow Nestling Liver; CVAF	0.071	G_DRY	0.0290				T
	BLANK R1		0.700	NA	Blank results (LAB, MDL) reported on dry weight basis; ICP-MS	0.300	G_DRY					T
	BLANK R1		0.700	NA	Blank results (LAB, MDL) reported on dry weight basis; AES	0.300	G_DRY					T
	BLANK R1		0.700	NA	Blank results (LAB, MDL) reported on dry weight basis; AES	0.300	G_DRY					T
	BLANK R1		0.700	NA	Blank results (LAB, MDL) reported on dry weight basis; AES	0.300	G_DRY					T
	BLANK R1		0.700	NA	Blank results (LAB, MDL) reported on dry weight basis; AES	0.300	G_DRY					T
	BLANK R1		0.700	NA	Blank results (LAB, MDL) reported on dry weight basis; AES	0.300	G_DRY					T
	BLANK R1		0.700	NA	Blank results (LAB, MDL) reported on dry weight basis; ICP-MS	0.300	G_DRY					T
	BLANK R1		0.700	NA	Blank results (LAB, MDL) reported on dry weight basis; ICP-MS	0.300	G_DRY					T
	BLANK R1		0.700	NA	Blank results (LAB, MDL) reported on dry weight basis; AES	0.300	G_DRY					T
	BLANK R1		0.700	NA	Blank results (LAB, MDL) reported on dry weight basis; ICP-MS	0.300	G_DRY					T
	BLANK R1		0.700	NA	Blank results (LAB, MDL) reported on dry weight basis; FIAS	0.300	G_DRY					T
	BLANK R1		0.700	NA	Blank results (LAB, MDL) reported on dry weight basis; ICP-MS	0.300	G_DRY					T
	BLANK R1		0.700	NA	Blank results (LAB, MDL) reported on dry weight basis; AES	0.300	G_DRY					T
	BLANK R1		0.700	NA	Blank results (LAB, MDL) reported on dry weight basis; ICP-MS	0.300	G_DRY					T
	BLANK R1		0.700	NA	Blank results (LAB, MDL) reported on dry weight basis; ICP-MS	0.300	G_DRY					T
	BLANK R1		0.700	NA	Blank results (LAB, MDL) reported on dry weight basis; ICP-MS	0.300	G_DRY					T
	BLANK R1		0.700	NA	Blank results (LAB, MDL) reported on dry weight basis; ICP-MS	0.300	G_DRY					T
	BLANK R1		0.700	NA	Blank results (LAB, MDL) reported on dry weight basis; CVAA	0.300	G_DRY					T
	BLANK R1		1.00	NA	Blank results (LAB, MDL) reported on dry weight basis; CVAF	0.077	G_DRY					T
	DOLT-2 R1		0.65	NA	AES	0.300	G_DRY					T
	DOLT-2 R1		0.65	NA	AES	0.300	G_DRY					T
	DOLT-2 R1		0.65	NA	AES	0.300	G_DRY					T
	DOLT-2 R1		0.65	NA	AES	0.300	G_DRY					T
	DOLT-2 R1		0.65	NA	ICP-MS	0.300	G_DRY					T
	DOLT-2 R1		0.65	NA	ICP-MS	0.300	G_DRY					T
	DOLT-2 R1		0.65	NA	ICP-MS	0.300	G_DRY					T
	DOLT-2 R1		0.65	NA	AES	0.300	G_DRY					T
	DOLT-2 R1		0.65	NA	ICP-MS	0.300	G_DRY					T
	DOLT-2 R1		0.65	NA	FIAS	0.300	G_DRY					T
	DOLT-2 R1		0.65	NA	AES	0.300	G_DRY					T
	DOLT-2 R1		0.65	NA	ICP-MS	0.300	G_DRY					T
	DOLT-2 R1		0.65	NA	ICP-MS	0.300	G_DRY					T
	DOLT-2 R1		0.65	NA	CVAA	0.300	G_DRY					T
	DOLT-2 R1		1.00	NA	CVAF	0.078	G_DRY					T
	DOLT-2 R2		1.00	NA	CVAF	0.078	G_DRY					T
	BLANK SPIKE		0.7	N/A	ICP-MS	0.300	G_DRY					T
	BLANK SPIKE		0.7	N/A	AES	0.300	G_DRY					T

SAMPLE_NO	LAB_ID	LABORATORY	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	CASE	SDG	PARAMETER	CAS_NO	CLASS	METHOD	LAB_RESULT	UNITS	LAB_QUAL	IDL	MDL
	BLANK SPIKE	MSL	LCS		06/27/01	11/10/01			Vanadium	7440-82-2	M	L-44	105 % RECOVERY				0.04
	BLANK SPIKE	MSL	LCS		06/27/01	11/10/01			Chromium	7440-47-3	M	L-44	86 % RECOVERY				0.06
	BLANK SPIKE	MSL	LCS		06/27/01	11/10/01			Manganese	7439-96-5	M	L-44	85 % RECOVERY				0.064
	BLANK SPIKE	MSL	LCS		06/27/01	11/10/01			Iron	7439-89-6	M	L-44	141 % RECOVERY				1.12
	BLANK SPIKE	MSL	LCS		06/27/01	06/31/01			Cobalt	7440-48-4	M	L-42	104 % RECOVERY				1.34
	BLANK SPIKE	MSL	LCS		06/27/01	06/31/01			Nickel	7440-02-0	M	L-42	96 % RECOVERY				1.14
	BLANK SPIKE	MSL	LCS		06/27/01	06/31/01			Copper	7440-50-8	M	L-42	84 % RECOVERY				0.26
	BLANK SPIKE	MSL	LCS		06/27/01	11/10/01			Zinc	7440-66-6	M	L-44	86 % RECOVERY				0.064
	BLANK SPIKE	MSL	LCS		06/27/01	06/31/01			Arsenic	7440-38-2	M	L-42	121 % RECOVERY				0.12
	BLANK SPIKE	MSL	LCS		06/27/01	11/07/01			Selenium	7782-49-2	M	MSL-I-30	71 % RECOVERY				1.6
	BLANK SPIKE	MSL	LCS		06/27/01	06/31/01			Molybdenum	13939-06-5	M	L-42	100 % RECOVERY				1.15
	BLANK SPIKE	MSL	LCS		06/27/01	11/10/01			Silver	7440-22-4	M	L-44	100 % RECOVERY				0.216
	BLANK SPIKE	MSL	LCS		06/27/01	06/31/01			Cadmium	7440-43-9	M	L-42	95 % RECOVERY				0.712
	BLANK SPIKE	MSL	LCS		06/27/01	06/31/01			Antimony	7440-36-0	M	L-42	97 % RECOVERY				0.12
	BLANK SPIKE	MSL	LCS		06/27/01	06/31/01			Barium	7440-39-3	M	L-42	104 % RECOVERY				0.04
	BLANK SPIKE	MSL	LCS		06/27/01	06/31/01			Thallium	7440-28-0	M	L-42	107 % RECOVERY				0.06
	BLANK SPIKE	MSL	LCS		06/27/01	06/31/01			Lead	7439-82-1	M	L-42	107 % RECOVERY				0.06
	BLANK SPIKE	MSL	LCS		06/27/01	06/30/01			Mercury	7439-97-6	M	L-41	96 % RECOVERY				0.006
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	06/31/01			Beryllium	7440-41-7	M	L-42	80 % RECOVERY				0.016
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	11/10/01			Aluminum	7429-90-5	M	L-44	100 % RECOVERY				4.0
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	11/10/01			Vanadium	7440-82-2	M	L-44	98 % RECOVERY				0.04
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	11/10/01			Chromium	7440-47-3	M	L-44	102 % RECOVERY				0.06
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	11/10/01			Manganese	7439-96-5	M	L-44	97 % RECOVERY				0.064
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	11/10/01			Iron	7439-89-6	M	L-44	102 % RECOVERY				1.12
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	06/31/01			Cobalt	7440-48-4	M	L-42	86 % RECOVERY				1.34
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	06/31/01			Nickel	7440-02-0	M	L-42	81 % RECOVERY				1.14
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	06/31/01			Copper	7440-50-8	M	L-42	96 % RECOVERY				0.26
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	11/10/01			Zinc	7440-66-6	M	L-44	80 % RECOVERY				0.064
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	06/31/01			Arsenic	7440-38-2	M	L-42	97 % RECOVERY				0.12
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	11/07/01			Selenium	7782-49-2	M	MSL-I-30	84 % RECOVERY				1.6
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	06/31/01			Molybdenum	13939-06-5	M	L-42	101 % RECOVERY				1.15
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	11/10/01			Silver	7440-22-4	M	L-44	130 % RECOVERY				0.216
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	06/31/01			Cadmium	7440-43-9	M	L-42	95 % RECOVERY				0.712
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	06/31/01			Antimony	7440-36-0	M	L-42	100 % RECOVERY				0.12
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	06/31/01			Barium	7440-39-3	M	L-42	104 % RECOVERY				0.04
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	06/31/01			Thallium	7440-28-0	M	L-42	107 % RECOVERY				0.06
A-TS-48-L	MATRIX SPIKE 1678*141	MSL	MS	06/07/01	06/27/01	06/31/01			Lead	7439-82-1	M	L-42	106 % RECOVERY				0.06
G-TS-29-L	MATRIX SPIKE 1678*148	MSL	MS	06/07/01	06/30/01	06/04/01			Methyl Mercury	22967-92-6	M	L-40	104 % RECOVERY				0.016
G-TS-29-L	MATRIX SPIKE DUP 1678*148	MSL	MSD	06/07/01	06/30/01	06/04/01			Methyl Mercury	22967-92-6	M	L-40	113 % RECOVERY				0.016
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	06/31/01			3 Beryllium	7440-41-7	M	L-42	0.005 UG/G WET		U		0.006
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	11/10/01			3 Aluminum	7429-90-5	M	L-44	1.37 UG/G WET				1.13
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	11/10/01			3 Vanadium	7440-82-2	M	L-44	0.0419 UG/G WET		J		0.160
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	11/10/01			3 Chromium	7440-47-3	M	L-44	0.121 UG/G WET		J		0.271
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	11/10/01			3 Manganese	7439-96-5	M	L-44	1.36 UG/G WET				0.016
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	11/10/01			3 Iron	7439-89-6	M	L-44	238 UG/G WET				0.060
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	06/31/01			3 Cobalt	7440-48-4	M	L-42	0.00826 UG/G WET		J		0.378
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	06/31/01			3 Nickel	7440-02-0	M	L-42	0.0127 UG/G WET		J		0.320
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	06/31/01			3 Copper	7440-50-8	M	L-42	3.68 UG/G WET				0.073
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	11/10/01			3 Zinc	7440-66-6	M	L-44	19.7 UG/G WET				1.06
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	06/31/01			3 Arsenic	7440-38-2	M	L-42	0.0499 UG/G WET		B		0.034
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	11/07/01			3 Selenium	7782-49-2	M	MSL-I-30	0.527 UG/G WET				0.451
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	06/31/01			3 Molybdenum	13939-06-5	M	L-42	0.807 UG/G WET				0.325
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	11/10/01			3 Silver	7440-22-4	M	L-44	0.061 UG/G WET		U		0.061
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	06/31/01			3 Cadmium	7440-43-9	M	L-42	0.0136 UG/G WET		J		0.201
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	06/31/01			3 Antimony	7440-36-0	M	L-42	0.00481 UG/G WET		J		0.034
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	06/31/01			3 Barium	7440-39-3	M	L-42	0.0411 UG/G WET		B		0.011
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	06/31/01			3 Thallium	7440-28-0	M	L-42	0.06902 UG/G WET		J		0.023
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	06/31/01			3 Lead	7439-82-1	M	L-42	0.181 UG/G WET				0.023
A-TS-46-L	1678*140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/27/01	06/30/01			3 Mercury	7439-97-6	M	L-41	0.0411 UG/G WET				0.0023

[illegible]

SAMPLE_NO	LAB_ID	LABORATORY	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	CASE	SDG	PARAMETER	CAS_NO	CLASS	METHOD	LAB_RESULT	UNITS	LAB_QUAL	IDL	MDL
A-TS-45-L	1676-140 DUPLICATE	MSL	DUPLICATE	06/06/01	06/06/01	06/04/01			3-METHYL MERCURY	22867-82-8	M	L-40	0.0363	UG/G3 WET			0.0037

SAMPLE_NO	LAB_ID	CRDL_CRDL	OIL_FACTOR	PCT_LOST	COMMENTS	SAMPLE_SIZE	SAMPLE_SIZE_UNITS	FINAL_RESULT	FINAL_QUAL	VALID_COMMENT	FRACTION
A-15-45-L	1578140 DUPLICATE		1.00		70.5 Tere Swallow Nesting Liver, CVAF	0.072	G, DRY				1

Section 5

DCM Extractable Lipid Content Results

Tree Swallow Tissue and QC Results

SAMPLE_NO	LAB_ID	LABORATORY	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	CASE	SQ#	PARAMETER	CAS_NO	CLASS	METHOD	LAB_RESULT	UNITS	LAB_QUAL	IDL	MDL
L-TS-66-N	W6502DUP	BATD	DUPLICATE	09/12/01	10/16/01	10/17/01		01-390	Lipid Content		Wet	BATD SOP 5.190	4.00	%WET			0.01
L-TS-70-N	W6500	BATD	NORMAL	09/07/01	10/16/01	10/17/01		01-390	Lipid Content		Wet	BATD SOP 5.190	7.09	%WET			0.01
L-TS-65-N	W6502	BATD	NORMAL	09/12/01	10/16/01	10/17/01		01-390	Lipid Content		Wet	BATD SOP 5.190	5.90	%WET			0.01
A-TS-35-N	W6498	BATD	NORMAL	09/12/01	10/16/01	10/17/01		01-390	Lipid Content		Wet	BATD SOP 5.190	8.36	%WET			0.01
A-TS-45-N	W6489	BATD	NORMAL	09/09/01	10/16/01	10/17/01		01-390	Lipid Content		Wet	BATD SOP 5.190	8.51	%WET			0.01
A-TS-46-N	W6490	BATD	NORMAL	09/07/01	10/16/01	10/17/01		01-390	Lipid Content		Wet	BATD SOP 5.190	3.55	%WET			0.01
A-TS-49-N	W6491	BATD	NORMAL	09/12/01	10/16/01	10/17/01		01-390	Lipid Content		Wet	BATD SOP 5.190	4.22	%WET			0.01
A-TS-57-N	W6492	BATD	NORMAL	09/08/01	10/16/01	10/17/01		01-390	Lipid Content		Wet	BATD SOP 5.190	3.24	%WET			0.01
G-TS-02-N	W6493	BATD	NORMAL	09/30/01	10/16/01	10/17/01		01-390	Lipid Content		Wet	BATD SOP 5.190	2.59	%WET			0.01
G-TS-04-N	W6494	BATD	NORMAL	09/09/01	10/16/01	10/17/01		01-390	Lipid Content		Wet	BATD SOP 5.190	4.69	%WET			0.01
G-TS-07-N	W6495	BATD	NORMAL	09/30/01	10/16/01	10/17/01		01-390	Lipid Content		Wet	BATD SOP 5.190	6.31	%WET			0.01
G-TS-22-N	W6496	BATD	NORMAL	09/07/01	10/16/01	10/17/01		01-390	Lipid Content		Wet	BATD SOP 5.190	6.16	%WET			0.01
G-TS-29-N	W6497	BATD	NORMAL	09/07/01	10/16/01	10/17/01		01-390	Lipid Content		Wet	BATD SOP 5.190	11.19	%WET			0.01
L-TS-62-N	W6498	BATD	NORMAL	09/08/01	10/16/01	10/17/01		01-390	Lipid Content		Wet	BATD SOP 5.190	6.16	%WET			0.01
L-TS-63-N	W6499	BATD	NORMAL	09/08/01	10/16/01	10/17/01		01-390	Lipid Content		Wet	BATD SOP 5.190	6.51	%WET			0.01
L-TS-64-N	W6501	BATD	NORMAL	09/09/01	10/16/01	10/17/01		01-390	Lipid Content		Wet	BATD SOP 5.190	5.42	%WET			0.01

SAMPLE_NO	LAB_ID	ORGL_CRCL	ORL_FACTOR	PCT_MOIST	COMMENTS	SAMPLE_SIZE	SAMPLE_SIZE UNITS	FINAL_RESULT	FINAL_QUAL	VALID COMMENT	FRACTION
L-TS-89-N	W8502DUP		1.000	80.91	DCM Extractable Lipid	3.45	G WET	4.00			T
L-TS-70-N	W8500		1.000	80.57	DCM Extractable Lipid	3.63	G WET	7.03			T
L-TS-89-N	W8502		1.000	80.91	DCM Extractable Lipid	3.76	G WET	5.90			T
A-TS-35-N	W8488		1.000	59.93	DCM Extractable Lipid	5.49	G WET	5.36			T
A-TS-48-N	W8489		1.000	59.20	DCM Extractable Lipid	5.07	G WET	8.51			T
A-TS-48-N	W8490		1.000	62.84	DCM Extractable Lipid	5.25	G WET	3.55			T
A-TS-49-N	W8481		1.000	57.09	DCM Extractable Lipid	4.34	G WET	4.22			T
A-TS-57-N	W8492		1.000	84.25	DCM Extractable Lipid	5.37	G WET	3.24			T
G-TS-02-N	W8493		1.000	73.59	DCM Extractable Lipid	6.25	G WET	2.59			T
G-TS-04-N	W8494		1.000	82.44	DCM Extractable Lipid	4.10	G WET	4.88			T
G-TS-07-N	W8495		1.000	71.52	DCM Extractable Lipid	6.71	G WET	6.31			T
G-TS-22-N	W8496		1.000	61.70	DCM Extractable Lipid	5.14	G WET	6.18			T
G-TS-29-N	W8497		1.000	84.65	DCM Extractable Lipid	5.60	G WET	11.19			T
L-TS-62-N	W8498		1.000	81.60	DCM Extractable Lipid	5.29	G WET	6.19			T
L-TS-63-N	W8499		1.000	62.18	DCM Extractable Lipid	4.78	G WET	8.51			T
L-TS-84-N	W8501		1.000	83.30	DCM Extractable Lipid	5.42	G WET	5.42			T

SAMPLE NO	LAB ID	LABORATORY	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	CASE	SDG	PARAMETER	CAS_NO	CLASS	METHOD	LAB_RESULT	UNITS	LAB_QUAL	IDL	MDL
L-TS-73-P	W4947DUP	BATD	DUPLICATE	05/30/01	10/23/01	10/25/01		01-568	Lipid Content		Wet	BATD_SOP_5_190	5.79	%WET			0.01
A-TS-33-P	W4941	BATD	NORMAL	06/09/01	10/23/01	10/25/01		01-568	Lipid Content		Wet	BATD_SOP_5_190	3.10	%WET			0.01
L-TS-73-P	W4947	BATD	NORMAL	05/30/01	10/23/01	10/25/01		01-568	Lipid Content		Wet	BATD_SOP_5_190	4.48	%WET			0.01
A-TS-39-P	W4942	BATD	NORMAL	05/12/01	10/23/01	10/25/01		01-568	Lipid Content		Wet	BATD_SOP_5_190	7.42	%WET			0.01
A-TS-42B-P	W4943	BATD	NORMAL	05/07/01	10/23/01	10/25/01		01-568	Lipid Content		Wet	BATD_SOP_5_190	3.58	%WET			0.01
G-TS-01-P	W4944	BATD	NORMAL	05/21/01	10/23/01	10/25/01		01-568	Lipid Content		Wet	BATD_SOP_5_190	11.31	%WET			0.01
G-TS-06-P	W4945	BATD	NORMAL	05/31/01	10/23/01	10/25/01		01-568	Lipid Content		Wet	BATD_SOP_5_190	7.74	%WET			0.01
G-TS-19-P	W4946	BATD	NORMAL	05/11/01	10/23/01	10/25/01		01-568	Lipid Content		Wet	BATD_SOP_5_190	15.95	%WET			0.01
L-TS-65-P	W4948	BATD	NORMAL	06/14/01	10/23/01	10/25/01		01-568	Lipid Content		Wet	BATD_SOP_5_190	5.15	%WET			0.01

SAMPLE_NO	LAB_ID	ORDL_ORCL	DIL_FACTOR	PCT_MOIST	COMMENTS	SAMPLE_SIZE	SAMPLE_SIZE_UNITS	FINAL_RESULT	FINAL_QUAL	VALID_COMMENT	FRACTION
L-TS-73-P	W4847DUP		1.000	NA	DCM Extractable Lipid	1.71	G_WET	5.79			T
A-TS-33-P	W4841		1.000	NA	DCM Extractable Lipid	1.26	G_WET	3.10			T
L-TS-73-P	W4847		1.000	NA	DCM Extractable Lipid	1.74	G_WET	4.48			T
A-TS-38-P	W4842		1.000	NA	DCM Extractable Lipid	1.90	G_WET	7.42			T
A-TS-42B-P	W4843		1.000	NA	DCM Extractable Lipid	1.83	G_WET	3.58			T
G-TS-01-P	W4844		1.000	NA	DCM Extractable Lipid	1.75	G_WET	11.31			T
G-TS-06-P	W4845		1.000	NA	DCM Extractable Lipid	1.86	G_WET	7.74			T
G-TS-19-P	W4846		1.000	NA	DCM Extractable Lipid	1.68	G_WET	16.96			T
L-TS-65-P	W4848		1.000	NA	DCM Extractable Lipid	1.83	G_WET	5.15			T

Section 6

Third Party Validation Reports

Validator findings reported here may include results from non-swallow samples (e.g., fish). Only validator findings specific to tree swallow samples are applicable to this data report.

Stana Stephola
US EPA Approval Signature

May 24, 2002
Date

Ms. Christine Clark
Regional Sample Control Custodian
Office of Environmental Measurement and Evaluation
U.S. EPA Region I
11 Technology Drive
North Chelmsford, MA 01863

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Re: TO No. 04, Task No. 2, TDF No. 308
Case No. Swallow Egg B1OF2, SDG No. 48985-18 D/F
Battelle Laboratories - Columbus, OH
Centredale Manor, N. Providence, RI

Dioxin/Furan, TCX, and HCX: 18/Egg/A-TS-35-P, A-TS-38-P, A-TS-42a-P, A-TS-46-P,
A-TS-48-P, A-TS-49-P, A-TS-51-P, A-TS-57-P,
G-TS-02-P, G-TS-04-P, G-TS-07-P, G-TS-21-P,
G-TS-22-P, G-TS-29-P, L-TS-70-P, L-TS-83-P,
L-TS-84-P, L-TS-89-P

1/Fish Tissue SRM/CIL EDF 2526

Dear Ms. Clark:

A Tier III data validation was performed on the Dioxin/Furan, TCX and HCX analytical data for eighteen swallow egg tissue samples collected by the U.S. Geological Survey for the U.S. EPA at the Centredale Manor Site in N. Providence, RI. The samples were analyzed according to EPA Method 1613B, September 15, 1997. The samples were validated using first the criteria in the Centredale Manor Tasks 19-22 QAPP (5/23/01) prepared by Battelle Duxbury Operations, which includes the criteria in EPA Method 1613B, September 15, 1997, defaulting next to Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996 criteria, and to EPA Region I's Environmental Services Assistance Team Dioxin Data Validation SOP ESAT-01-0007 (01/31/01). The data were evaluated based on the following parameters:

- Overall Evaluation of Data and Potential Usability Issues
- Data Completeness (CSF Audit - Tier I)
- Preservation and Technical Holding Times
- PE Samples/Accuracy Check
- Window Defining Mix
- Initial and Continuing Calibrations
- Chromatographic Resolution
- Instrument Sensitivity Check
- Blanks
- Matrix Spike/Matrix Spike Duplicate
- Laboratory Control Sample

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- * Laboratory and Field Duplicates
- * Internal/Clean-Up Standards
- * Sample Analysis and Identification
- * Sample Quantitation
- * Estimated Detection Limits (EDL) and Estimated Maximum Possible Concentration (EMPC)
- * 2378-TCDD Toxicity Equivalents (TE) and Isomer Specificity
- * Required Sample Reruns and Second Column Confirmation
- * System Performance

* - All criteria were met for this parameter.

The following information was used to generate the Data Validation Memorandum attachment:

Table I: Recommendation Summary Table - summarizes validation recommendations

Table II: Overall Evaluation of Data - summarizes site objectives and potential usability issues

Data Summary Tables - summarize accepted, qualified, and rejected data

Overall Evaluation of Data and Potential Usability Issues

The following is a summary of the site investigation/assessment objectives:

- * To generate data of quality sufficient to be used for human health (EHRA) and ecological risk assessments (ERA) at the site.

One Cambridge Isotope Laboratories (CIL) Standard Reference Material (SRM) sample was evaluated for this SDG (CIL EDF 2526 for Dioxin/Furan congeners in fish tissue). All congeners were outside the Centredale Manor Tasks 19-22 QAPP (5/23/01) specified criterion of less than 30 %D from the consensus value. Since all of the congeners had low recoveries, the results for dioxin/furan in all samples were estimated (J,U) due to the possibility of bias low results.

The method blanks exhibited low level contamination. This contamination problem does not have an impact on the usability of the data. Contaminants were found in both the blanks and the field samples. When the analyte concentrations in the field samples were less than the corresponding blank action level, the field sample results reported by the laboratory were qualified as non-detected (U) on the Data Summary Table. See Table I for a summary of the qualifiers applied due to blank contamination.

Data Validation indicated minor data quality problems which do not significantly impact the usability of the data. See the discussion below for details. The reported results are usable for the site objectives.

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Data Completeness (CSF Audit - Tier I)

The following data or information in the data package had discrepancies and/or was missing:

1. The original chain of custody form was requested from the field sampling contractor or from Battelle Ocean Sciences, Duxbury, MA. There was no information in the data package indicating the date that these samples were collected.
2. The laboratory was asked to submit the run log for the analysis of sample A-TS-57-P (lab # 48985-18-09, file: 4888338A), analyzed on August 9, 2001.
3. The laboratory was asked to verify the extraction date of 07/30/01 for sample A-TS-57-P (lab # 48985-18-09) on pages 1471 and 1472, and submit corrected result reports if necessary. All of the samples appear to have been extracted on 07/27/01. c/c. EDF
not affected.
EDF
07/27/01
4. The laboratory was asked to submit the missing quantitation report and chromatograms for the fish SRM sample (lab # 48985-18-22) analyzed on 08/08/01, file: 4888337A, S10.
5. The laboratory was asked to submit the missing initial calibration data (file: 4888402, 08/08/01) for the DB225 confirmation analysis.
6. The laboratory was asked to submit the % Lipids results for this SDG/batch.
7. Most of the qualifiers used on the Form I report for sample A-TS-57-P (48985-18-09) (page 1720) were incorrect. The laboratory was asked to resubmit the Form I report for this sample with corrected qualifiers.
8. The laboratory was asked to submit the spreadsheets summarizing the measured concentrations and recoveries for the MS pair (G-TS-21-P/G-TS-21-P MS; 48985-18-20/48985-18-21), LCS (48985-18-23), and SRM (Fish SRM CIL EDF 2526, 48985-18-22).
9. The laboratory was asked to submit the spreadsheet summarizing the measured concentrations and RPDs for the laboratory duplicate pair (G-TS-07-P/G-TS-07-P DUP; 48985-18-18/48985-18-19)

Item 1 was requested via the TOPO on November 19, 2001, December 12, 2001, and March 1, 2002. Items 2 through 5 were requested via the TOPO on November 19, 2001. Item 6 was requested via the TOPO on January 18, 2002, and March 1, 2002. Items 7 through 9 were requested via the TOPO on April 1, 2002. Items 2 through 5 were received via the TOPO on December 12, 2001. Items 1 and 6 were received via the TOPO on March 15, 2002. Items 7 through 9 were received via the TOPO on April 26, 2002. All items were adequately addressed.

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PE Samples/Accuracy Check

One Cambridge Isotope Laboratories (CIL) Standard Reference Material (SRM) sample was evaluated for this SDG (CIL EDF 2526 for Dioxin/Furan congeners in fish tissue). All congeners were outside the Centradale Manor Tasks 19-22 QAPP (5/23/01) specified criterion of 30 %D from the consensus value.

The following table summarizes the SRM sample (44985-18-22 FISH SRM) results which did not meet the criterion and the resulting sample qualifications.

PE Sample Number	Congener	%D	Action	
			Positive Detects	NDs
CIL EDF 2526	2378-TCDD	62	J	UJ
CIL EDF 2526	12378-PeCDD	68	J	UJ
CIL EDF 2526	123478-FbCDD	74	J	UJ
CIL EDF 2526	123678-HxCDD	71	J	UJ
CIL EDF 2526	123789-HxCDD	74	J	UJ
CIL EDF 2526	1234678-HpCDD	71	J	UJ
CIL EDF 2526	OCDD	66	J	UJ
CIL EDF 2526	2378-TCDF	51	J	UJ
CIL EDF 2526	12378-PeCDF	65	J	UJ
CIL EDF 2526	23478-PeCDF	67	J	UJ
CIL EDF 2526	123478-HxCDF	68	J	UJ
CIL EDF 2526	123678-HxCDF	69	J	UJ
CIL EDF 2526	123789-HxCDF	72	J	UJ
CIL EDF 2526	234678-HxCDF	69	J	UJ
CIL EDF 2526	1234678-HpCDF	70	J	UJ
CIL EDF 2526	1234789-HpCDF	69	J	UJ
CIL EDF 2526	OCDF	65	J	UJ

Since all congeners had low recoveries as indicated by the large %Ds, the results for dioxin/furans in all the samples were estimated (J,UJ) due to the possibility of biased low results.

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The laboratory documented in their report that the low recoveries of the congeners in the SRM may be due to the lipid content. The laboratory indicated that for future analyses of associated samples the SRM preparation procedures will be modified.

Initial and Continuing Calibration

Initial Calibration

The following table summarizes the Initial Calibration (IC) results which did not meet the criterion specified in the Centredale Manor Tasks 19-22 QAPP (5/23/01) of RSD $\leq 25\%$ and the resulting sample qualifications:

IC Date	Compound	% RSD	Action		Affected Samples
			Positive Detects	NDs	
07/19/01	TCX	30	J	UJ	All

The data associated with the noncompliant initial calibrations are qualified due to the high variability. The quantitation of the analytes in the samples could be biased.

Continuing Calibration

The following table summarizes the Calibration Verification (VER) result which did not meet Centredale Manor Tasks 19-22 QAPP (5/23/01) recovery criterion and the resulting sample qualifications:

VER Date	Compound	Recovery (ng/mL)	Acceptable Recovery Range (ng/mL)	Action		Affected Samples
				Positive Detects	NDs	
06/06/01	¹²⁵ C ₁₂ -1234789-HpCDF	131	77-129	J	UJ	U-TS-21-P, L-TS-34-W

The data associated with the noncompliant calibration verification are qualified due to the high recovery. The quantitation of the associated analyte (1234789-HpCDF) in the samples could be biased.

Chromatographic Resolution

The hexachloroxanthene (HCX) peaks exhibit poor chromatography, i.e., broad shape. The broad peak shape created irregularities in the response factors used to calculate the concentrations of HCX. Therefore, professional judgment was used to estimate (J, UJ) all HCX results due to the poor chromatography.

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Blanks

All of the blanks associated with this SDG were evaluated for contamination. The following tables list the highest concentration of analytes found in the various blanks associated with these samples. The table lists the contamination found in the blanks along with the action levels and the affected samples:

Congener	Type of Blank	Blank Concentration* (Total pg)	Action Level* (Total pg)	Affected Samples
OCDD	Method Blank (8/3/01)	27	270	A-TS-31-P
2378-TCDF	Method Blank (8/10/01)	2.3	12	G-TS-02-P, G-TS-07-P
11374-PeCDF	Method Blank (8/3/01)	1.4	7.0	A-TS-42n-P, A-TS-46-P, A-TS-48-P, A-TS-49-P, G-TS-02-P, G-TS-04-P, G-TS-22-P, L-TS-39-P
23478-PeCDF	Method Blank (8/3/01)	1.0	5.0	G-TS-02-P, G-TS-07-P
123478-HxCDF	Method Blank (8/3/01)	1.4	7.0	G-TS-07-P, G-TS-21-P
123678-HxCDF	Method Blank (8/3/01)	0.75	3.8	G-TS-07-P
234678-HxCDF	Method Blank (8/3/01)	0.55	2.8	G-TS-07-P
1234789-HpCDF	Method Blank (8/6/01)	0.60	3.0	A-TS-38-P, A-TS-42n-P, A-TS-48-P, G-TS-04-P, G-TS-21-P
OCDF	Method Blank (8/3/01)	1.6	16	A-TS-38-P, A-TS-42n-P, A-TS-51-P, G-TS-07-P, G-TS-29-P
Total PeCDD	Method Blank (8/7/01)	4.7	47	A-TS-35-P, A-TS-42n-P, A-TS-46-P, A-TS-48-P, A-TS-49-P, A-TS-51-P, A-TS-52-P, G-TS-02-P, G-TS-04-P, G-TS-21-P, G-TS-29-P, L-TS-70-P, L-TS-34-P, L-TS-39-P
Total PeCDF	Method Blank (8/3/01)	2.4	24	A-TS-46-P, A-TS-48-P, A-TS-49-P, A-TS-57-P, G-TS-02-P, G-TS-04-P, G-TS-07-P, G-TS-21-P, G-TS-22-P, L-TS-34-P, L-TS-39-P
Total HxCDF	Method Blank (8/3/01)	2.8	28	G-TS-07-P, G-TS-21-P
Total HpCDF	Method Blank (8/6/01)	2.0	20	A-TS-31-P

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* Blank values and action levels are listed in units of total pg because the sample weights vary from 1.2 to 7.0 grams. The affected samples were determined by comparing the total pg of each congener in the samples to its respective action level.

Blank actions are based on Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996 and EPA Region I's Environmental Services Assistance Team Dioxin Data Validation SOP ESAT-01-0007 (01/31/01) criteria. Blank action levels are calculated as ten times the highest concentration of the contaminant determined in any blank for common contaminants (OCDD/OCDF and Total Homologues) and five times the highest concentration for all other analytes. The positive sample results that are less than the blank action level are reported as non-detects (U) at the reported concentration on the Data Summary Table.

Matrix Spike/Matrix Spike Duplicate

One MS sample was evaluated for this SDG: G-TS-21-P MS. No Matrix Spike Duplicate (MSD) was performed with this SDG. The MS/MSD precision (RPD) could not be evaluated.

The following table summarizes the egg tissue MS result which did not meet the recovery criterion of 50-120% as documented in the Centredale Manor Tasks 19-22 QAPP (5/23/01):

G-TS-21-P					
Congener	MS % Rec.	MSD % Rec.	RPD	Action	
				Positive Detect	NDs
TCX	15	NA	NA	J	Raise Detection Limit

NA Not Applicable

Due to the low % recovery of the TCX in the Matrix Spike (MS) and the Lab Control Sample (LCS), professional judgment was used to estimate (J) the positive result in sample A-TS-48-P and to raise the detection limits for the non-detected results to the corresponding level of the TCX in the LCS.

Laboratory Control Sample

The laboratory extracted and analyzed one OPR/LCS with this group of samples. The following table summarizes the Ongoing Precision and Recovery (OPR) results which did not meet the Centredale Manor Tasks 19-22 QAPP (5/23/01) criterion and the resulting sample qualifications:

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OFR Date	Compound	% Recovery	% Recovery Range	Action		Affected Samples
				Positive Detect	NDs	
08/5/01	TCX	43	50-120	J	Below Detection Limit	All

Due to the low % recovery of the TCX in the Matrix Spike (MS) and the Lab Control Sample (LCS), professional judgment was used to estimate (J) the positive result in sample A-TS-48-P and to raise the detection limits for the non-detected results to the corresponding level of the TCX in the LCS.

Laboratory and Field Duplicates

One laboratory duplicate pair was evaluated for this SDG (G-TS-07-P/G-TS-07-P DUP).

The table below summarizes the egg laboratory duplicate results which did not meet the duplicate criterion of Relative Percent Difference (RPD) < 30% for the Centredale Manor Tasks 19-22 QAPP (5/23/01).

G-TS-07-P					
Congener	Sample Conc. (ng/Kg)	Duplicate Conc. (ng/Kg)	RPD	Action	Affected Sample
				Positive Detects	
1234678-HpCDD	292.99	474.74	47	J	G-TS-07-P
OCDD	617.05	1013.81	46	J	G-TS-07-P

The positive results were estimated (J) for 1234678-HpCDD and OCDD in sample G-TS-07-P since the laboratory duplicate precision was outside criterion.

Sample Quantitation

Concentrations quantitated and reported by the laboratory below the lowest calibration standard are flagged (J) on the Data Summary Table. Quantitation is not accurate when the reported results are below the lowest calibration standard. The percent solids/lipids were not analyzed due to the limited amount of sample available, and are listed as (NA) on the Data Summary Table.

The detection limits for HCX correspond to the concentration in the lowest HCX calibration standard.

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2329-CCEDR Toxicity Equivalents, CTE, and Lower Specificity

All TE values were calculated by the ESAT data validator using the validated data discussed above in this report. The validated data accounts for blank contamination. The TE calculations include the reported EMPC values. TE values in the Data Summary Table differ slightly from the values reported by the laboratory. The validator used the Bird TEF values published in Environmental Health Perspectives, Volume 106, Number 12, December 1998, "Toxic Equivalency factors (TEFs) for PCBs, PCDDs, PCDFs for Humans and Wildlife."

Reanalyzed Sample Returns and Second Column Confirmation

Concentrations reported from the confirmation analysis are flagged with a (\$) on the Data Summary Table.

System Performance

No trends were noted with the dioxin/furan analysis. The results for HCX and TCX indicated analytical problems. The problems included: noncompliant initial calibration for TCX; poor HCX chromatography; low LCS/OPR recovery for TCX; and low MS recovery for TCX. Professional judgment was used to estimate (J) the positive TCX result and to raise the detection limits for the non-detects to the level of the TCX in the LCS.

Very truly yours,

LOCKHEED ENVIRONMENTAL


Robert Peary
Scientist


Louis Macri
ESAT Program Manager

cc: Cornell Rosiu, EPA RPM (DV Memorandum, Data Summary Table)

Attachments: Table I: Recommendation Summary Table
Table II: Overall Evaluation of Data
Data Summary Tables
Data Validation Worksheets
PE Score Reports
Analytical Method
Communications
Field Sampling Notes

Table I
 Recommendation Summary Table for Dioxins/Furans
 Centredale Manor Site
 Case No.: Swallow Egg and Diet B10F2 / SDG No.: 48985-18 D/F

Sample No.	A-TS-35-P	A-TS-38-P	A-TS-42a-P	A-TS-46-P	A-TS-48-P	A-TS-49-P	A-TS-51-P	A-TS-57-P	G-TS-02-P
Compound									
2378-TCDD	J ¹	J ¹	J ²	J ¹	J ¹	J ²	J ¹	J ¹	J ²
12378-PeCDD	J ¹	J ¹	J ²	J ¹	J ¹	J ²	J ¹	J ¹	J ²
123478-HxCDD	J ¹	J ¹	J ²	J ¹	J ¹	J ²	J ¹	J ¹	J ²
123678-HxCDD	J ¹	J ¹	J ¹	J ¹	J ¹	J ²	J ¹	J ¹	J ²
123789-HxCDD	J ¹	J ¹	J ¹	J ¹	J ¹	J ²	J ¹	J ¹	J ²
1234678-HxCDD	J ¹	J ¹	J ¹	J ¹	J ¹	J ²	J ¹	J ¹	J ²
OCDD	J ¹	J ²	J ²	J ¹	J ¹	J ¹	J ^{1,2}	J ¹	J ¹
2378-TCDF	J ¹	J ¹	J ¹	J ¹	J ¹	J ²	J ¹	J ¹	J ^{1,2}
12378-PeCDF	J ¹	J ¹	J ^{1,2}	J ^{1,2}	J ^{1,2}	J ^{1,2}	J ¹	J ¹	J ^{1,2}
23478-PeCDF	J ¹	J ¹	J ¹	J ¹	J ¹	J ²	J ¹	J ¹	J ^{1,2}
123478-HxCDF	J ¹	J ¹	J ¹	J ¹	J ¹	J ²	J ¹	J ¹	J ²
123678-HxCDF	J ¹	J ¹	J ¹	J ¹	J ¹	J ²	J ¹	J ¹	J ²
123789-HxCDF	J ¹	J ¹	J ²	J ¹	J ¹	J ²	J ¹	J ¹	J ²
234678-HxCDF	J ¹	J ¹	J ²	J ¹	J ¹	J ²	J ¹	J ¹	J ²
1234678-HxCDF	J ¹	J ¹	J ²	J ¹	J ¹	J ²	J ¹	J ¹	J ²
1234789-HxCDF	J ¹	J ^{1,2}	J ^{1,2}	J ¹	J ^{1,2}	J ²	J ¹	J ¹	J ²
OCDF	J ¹	J ^{1,2}	J ^{1,2}	J ¹	J ¹	J ²	J ^{1,2}	J ¹	J ¹
HCX	J ⁴	J ⁴	J ²	J ⁴	J ⁴	J ²	J ⁴	J ⁴	J ²
TCX	J ^{2,3}	J ^{2,3}	J ^{2,3}	J ^{2,3}	J ^{2,6,7}	J ^{2,3}	J ^{2,3}	J ^{2,3}	J ^{2,3}

Table I
Recommendation Summary Table for Dioxins/Furans
Centredale Manor Site

Case No.: Swallow Egg and Diet B10F2 / SDG No.: 48985-18 D/F

Sample Nos.	G-TS-04-P	G-TS-07-P	G-TS-21-P	G-TS-22-P	G-TS-29-P	L-TS-70-P	L-TS-83-P	L-TS-84-P	L-TS-89-P
Compound									
2378-TCDD	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹
12378-PeCDD	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹
123478-HxCDD	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹
123678-HxCDD	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹
123789-HxCDD	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹
1234678-HxCDD	J ¹	J ^{1,2}	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹
OCDD	J ¹	J ^{1,2}	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹
2378-TCDF	J ¹	J ^{1,2}	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹
12378-PeCDF	J ^{1,2}	J ¹	J ¹	J ^{1,2}	J ¹	J ¹	J ¹	J ¹	J ^{1,2}
23478-PeCDF	J ¹	J ^{1,2}	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹
123478-HxCDF	J ¹	J ^{1,2}	J ^{1,2}	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹
123678-HxCDF	J ¹	J ^{1,2}	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹
123789-HxCDF	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹
234678-HxCDF	J ¹	J ^{1,2}	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹
1234678-HxCDF	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹
1234789-HxCDF	J ^{1,2}	J ¹	J ^{1,2,3}	J ¹	J ¹	J ¹	J ¹	J ¹	J ^{1,2}
OCDF	J ¹	J ^{1,2}	J ¹	J ¹	J ^{1,2}	J ¹	J ¹	J ¹	J ¹
HCH	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹	J ¹
TCX	J ^{1,2}	J ^{1,2}	J ^{1,2}	J ^{1,2}	J ^{1,2}	J ^{1,2}	J ^{1,2}	J ^{1,2}	J ^{1,2}

Table 1
Recommendation Summary Table for Dioxins/Furans

A	-	Accept results.
J ¹	-	SRM %D outside criterion; J detects, UJ non-detects.
J ²	-	Initial calibration outside criterion; J detects, UJ non-detects.
J ³	-	Continuing calibration outside criterion; J detects, UJ non-detects.
J ⁴	-	Poor chromatography; J detects, UJ non-detects.
J ⁵	-	Method blank contamination; positive sample results less than the blank action level are reported as non-detects (U) at the concentration reported.
J ⁶	-	MS recovery outside criterion; J detects.
J ⁷	-	OPR/LCS recovery outside criterion; J detects.
J ⁸	-	Laboratory duplicate precision (%D) outside criteria; J detects.
J ⁹	-	The detection limits were raised due to poor MS and LCS recoveries.

EPA-NE - Data Validation Worksheet
Overall Evaluation of Data - Data Validation Memorandum - Table II

DIOXIN/FURAN ANALYSIS					
DQO (List all DQOs)	Sampling* and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability	Potential Usability Issues
		Analytical Error	Sampling Error		
To generate data of quality sufficient to be used for human health (HHRA) and ecological risk assessments (ERA) at the site.	Yes, Sampling Method appropriate for all samples. Yes, Analytical Method appropriate for all samples.	Refer to qualification in R/S Key on Table I: 1, 2, 3, 4, 5, 6, 7, 8, 9	Refer to qualification in R/S Key on Table I: None	**	One Cambridge Isotope Laboratories (CIL) Standard Reference Material (SRM) sample was evaluated for this SDG (CIL EDF 2526 for Dioxin/Furan congeners in fish tissue). All congeners were outside the Centredale Manor Tasks 19-22 QAPP (5/23/01) specified criteria of less than 30% D from the consensus value. Since all of the congeners had low recoveries, the results for dioxin/furan in all samples were estimated (I,U) due to the possibility of bias low results. The method blanks exhibited low level contamination. This contamination problem does not have an impact on the usability of the data. Contaminants were found in both the blanks and the field samples. When the analytic concentrations in the field samples were less than the corresponding blank action level, the field sample results reported by the laboratory were qualified as non-detected (U) on the Data Summary Table. See Table I for a summary of the qualifiers applied due to blank contamination. Data Validation indicated minor data quality problems which do not significantly impact the usability of the data. See the discussion in the data validation memorandum for details. The reported results are usable for the site objectives.

* The evaluation of "sampling error" cannot be completely assessed in the data validation.

** Sampling variability is not assessed in data validation.

Validator:

Patricia

Date: 5/23/02

0014/017

05/24/2002 FRI 11:48 FAX

Data Summary Table
 Dioxin/Furan Analysis - Egg Samples (ppb/g wet weight)

SITE: Cuyahoga River - St. Marys, OH
 CASE NO.: Bunker Egg and Oat #1072
 LABORATORY: BGS - Columbus, OH

SAMPLE NUMBER	Toxicity	A-15-05-P	A-15-06-P	A-15-08-P	A-15-09-P	A-15-10-P	A-15-11-P	A-15-12-P	A-15-13-P
STATION LOCATION	Equivalency	Aluminum Pond	Aluminum Pond	Aluminum Pond	Aluminum Pond	Aluminum Pond	Aluminum Pond	Aluminum Pond	Aluminum Pond
MATRIX	Factor (1)	Egg	Egg	Egg	Egg	Egg	Egg	Egg	Egg
PCDD/PCDF CONC.		ppb/g	DU/EMPC	ppb/g	DU/EMPC	ppb/g	DU/EMPC	ppb/g	DU/EMPC
2,3,7,8-TCDD	1.0	41.82 J		180.82 J		410.36 J		175.97 J	
2,3,7,8-PeCDD	1.0	5.48 J		32.08 J		5.56 J		4.08 J	
2,3,4,7,8-HxCDD	0.65	6.44 J		70.89 J		5.71 J		3.79 J	
2,3,6,7,8-HxCDD	0.01	48.34 J		187.31 J		37.88 J		32.88 J	
2,3,7,8,9-HxCDD	0.1	8.28 J		11.61 J		8.18 J		5.89 J	
2,3,4,6,7,8-HxCDD	0.001	344.71 J		330.58 J		187.82 J		194.87 J	
OCDD	0.001	318.53 J		353.99 J		198.80 J		315.72 J	
2,3,7,8-TCDF	1.0	2.05 J		8.60 J		19.91 J		5.87 J	
2,3,7,8-PeCDF	0.1	3.78 J		6.01 J		UJ	2.73	UJ	2.24
2,3,4,7,8-PeCDF	1.0	4.58 J		12.08 J		4.33 J		2.84 J	
2,3,6,7,8-HxCDF	0.1	7.00 J		7.89 J		4.53 J		3.79 J	
2,3,4,7,8-HxCDF	0.1	5.91 J		7.83 J		3.67 J		3.82 J	
2,3,7,8,9-HxCDF	0.1	0.40 J		UJ	0.88	UJ	0.42	UJ	0.88
2,3,4,6,7,8-HxCDF	0.1	4.12 J		4.86 J		2.82 J		2.38 J	
2,3,4,6,7,8-HxCDF	0.01	84.47 J		21.82 J		26.80 J		32.88 J	
2,3,4,7,8,9-HxCDF	0.01	2.61 J		UJ	0.61	UJ	1.82	1.78 J	0.81
OCDF	0.001	37.58 J		UJ	1.88	UJ	5.52	11.88 J	
TOTAL TCDD		41.82 J		180.82 J		410.36 J		175.97 J	
TOTAL PeCDD		UJ	5.48	32.08 J		UJ	5.56	UJ	4.08
TOTAL HxCDD		68.50 J		248.21 J		80.38 J		44.88 J	
TOTAL HpCDD		248.57 J		301.89 J		180.27 J		194.87 J	
TOTAL TCDF		12.28 J		10.74 J		10.94 J		6.88 J	
TOTAL PeCDF		12.92 J		18.10 J		28.08 J		UJ	8.38
TOTAL HxCDF		13.50 J		24.57 J		13.98 J		16.81 J	
TOTAL HpCDF		105.72 J		23.46 J		32.29 J		82.78 J	
HEX - Hexachlorobenzene		UJ	79.07	UJ	88.45	UJ	75.18	UJ	88.47
TCX - Trichlorobenzene		UJ	1800	UJ	1100	UJ	1300	UJ	1400
TOXIC EQUIVALENT (1)		88 J		240 J		440 J		180 J	
PERCENT SOLIDS		NA		NA		NA		NA	
PERCENT LIPIDS		NA		NA		NA		NA	
DILUTION FACTOR		1.0		1.0		1.0		1.0	
DATE SAMPLED		05/01/01		05/25/01		05/08/01		05/26/01	
DATE OF RECEIPT		07/11/01		07/11/01		07/11/01		07/11/01	
SAMPLE EXTRACTION DATE		07/27/01		07/27/01		07/27/01		07/27/01	
ANALYSIS DATE		08/08/01		08/08/01		08/08/01		08/08/01	
LAB SAMPLE IN		48985-18-02		48985-18-03		48985-18-04		48985-18-05	

* = The values in this column are either the Detection Limit (DL) or the Estimated Maximum Possible Concentration (EMPC). The EMPC results are marked with a "U". The DL values are Unmarked.

The EMPC values are not qualified with a "U", since they are already estimated.

(1) = The Toxicity Equivalency concentrations are calculated with the Toxicity Equivalency Factors (TEFs) for BGS found in "Toxicity Equivalency Factors (TEFs) for PCBs, PCDDs, PCDFs for Humans and Wildlife".

Environmental Health Perspectives, Volume 105, Number 12, December 1998, Table 3, page 782.

U = The expected upper limit of the TEF values for the congeners in birds.

S = Result reported from confirmation analysis.

Concentrations reported by the laboratory below the lowest standard are flagged (J) on the Data Summary Table as estimated values. All other summary qualifications are defined in Table 1.

NA = Not Analyzed; due to limited amount of sample available.

05/16/017

Table Summary Table Dioxin/Furan Analysis - Egg Samples (dry/wet weight)

SITE: Cranston Water - M. Providence, RI
 CASE NO.: Cranston Egg and Diet 010F2
 LABORATORY: ERM - Columbus, OH

SAMPLE NUMBER: STATION LOCATION: MATRIX:	Toxicity Equivalency Factors (1)	AT-51-P Allendale Pond Egg	AT-51-P Allendale Pond Egg	GT-52-P Gristone Mill Pond Egg	GT-54-P Gristone Mill Pond Egg	GT-57-P Gristone Mill Pond Egg	GT-51-P Gristone Mill Pond Egg
PCDD/F CONC.		ng/g	DL/EMPC	ng/g	DL/EMPC	ng/g	DL/EMPC
2,3,7,8-TCDD	1.0	428.34 J		550.50 J		8.14 J	
1,2,3,7,8-PeCDD	1.0	7.79 J		9.44 J		2.09 J	
1,2,3,4,7,8-HxCDD	0.05	8.17 J		19.27 J		4.07 J	
1,2,3,6,7,8-HxCDD	0.01	19.83 J		51.57 J		11.96 J	
1,2,3,7,8,9-HxCDD	0.1	3.29 J		11.27 J		5.18 J	
1,2,3,4,6,7,8-HpCDD	0.001	29.33 J		409.54 J		119.50 J	
OCDD	0.0001	UJ	26.00	1042.06 J		188.14 J	
2,3,7,8-TCDF	1.0	19.24 J		11.08 J		UJ	0.54
1,2,3,7,8-PeCDF	0.1	2.96 J		5.03 J		UJ	1.17
2,3,4,7,8-PeCDF	1.0	5.40 J		UJ	2.00	UJ	1.00
1,2,3,4,7,8-HxCDF	0.1	2.20 J		5.80 J		4.35 J	
1,2,3,6,7,8-HxCDF	0.1	2.36 J		7.28 J		3.33 J	
1,2,3,7,8,9-HxCDF	0.1	UJ	0.00	UJ	4.00	UJ	0.76
2,3,4,6,7,8-HpCDF	0.1	1.36 J		4.84 J		2.19 J	
1,2,3,4,6,7,8-HpCDF	0.01	2.71 J		71.01 J		45.74 J	
1,2,3,4,7,8,9-HpCDF	0.01	UJ	0.46	4.47 J		3.02 J	
OCDF	0.0001	UJ	0.57	54.34 J		14.86 J	
TOTAL TCDD		428.34 J		550.50 J		8.14 J	
TOTAL PeCDD		UJ	7.79	UJ	12.00	UJ	0.04
TOTAL HxCDD		23.34 J		55.78 J		54.24 J	
TOTAL HxCDF		22.80 J		55.92 J		118.62 J	
TOTAL TCDF		22.28 J		15.82 J		4.19 J	
TOTAL PeCDF		12.40 J		UJ	5.00	UJ	4.00
TOTAL HxCDF		3.26 J		55.90 J		14.81 J	
TOTAL HpCDF		UJ	2.71	112.35 J		51.88 J	
HCH - Heptachlor Epoxide		UJ	42.00	UJ	67.70	UJ	67.74
TCX - Toxaphene		UJ	800	UJ	1600	UJ	1600
TOXICITY EQUIVALENCY (1)		480 J		380 J		12 J	
PERCENT SOLID:		NA		NA		NA	
PERCENT LIPID:		NA		NA		NA	
DILUTION FACTOR:		1.0		1.0		1.0	
DATE SAMPLED:		05/22/01		05/22/01		05/22/01	
DATE OF RECEIPT:		05/21/01		07/11/01		07/11/01	
SAMPLE EXTRACTION DATE:		05/22/01		05/22/01		05/22/01	
ANALYSIS DATE:		05/25/01		05/25/01		05/27/01	
LAB SAMPLE ID:		0000-18-08		0000-18-09		0000-18-10	

* = The value is less than the detection limit (DL) or the Estimated Maximum Possible Concentration (EMPC). The EMPC results are marked with a "U". The DL values are indicated.

The EMPC values are not qualified with a "U", since they are already estimated.

(1) = The Toxic Equivalent concentrations are calculated with the Toxicity Equivalency Factors (TEFs) for Dioxin and Furan (TCDD, PeCDD, HxCDD, HxCDF, HpCDF, OCDD, OCDF) for Human and Wildlife.

Environmental Health Perspectives, Volume 105, Number 12, December 1997, Table 3, page 742.

U = The estimated upper limit of the TEF values for the compound in birds.

J = Result reported from confirmation analysis.

Concentrations reported by the laboratory below the listed standard are flagged (J) on this Table Summary Table as estimated values. All other necessary qualifications are defined in Table 1.

NA = Not Analyzed due to limited amount of sample available.

05/24/2002 FRI 11:49 FAX

Data Summary Table
 Chemicals Analysis - Egg Samples (Quality and Weight)

NOTE: Cuyahoga River at Ft. Lorain, OH
 CASE NO.: Swine Egg and Fish BPOF2 BOD NO.: 48005-18 DIF
 LABORATORY: Cincinnati, OH

SAMPLE NUMBER:	Toxicity	G-TS-22-P	G-TS-23-P	L-TS-20-P	L-TS-23-P	L-TS-24-P	L-TS-25-P
STATION LOCATION:	Equivalency	Oregano MS Pond	Oregano MS Pond	Lymnaea Pond	Lymnaea Pond	Lymnaea Pond	Lymnaea Pond
MATRIX:	Factor (1)	Egg	Egg	Egg	Egg	Egg	Egg
PCDD/PCDF CONC.		ng/Kg	DU/EMPC	ng/Kg	DU/EMPC	ng/Kg	DU/EMPC
2,3,7,8-TCDD	1.0	208.25 J		15.17 J		688.13 J	
1,2,3,7,8-PeCDD	1.0	7.25 J		4.80 J		14.96 J	
1,2,3,4,7,8-HxCDD	0.05	8.85 J		5.20 J		8.47 J	
1,2,3,6,7,8-HxCDD	0.01	52.12 J		22.24 J		16.84 J	
1,2,3,7,8,9-HxCDD	0.1	7.21 J		4.80 J		14.96 J	
1,2,3,4,6,7,8-HpCDD	40.001	478.89 J		22.71 J		239.81 J	
OCDD	0.0001	2078.23 J		101.33 J		411.14 J	
2,3,7,8-TCDF	1.0	15.85 J		15.00 J		10.18 J	
1,2,3,7,8-PeCDF	0.1	4.24 J	2.63	2.12 J		9.38 J	
2,3,4,7,8-PeCDF	1.0	4.24 J		2.72 J		13.93 J	
1,2,3,4,7,8-HxCDF	0.1	6.53 J		3.72 J		10.88 J	
1,2,3,6,7,8-HxCDF	0.1	6.53 J		3.81 J		7.15 J	
1,2,3,7,8,9-HxCDF	0.1	UJ	2.79	UJ	0.53	UJ	1.21
2,3,4,6,7,8-HpCDF	0.1	2.83 J		1.98 J		3.74 J	
1,2,3,4,6,7,8-HpCDF	0.01	33.84 J		17.88 J		48.82 J	
1,2,3,4,7,8,9-HpCDF	0.01	4.22 J		1.00 J		1.48 J	
OCDF	0.0001	58.61 J		UJ	0.01	20.89 J	
TOTAL TCDD		208.25 J		15.17 J		688.13 J	
TOTAL PeCDD		4.24 J		UJ	0.03	14.96 J	
TOTAL HxCDD		72.25 J		32.83 J		95.54 J	
TOTAL HpCDD		651.46 J		22.71 J		243.84 J	
TOTAL TCDF		15.85 J		15.00 J		10.18 J	
TOTAL PeCDF		UJ	11.88	9.22 J		24.71 J	
TOTAL HxCDF		35.24 J		15.05 J		23.84 J	
TOTAL HpCDF		197.81 J		22.20 J		57.02 J	
HCH - Hexachlorocyclohexane		UJ	562.21	UJ	50.82	UJ	59.08
TCX - Tetrachlorocyclohexane		UJ	7200	UJ	1800	UJ	2000
TOXICITY EQUIVALENCY (1):		240 J		40 J		720 J	
PERCENT SOLIDS:		NA		NA		NA	
PERCENT LARVAE:		NA		NA		NA	
DILUTION FACTOR:		1.0		1.0		1.0	
DATE SAMPLED:		06/28/01		06/28/01		06/28/01	
DATE OF RECEIPT:		07/11/01		07/11/01		07/11/01	
SAMPLE EXTRACTION DATE:		07/27/01		07/27/01		07/27/01	
ANALYSIS DATE:		08/07/01		08/07/01		08/07/01	
LAB SAMPLE NO:		48005-18-12		48005-18-13		48005-18-14	

* The value in this column are either the Detection Limit (DL) or the Estimated Maximum Possible Concentration (EMPC). The EMPC results are marked with a "J". The DL values are unmarked.

The EMPC values are not qualified with a "J", since they are already estimated.

(1) * The Toxic Equivalency concentrations are calculated with the Toxicity Equivalency Factors (TEFs) for dioxins found in "Toxic Equivalency Factors (TEFs) for PCDDs, PCDFs for Humans and Wildlife".

Environmental Health Perspectives, Volume 108, Number 12, December 1999, Table 3, page 782.

* * The expected upper limit of the TEF values for the congeners in this.

§ = Result reported from confirmation analysis.

Concentrations reported by the laboratory below the lowest standard are flagged (J) on the Data Summary Table as estimated values. All other necessary qualifications are defined in Table 1.

NA = Not Analyzed due to limited amount of sample available.

Steve Stodola

US EPA Approval Signature

4/26/02

Date

April 19, 2002

B-02-04-Y-1

Revised: April 25, 2002

Ms. Christine Clark
Regional Sample Control Custodian
Office of Environmental Measurement and Evaluation
U.S. EPA Region I
11 Technology Drive
North Chelmsford, MA 01863

Re: TO No. 04, Task No. 2, TDF No. 0418
Case No. Swallow Egg and Diet B2OF2, SDG No. 48985-25 D/F
Battelle Laboratories - Columbus, OH
Centredale Manor, North Providence, RI

Dioxin/Furan, HCH and TCX:13/Egg and Diet/A-TS-45-P, A-TS-47-P, A-TS-52-P,
A-TS-53-P, A-TS-54-P, DIET-AP,
DIET-GP, DIET-LP, L-TS-62-P,
L-TS-63-P, L-TS-67-P, L-TS-69-P,
L-TS-90-P

I/Fish Tissue SRM/CIL EDF 2526

Dear Ms. Clark:

A Tier III data validation was performed on the Dioxin/Furan, HCH, and TCX analytical data for 10 swallow eggs and three diet samples collected by USGS for the U.S. EPA at the Centredale Manor Site in North Providence, RI. The samples were analyzed according to EPA Method 1613B, September 15, 1997. The samples were validated using first the criteria in the Centredale Manor Tasks 19-22 QAPP (5/23/01) prepared by Battelle Duxbury Operations which include the criteria in EPA Method 1613B, September 15, 1997, defaulting next to Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analysis, December 1996 criteria, and to EPA Region I's Environmental Services Assistance Team Dioxin Data Validation SOP ESAT-01-0007 (01/31/01). The criteria for HCH and TCX are documented in Battelle's December 7, 2001 letter to EPA. See the Supporting Documentation section. The data were evaluated based on the following parameters:

- Overall Evaluation of Data and Potential Uncertainty Issues
- Data Completeness (CSF Audit - Tier I)
- * • Preservation and Technical Holding Times
- PE Samples/Accuracy Check
- * • Window Defining Mix
- Initial and Continuing Calibrations
- Chromatographic Resolution
- * • Instrument Sensitivity Check

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- Blanks
- Matrix Spike/Matrix Spike Duplicate
- Laboratory Control Sample/Laboratory Control Sample Duplicate
- Laboratory and Field Duplicates
- Internal/Clean-up Standards
- Sample Analysis and Identification
- Sample Quantitation
- Estimated Detection Limits (EDL) and Estimated Maximum Possible Concentration (EMPC)
- 2378-TCDD Toxicity Equivalents (TE) and Isomer Specificity
- Required Sample Results and Second Column Confirmation
- System Performance

* - All criteria were met for this parameter.

The following information was used to generate the Data Validation Memorandum
attached:

Table I: Recommendation Summary Table - summarizes validation recommendations

Table II: Overall Evaluation of Data - summarizes site objectives and potential usability issues

Data Summary Tables - summarize accepted, qualified, and rejected data

Overall Evaluation of Data and Potential Usability Issues

The following is a summary of the site investigation/assessment objectives as found in Centredale Manor Tasks 19-22 QAPP (5/23/01):

- To generate data of quality to be used for human health (HHRA) and ecological risk assessments (ERA).

One Cambridge Isotope Laboratories (CIL) Standard Reference Material (SRM) sample was evaluated for this SDQ (CIL EDF 2526 for Dioxin/Furan congeners in fish tissue). All congeners were outside the Centredale Manor Tasks 19-22 QAPP (5/23/01) specified criterion of 30 %D from the consensus value. Since all of the congeners had low recoveries, the results for dioxin/furan in all samples were estimated (J, UJ) due to the possibility of biased low results.

The TCX results indicated analytical problems. The problems included noncompliant initial calibration for TCX, low OPR TCX recovery, and low MS recovery for TCX. All non-detected TCX results were rejected due to noncompliant OPR and MS recoveries.

The method blanks exhibited low level contamination. This contamination problem does not have an impact on the usability of the dioxin/furan data. Contaminants were found in both the blanks and the field samples. When the analyte concentrations in the field samples were less than the corresponding blank action level, the field sample results reported by the laboratory are qualified as non-detected (U) on the Data Summary Table. See Table I for a summary of the qualifiers applied due to blank contamination.

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Data validation indicated minor data quality problems which do not significantly impact the usability of the dioxin/furan data. However, the TCX data were rejected. See the discussion in this memorandum for details. The reported results are usable for the site objectives.

Data Completeness (CSE Audit - Clear)

The following data or information in the data package had discrepancies and/or were missing:

1. The laboratory was asked to submit original COC from the sampler showing the sampling dates and the original date the egg samples were first received.
2. The laboratory was asked to submit their original sample log in forms with the dates the samples were first received.
3. The laboratory was asked to submit the % lipids for this SDG.

Items 1, 2, and 3 were requested via the TOPO on March 1, 2002. Items 1, 2, and 3 were received via the TOPO on March 13, 2002. All items were adequately addressed.

EE Samples/Accuracy Check

One CIL Standard Reference Material (SRM) sample was evaluated for this SDG (CIL EDF 2526 for Dioxin/Furan congeners in fish tissue). All congeners were outside the Centredale Manor Tasks 19-22 QAPP (5/23/01) specified criterion of 30 %D from the consensus value.

The following table summarizes the SRM sample (48985-25-18 FISH SRM) results which did not meet the criterion and the resulting sample qualifications:

PE Sample Number	Congener	%D from the consensus value	Action	
			Positive Detects	NDs
CIL EDF 2526	2378-TCDD	43	J	UJ
CIL EDF 2526	12378-PeCDD	54	J	UJ
CIL EDF 2526	123478-HxCDD	56	J	UJ
CIL EDF 2526	123678-HxCDD	59	J	UJ
CIL EDF 2526	123789-HxCDD	60	J	UJ
CIL EDF 2526	1234678-HpCDD	57	J	UJ
CIL EDF 2526	OCDD	54	J	UJ
CIL EDF 2526	2378-TCDF	39	J	UJ
CIL EDF 2526	12378-PeCDF	49	J	UJ

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PE Sample Number	Congener	%D from the consensus value	Action	
			Positive Detects	NDs
CIL EDF 2526	23478-PeCDF	51	J	UJ
CTL EDF 2526	123478-HxCDF	51	J	UJ
CTL EDF 2526	123678-HxCDF	54	J	UJ
CIL EDF 2526	123789-HxCDF	55	J	UJ
CIL EDF 2526	234678-HxCDF	51	J	UJ
CIL EDF 2526	1234678-HpCDF	55	J	UJ
CIL EDF 2526	1234789-HpCDF	54	J	UJ
CIL EDF 2526	OCDF	54	J	UJ

Since all of the congeners had low recoveries as indicated by the large %D, the results for dioxin/furans in all samples were estimated (J, UJ) due to the possibility of biased low results.

The laboratory documented in their report that the low recoveries of the congeners in the SRM may be due to the lipid content. The laboratory indicated that for future analyses of associated samples the SRM preparation procedures will be modified.

Initial and Continuing Calibrations

The following table summarizes the Initial Calibration (IC) which did not meet the criterion specified in Centredale Manor Tasks 19-22 QAPP (5/23/01) of RSD $\leq 25\%$ and the resulting sample qualifications:

IC Date	Compound	% RSD	Action		Affected Samples
			Positive Detects	NDs	
07/20/01	TCX	30	J	UJ	All

The data associated with the noncompliant initial calibration are qualified due to the variability. The quantitation of the associated analyte in the samples could be biased.

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The following table summarizes the Calibration Verification (VER) results which did not meet Method 1613B recovery criterion and the resulting sample qualifications:

VER Date	Compound	Recovery (ng/ml)	Recovery Range (ng/ml)	Action		Affected Samples
				Positive Detects	NDs	
08/07/01 (Ending)	¹² C ₁₂ -1234789-HxCDF	131	77-129	J	UJ	A-TS-53-P, A-TS-54-P, L-TS-67-P, L-TS-69-P
08/08/01 (Beginning)	123789-HxCDF	44	45-56	J	UJ	A-TS-45-P, A-TS-52-P, DIET-AP, DIET-GP, DIET-LP, L-TS-62-P

The data associated with the recoveries of noncompliant calibration verifications are qualified due to the recoveries outside acceptance range. The quantitation of the associated analytes in the samples could be biased.

Chromatographic Resolution

The hexachloroxanthene (HCX) peaks exhibit poor chromatography, i.e., broad shape. The broad peak shape created irregularities in the response factors used to calculate the concentrations of HCX. Therefore, professional judgement was used to estimate (J,UJ) all HCX results due to the poor chromatography.

Blanks

All of the blanks associated with this SDG were evaluated for possible sources of contamination. The following table summarizes the highest concentration of contamination that was detected in the blanks. The table lists the action levels/actions and the samples affected:

Congener	Type of Blank	Blank Concentration (2g sample size) ng/Kg	Action Level (2g sample size) ng/Kg	Samples Affected
12378-PeCDD	Method Blank (8/10/01)	0.01	4.0	DIET-AP, L-TS-62-P, L-TS-63-P
OCDD	Method Blank (8/10/01)	9.3	93	A-TS-45-P, A-TS-47-P, A-TS-52-P, A-TS-54-P
2378-TCDF	Method Blank (8/13/01) (Confirmation Runs)	7.0	35	A-TS-45-P, A-TS-47-P, A-TS-52-P, A-TS-53-P, A-TS-54-P, DIET-AP, DIET-LP, L-TS-62-P, L-TS-63-P, L-TS-67-P, L-TS-69-P, L-TS-90-P
123478-HxCDF	Method Blank (8/08/01)	0.47	2.4	DIET-GP, DIET-LP

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Congener	Type of Blank	Blank Concentration (2g sample size) ng/Kg	Action Level (2g sample size) ng/Kg	Samples Affected
1234789-HpCDF	Method Blank (8/10/01)	0.82	4.1	A-TS-45-P, A-TS-53-P, A-TS-54-P, DIET-AP, DIET-GP, DIET-LP, L-TS-62-P, L-TS-63-P, L-TS-67-P, L-TS-69-P, L-TS-90-P
OCDF	Method Blank (8/10/01)	4.5	45	A-TS-45-P, A-TS-53-P, A-TS-54-P, DIET-AP, DIET-GP, DIET-LP, L-TS-62-P, L-TS-63-P, L-TS-67-P, L-TS-69-P, L-TS-90-P
Total PeCDD	Method Blank (8/07/01)	2.4	24	A-TS-45-P, A-TS-47-P, A-TS-52-P, A-TS-53-P, A-TS-54-P, DIET-AP, DIET-LP, L-TS-62-P, L-TS-63-P, L-TS-67-P, L-TS-69-P
Total HxCDF	Method Blank (8/08/01)	0.47	4.7	DIET-GP
Total HpCDF	Method Blank (8/10/01)	1.3	13	A-TS-45-P, A-TS-47-P, A-TS-53-P, DIET-AP, DIET-GP, DIET-LP, L-TS-67-P

Blank actions are based on Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996 and EPA Region I's Environmental Services Assistance Team Dioxin Data Validation SOP ESAT-01-0007 (01/31/01) criteria. Blank action levels are calculated as ten times the highest concentration of the contaminant determined in any blank for common contaminants (OCDD/OCDF and Total Homologues) and five times the highest concentration for all other analytes. The positive sample results that are less than the blank action level are reported as non-detects (U) at the reported concentration on the Data Summary Table.

Matrix Spike/Matrix Spike Duplicate

One MS was evaluated for this SDG: L-TS-90-PM3.

The table below summarizes the tissue MS/MSD results which did not meet the recovery criterion of 50-120% as documented in the Centredale Manor Tasks 19-22 QAPP (5/23/01).

L-TS-90-P			
Congener	MS % Rec.	Action	
		Positive Detects	NDs
TCX	1	NA no positive results	R

Professional judgement was used to reject (R) non-detected values for TCX in all samples since

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MS percent recovery was low.

Laboratory Control Sample

The laboratory extracted and analyzed one OPR/LCS with this group of samples. The following table summarizes the Ongoing Precision and Recovery (OPR) result which did not meet Centredale Manor Tasks 19-22 QAPP (5/23/01) recovery criterion and the resulting sample qualifications:

OPR Date	Compound	% Recovery	% Recovery Range	Action		Affected Samples
				Positive Detects	NDs	
07/30/01	TCX	5	50-120	NA no positive results	R	All

The data associated with low recoveries of a noncompliant (less than 10% recovery) OPR are rejected (R).

Laboratory and Field Duplicates

Two laboratory duplicate pairs were evaluated for this SDG A-TS-47-P/A-TS-47-PDup and DIET-AP/DIET-APDup. All criterion were met for A-TS-47-P/A-TS-47-PDup.

The table below summarizes the tissue duplicate results that did not meet the laboratory duplicate criterion of Relative Percent Difference (RPD) < 30% as specified in Centredale Manor Tasks 19-22 QAPP (5/23/01).

Congener	DIET-AP	DIET-APDup	RPD	Action		Affected Samples
	Sample Conc. (ng/Kg)	Duplicate Conc. (ng/Kg)		Positive Detects	Non-Detects	
2376-TCDD	218	33	148	J	UJ	All Diet
1234678-HpCDD	53	23	81	J	UJ	All Diet

Professional judgement was used to estimated (J, UJ) 2378-TCDD and 1234678-HpCDD in all Diet samples due to duplicate precision outside criterion.

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Internal/Chem.-Up Standards

• Internal Standards

The following table summarizes the internal standard recovery that did not meet Centredale Manor Tasks 19-22 QAPP (5/23/01) of 25-150%:

Standard	% Recovery	Action		Affected Sample
		Positive Detects	NDs	
¹²³⁷⁸ -TCDD	162	1	11	A-TS-47-P

The corresponding non-labeled congener results are estimated as shown in the table due to internal standard percent recoveries outside method acceptance criterion.

Samples Quantitation

Concentrations quantitated below the lowest calibration standard are flagged (J) on the Data Summary Tables. Quantitation is not accurate when the reported results are below the lowest calibration standard.

12378-TCDD Toxicity Equivalents (TE) and Hammer Specificity

All TE values reported on the Data Summary Tables have been calculated by the ESAT data validator using the validated data discussed above in this report. As a result, the TE values in the Data Summary Table differ slightly from the values reported by the laboratory. The validated data accounts for blank contamination. The TE calculations include the reported EMPC values. The Fish TEF values used by ESAT are the ones published in Environmental Health Perspectives, volume 106, Number 12, December 1998, "Toxic Equivalency factors (TEFs) for PCBs, PCDDs, PCDFs for Humans and Wildlife."

System Performance

No trends were noted with the dioxin/furan analysis. The results for HCX and TCX indicated analytical problems. The problems included a noncompliant initial calibration for TCX, poor HCX chromatography, low OPR TCX recovery, and low MS recovery for TCX.

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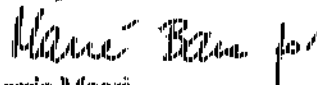
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Revised: April 25, 2002

Very truly yours,

LOCKHEED ENVIRONMENTAL



Jimmie Bartels
Principal Scientist



Louis Macri
ESAT Program Manager

cc: Cornell Rosin, EPA RPM (DY Memorandum, Data Summary Table)

Attachments: Table I: Recommendation Summary Table
Table II: Overall Evaluation of Data
Data Summary Tables
Data Validation Worksheets
Analytical Method
PE Results
Communication/Phone Logs
Field Sampling Notes

Table I
Recommendation Summary Table for Dioxins/Furans

A	-	Accept results.
J ¹	-	SRM %D outside criterion; J detects, UJ non-detects.
J ²	-	Poor chromatography; J detects, UJ non-detects.
J ³	-	Method blank contamination; positive sample results less than the blank action level are reported as non-detects (U) at the concentration reported.
J ⁴	-	Laboratory duplicate precision outside criteria; J detects, UJ non-detects.
J ⁵	-	Internal standard recovery outside criteria; J detects, UJ non-detects.
J ⁶	-	VER recoveries outside criterion; J detects, UJ non-detects.
R ¹	-	Low OPR recovery; R non-detects.
R ²	-	Low MS recovery; R non-detects.

EPA-NE - Data Validation Worksheet

Overall Evaluation of Data - Data Validation Memorandum - Table II

DIOXIN/FURAN/PCB/TCX ANALYSIS					
DQO (For all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability	Potential Usability Issues
		Analytical Error	Sampling Error ^a		
The following is a summary of the site investigation/assessment objectives as found in Connecticut Minor Tanks 19-22 QAPP (5/23/01): To generate data of quality to be used for human health (HHRA) and ecological risk assessments (ERA).	Yes, Sampling Method appropriate for all samples. Yes, Analytical Method appropriate for all samples.	Refer to qualification in R/S Key on Table I. Passable, R¹²	Refer to qualification in R/S Key on Table I. NA	—	One Cambridge Isotope Laboratories (CIL) Standard Reference Material (SRM) sample was evaluated for this SDO (CIL REF 2526 for Dioxin/Furan congeners in fish tissue). All congeners were outside the Connecticut Minor Tanks 19-22 QAPP (5/23/01) specified criteria of 30 MD from the consensus value. Since all of the congeners had low recoveries, the results for dioxin/furan in all samples were estimated (U) due to the possibility of biased low results. The TCX results indicated analytical problems. The problems included noncompliant initial calibration for TCX, low OPR TCX recovery, and low MS recovery for TCX. All non-detect TCX results were rejected due to noncompliant OPR and MS recoveries. The method blanks exhibited low level contamination. This contamination problem does not have an impact on the usability of the dioxin/furan data. Contaminants were found in both the blanks and the field samples. When the analyte concentrations in the field samples were less than the corresponding blank action level, the field sample results reported by the laboratory are qualified as non-detect (U) on the Data Summary Table. See Table I for a summary of the guidelines applied due to blank contamination. Data validation indicated minor data quality problems which do not significantly impact the usability of the dioxin/furan data. However, the TCX data were rejected. See the data validation memorandum for details. The reported results are usable for the site objectives.

^a The evaluation of "sampling error" cannot be completely assessed in the data validation.
Sampling variability is not assessed in data validation.

Validator: 

Date: 4/25/02

04/26/2002

04/26/2002 FRI 15:00 FAX

09/26/2002 THU 15:00 FRI

* The values in this column are either the Observed Level (OL) or the Estimated Maximum Possible Concentration (EMPC). The EMPC results are reported with a "Y". The OL values are unmarked. The EMPC values are not qualified with a "Y", since they are already estimated.
 (1) The Toxic Equivalent concentration is estimated with the Toxicity Equivalency Factors (TEFs) found in "Toxic Equivalency Factors (TEFs) for PCBs, PCDDs, PCDFs for Humans and Animals", Environmental Health Perspectives, Volume 108, Number 12, December 1995, Table 2, page 782.
 Concentrations reported by the laboratory below the listed standards listed (2) on the table SUMMARY Table as estimated values. All other necessary qualifications are defined in Table 1.
 * = The reported upper limit of the TEQ values for the compound in fish.
 B = Basic reported data concentration analysis.

110107

04/26/2002 FRI 15:00 FAX

* The values in this column are either the Detected Levels (DL) or the Estimated Maximum Possible Concentration (EMPC). The EMPC results are marked with a **. The DL values are unmarked.
 The EMPC values are not entitled with a "T", since they are already estimated.
 (†) The Toxic Equivalent concentration is calculated with the Toxic Equivalency Factors (TEFs) found in "Toxic Equivalency Factors (TEFs) for PCBs, PCDDs, PCDFs for Humans and Wildlife", Environmental Health Perspectives, Volume 100, Number 12, December 1992, Table 1, page 752.
 Concentrations reported by the laboratory below the limit reported are marked (‡) on the Data Summary Table as estimated values. All other necessary qualifications are defined in Table 1.
 < = The expected upper limit of the TEF value for the compound in table.
 * = Result obtained from confirmation analysis.

Data Summary Table
 Study/Purpose Analysis - Tissue Samples (ppb wet weight)

SITE: Cambridge Mass. - N. Providence, RI
 CASE NO. Benthic Egg and Dipodomys EGG NO. ANALYSIS OF
 LABORATORY: Estelle

SAMPLE NUMBER	Toxicity Equivalency Factor (1)	LTS-OP LYMANVILLE POND EGG	LTS-OP LYMANVILLE POND EGG	LTS-OP LYMANVILLE POND EGG
STATION LOCATION				
MATRIX				
TODITCDF CONCL				
2,3,7,8-TCDF	1.5	100.00 J	100.00 J	100.00 J
2,3,7,8-PeCDF	1.5	10.00 J	10.00 J	10.00 J
2,3,4,7,8-PeCDF	0.05	11.00 J	11.00 J	11.00 J
1,2,3,7,8-HxCDF	0.01	00.00 J	00.00 J	00.00 J
1,2,3,7,8-HxCDF	0.1	4.70 J	4.70 J	4.70 J
1,2,3,4,6,7,8-HpCDF	<0.001	04.12 J	04.12 J	04.12 J
OCDF	0.0001	00.00 J	00.00 J	00.00 J
2,3,7,8-TCDF	1.0	10.00	10.00	10.00
1,2,3,7,8-PeCDF	0.1	4.70 J	4.70 J	4.70 J
2,3,4,7,8-PeCDF	1.0	7.00 J	7.00 J	7.00 J
1,2,3,4,7,8-HxCDF	0.1	0.01 J	0.01 J	0.01 J
1,2,3,4,7,8-HxCDF	0.1	0.01 J	0.01 J	0.01 J
1,2,3,7,8-HxCDF	0.1	0.01 J	0.01 J	0.01 J
2,3,4,6,7,8-HpCDF	0.1	0.01 J	0.01 J	0.01 J
1,2,3,4,6,7,8-HpCDF	0.01	10.00 J	10.00 J	10.00 J
1,2,3,4,7,8-HpCDF	0.01	0.01 J	0.01 J	0.01 J
OCDF	0.0001	0.01 J	0.01 J	0.01 J
TOTAL TCDF		100.00 J	100.00 J	100.00 J
TOTAL PeCDF		0.01 J	0.01 J	0.01 J
TOTAL HxCDF		10.00 J	10.00 J	10.00 J
TOTAL HpCDF		00.00 J	00.00 J	00.00 J
TOTAL TCDF		10.00 J	10.00 J	10.00 J
TOTAL PeCDF		10.00 J	10.00 J	10.00 J
TOTAL HxCDF		10.00 J	10.00 J	10.00 J
TOTAL HpCDF		0.01 J	0.01 J	0.01 J
TCX - Toxicity Equivalency		10.00 J	10.00 J	10.00 J
TCX - Toxicity Equivalency		10.00 J	10.00 J	10.00 J
TOXIC EQUIVALENT		10.00 J	10.00 J	10.00 J
PERCENT SOLUBLE		10.00 J	10.00 J	10.00 J
PERCENT LIPID		10.00 J	10.00 J	10.00 J
SOLUTION FACTOR		1.0	1.0	1.0
DATE SAMPLED		07/1/01	07/1/01	07/1/01
DATE OF RECEIPT		07/1/01	07/1/01	07/1/01
SAMPLE EXTRACTION DATE		07/1/01	07/1/01	07/1/01
ANALYSIS DATE		07/1/01	07/1/01	07/1/01
LAB SAMPLE ID		07/1/01	07/1/01	07/1/01

* = The value in this column are either the Detection Limit (DL) or the Estimated Maximum Possible Concentration (EMPC). The EMPC results are noted with a "J". The DL values are unrounded. The EMPC values are not qualified with a "J", since they are already estimated.

(1) The Toxic Equivalency Factor (TEF) is calculated with the Toxicity Equivalency Factors (TEFs) found in Toxicity Equivalency Factors (TEFs) for PCBs, PCDDs, PCDFs for Humans and Wildlife, Environmental Health Perspectives, Volume 105, Number 12, December 1993, Table 3, page 782.

Concentrations reported by the laboratory below the lowest standard are flagged (J) on the Data Summary Table as estimated values. All other necessary qualifications are defined in Table 1.

< = The expected upper limit of the TEF values for the compound in this.

= Result reported from confirmation analysis

04/17/017

04/26/2002 FRI 15:01 FAX

Steve Stodola
US EPA Approval Signature

11/18/02
Date
November 7, 2002

Ms. Christine Clark
Regional Sample Control Custodian
Office of Environmental Measurement and Evaluation
U.S. EPA Region I
11 Technology Drive
North Chelmsford, MA 01863

Re: TO No. 10, Task No. 2, TDF No. 0737
Case No. Nestling BIOF1, SDG No. 49038-41 D/F
Battelle Laboratories - Columbus, OH
Centredale Manor, North Providence, RI

Dioxin/Furan, HCH and TCX:15/Nestling/A-TS-35-N, A-TS-46-N, A-TS-48-N,
A-TS-49-N, A-TS-57-N, G-TS-02-N,
G-TS-04-N, G-TS-07-N, G-TS-22-N,
G-TS-29-N, L-TS-62-N, L-TS-63-N,
L-TS-70-N, L-TS-84-N, L-TS-89-N

1/Fish Tissue SRM/CIL EDF 2526

Dear Ms. Clark:

A Tier III data validation was performed on the Dioxin/Furan, HCH, and TCX analytical data for 15 nestling samples collected by USGS for the U.S. EPA at the Centredale Manor Site in North Providence, RI. The samples were analyzed according to EPA Method 1613B, September 15, 1997. The samples were validated using first the criteria in the Centredale Manor Tasks 19-22 QAPP (5/23/01) prepared by Battelle Duxbury Operations which include the criteria in EPA Method 1613B, September 15, 1997, defaulting next to Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996 criteria, and to EPA Region I's Environmental Services Assistance Team Dioxin Data Validation SOP ESAT-01-0007 (01/31/01). The criteria for HCH and TCX are documented in Battelle's December 7, 2001 letter to EPA. See the Supporting Documentation section. The data were evaluated based on the following parameters:

- Overall Evaluation of Data and Potential Usability Issues
 - Data Completeness (CSF Audit - Tier I)
 - Preservation and Technical Holding Times
 - PE Samples/Accuracy Check
 - Window Defining Mix
 - Initial and Continuing Calibration
 - Chromatographic Resolution
 - Instrument Sensitivity Check

- Blanks
- Matrix Spike/Matrix Spike Duplicate
- * • Laboratory Control Sample/Laboratory Control Sample Duplicate
- • Laboratory and Field Duplicates
- • Internal/Clean-up Standards
- • Sample Analysis and Identification
- • Sample Quantitation
- * • Estimated Detection Limits (EDL) and Estimated Maximum Possible Concentration (EMPC)
- • 2378-TCDD Toxicity Equivalents (TE) and Isomer Specificity
- * • Required Sample Retums and Second Column Confirmation
- System Performance

* - All criteria were met for this parameter.

The following information was used to generate the Data Validation Memorandum attachments:

Table I: Recommendation Summary Table - summarizes validation recommendations

Table II: Overall Evaluation of Data - summarizes site objectives and potential usability issues

Data Summary Tables - summarize accepted, qualified, and rejected data

General Evaluation of Data and Potential Usability Issues

The following is a summary of the site investigation/assessment objectives as found in Centredale Manor Tasks 19-22 QAPP (5/23/01):

- To generate data of quality sufficient to be used for human health (HHRA) and ecological risk assessments (ERA).

One Cambridge Isotope Laboratories (CIL) Standard Reference Material (SRM) sample was evaluated for this SDG (CIL EDF 2526 for Dioxin/Furan congeners in fish tissue). All congeners were outside the Centredale Manor Tasks 19-22 QAPP (5/23/01) specified criterion of 30 %D from the consensus value. Since all of the congeners had low recoveries, the results for dioxin/furan in all samples were estimated (J, U) due to the possibility of biased low results.

The TCX initial calibration % RSD was noncompliant. The laboratory did not perform additional quality control procedures, neither a laboratory control sample nor matrix spike samples, for the TCX analysis. Therefore, the results of the initial calibration standards were investigated. The low standards in the multi-point initial calibration had an erratic response. The laboratory used the lowest standard as the reporting limit for the non-detected results. The erratic response would indicate that this may not be an appropriate reporting limit. Therefore, the TCX results were rejected (R). (1)

The method blanks exhibited low level contamination. This contamination problem does not have an impact on the usability of the dioxin/furan data. Contaminants were found in both the blanks and the field samples. When the analyte concentrations in the field samples were less than

(1) Note that TCX analysis was for screening purposes only. An LCS/MS was not required for TCX per the QAPP. Dated 11/25/02

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the corresponding blank action level, the field sample results reported by the laboratory are qualified as non-detected (U) on the Data Summary Table. See Table I for a summary of the qualifiers applied due to blank contamination.

Data validation indicated minor data quality problems which do not significantly impact the usability of the dioxin/furan data. However, the TCX data were rejected. See the discussion below for details. The reported results are usable for the site objectives.

PE Samples/Accuracy Check

One CIL Standard Reference Material (SRM) sample was evaluated for this SDG (CIL EDF 2526 for Dioxin/Furan congeners in fish tissue). All congeners were outside the Centredale Manor Tackles 19-22 QAPP (5/23/01) specified criterion of 30 %D from the consensus value.

The following table summarizes the SRM sample (49038-41-20 FISH SRM) results which did not meet the criterion and the resulting sample qualifications:

PE Sample Number	Congener	%D from the consensus value	Action	
			Positive Detects	NDs
CIL EDF 2526	2378-TCDD	54	J	UJ
CIL EDF 2526	12378-PeCDD	59	J	UJ
CIL EDF 2526	123478-HxCDD	64	J	UJ
CIL EDF 2526	123678-HxCDD	64	J	UJ
CIL EDF 2526	123789-HxCDD	63	J	UJ
CIL EDF 2526	1234678-HpCDD	61	J	UJ
CIL EDF 2526	OCDD	54	J	UJ
CIL EDF 2526	2378-TCDF	43	J	UJ
CIL EDF 2526	12378-PeCDF	59	J	UJ
CIL EDF 2526	23478-PeCDF	58	J	UJ
CIL EDF 2526	123478-HxCDF	57	J	UJ
CIL EDF 2526	123678-HxCDF	56	J	UJ
CIL EDF 2526	123789-HxCDF	62	J	UJ
CIL EDF 2526	234678-HxCDF	57	J	UJ
CIL EDF 2526	1234678-HpCDF	59	J	UJ

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PE Sample Number	Congener	%D from the consensus value	Action	
			Positive Detects	NDs
CIL EDF 2526	1234789-HpCDF	56	J	UJ
CIL EDF 2526	OCDF	53	J	UJ

Since all of the congeners had low recoveries as indicated by the large %Ds, the results for dioxin/furans in all samples were estimated (J, UJ) due to the possibility of biased low results.

The laboratory documented in their report that the low recoveries of the congeners in the SRM may be due to the lipid content. For this SDG, 1.0119 grams of SRM tissue, instead of 2 grams, were extracted in an attempt to bring the lipid content of the SRM in line with the lipid content of the samples. With this change the recoveries of the analytes still did not meet the %D criterion. The laboratory indicated that for future analyses of associated samples the SRM preparation procedures will be modified.

Initial and Continuing Calibrations

The following table summarizes the Initial Calibration (IC) which did not meet the criterion specified in Centredale Manor Tasks 19-22 QAPP (5/23/01) of RSD $\leq 25\%$ and the resulting sample qualifications:

IC Date	Compound	% RSD	Action		Affected Samples
			Positive Detects	NDs	
07/20/01	TCX	30	J*	UJ*	All

* See the following discussion.

The TCX initial calibration % RSD was noncompliant. The laboratory did not perform additional quality control procedures, neither a laboratory control sample nor matrix spike samples, for the TCX analysis. Therefore, the results of the initial calibration standards were investigated. The low standards in the multi-point initial calibration had an erratic response. The laboratory used the lowest standard as the reporting limit for the non-detected results. The erratic response would indicate that this may not be an appropriate reporting limit. Therefore, the TCX results were rejected (R).

Chromatographic Resolution

The hexachloroxanthene (HCX) peaks exhibit poor chromatography, i.e., broad shape. The broad peak shape created irregularities in the response factors used to calculate the concentrations of HCX. Therefore, professional judgement was used to estimate (J, UJ) all HCX results due to the poor chromatography.

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The laboratory flagged the 2378-TCDF values in samples A-TS-35-N, A-TS-46-N, A-TS-48-N, A-TS-49-N, A-TS-57-N, G-TS-02-N, G-TS-07-N, G-TS-22-N, G-TS-29-N, L-TS-62-N, L-TS-63-N, L-TS-70-N, L-TS-84-N, and L-TS-89-N with an "E" to indicate chromatographic interference. Estimate (J) the 2378-TCDF value in referenced samples due to chromatographic interference.

Blanks

All of the blanks associated with this SDG were evaluated for possible sources of contamination. The following table summarizes the highest concentration of contamination that was detected in the blanks. The table lists the action levels/actions and the samples affected:

Congener	Type of Blank	Blank Concentration ng/Kg	Action Level ng/Kg	Samples Affected
OCDD	Method Blank (10/11/01) (1.0g sample size)	10	100	A-TS-35-N, G-TS-04-N
OCDD	Method Blank (10/11/01) (2.0g sample size)	5.0	50	L-TS-62-N
OCDD	Method Blank (10/11/01) (5.0g sample size)	2.0	20	G-TS-22-N
OCDD	Method Blank (10/11/01) (8.0g sample size)	1.3	13	G-TS-02-N
123478-HxCDF	Method Blank (10/12/01) (1.0g sample size)	0.90	4.5	A-TS-35-N, G-TS-04-N
OCDF	Method Blank (10/11/01) (1.0g sample size)	2.6	26	A-TS-35-N, G-TS-04-N
OCDF	Method Blank (10/11/01) (2.0g sample size)	1.3	13	L-TS-62-N
OCDF	Method Blank (10/11/01) (5.0g sample size)	0.52	5.2	A-TS-46-N, A-TS-49-N, A-TS-57-N, G-TS-22-N, G-TS-29-N, L-TS-63-N, L-TS-70-N, L-TS-84-N, L-TS-89-N
OCDF	Method Blank (10/11/01) (8.0g sample size)	0.32	3.2	G-TS-02-N, G-TS-07-N
Total PeCDD	Method Blank (10/11/01) (1.0g sample size)	4.9	49	A-TS-35-N, G-TS-04-N

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Congener	Type of Blank	Blank Concentration ng/Kg	Action Level ng/Kg	Samples Affected
Total PeCDD	Method Blank (10/11/01) (2.0g sample size)	2.4	24	L-TS-62-N
Total PeCDD	Method Blank (10/11/01) (5.0g sample size)	0.98	9.8	A-TS-46-N, A-TS-48-N, A-TS-49-N, A-TS-57-N, G-TS-22-N, G-TS-29-N, L-TS-63-N, L-TS-70-N, L-TS-84-N, L-TS-89-N
Total PeCDD	Method Blank (10/11/01) (8.0g sample size)	0.61	6.1	G-TS-02-N, G-TS-07-N
Total HpCDD	Method Blank (10/11/01) (1.0g sample size)	4.2	42	A-TS-35-N, G-TS-04-N
Total TCDF	Method Blank (10/12/01) (1.0g sample size)	1.1	11	A-TS-35-N, G-TS-04-N
Total HxCDF	Method Blank (10/12/01) (1.0g sample size)	1.6	16	A-TS-35-N, G-TS-04-N
Total HpCDF	Method Blank (10/12/01) (1.0g sample size)	1.2	12	A-TS-35-N, G-TS-04-N
Total HpCDF	Method Blank (10/12/01) (5.0g sample size)	0.24	2.4	G-TS-22-N
Total HpCDF	Method Blank (10/12/01) (8.0g sample size)	0.15	1.5	G-TS-02-N

Blank actions are based on Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996 and EPA Region I's Environmental Services Assistance Team Dioxin Data Validation SOP ESAT-01-0007 (01/31/01) criterion. Blank action levels are calculated as ten times the highest concentration of the contaminant determined in any blank for common contaminants (OCDD/OCDF and Total Homologues) and five times the highest concentration for all other analytes. The positive sample results that are less than the blank action level are reported as non-detects (U) at the reported concentration on the Data Summary Table.

Matrix Spike/Matrix Spike Duplicate

One MS/MSD pair was evaluated for this SDG: G-TS-04-NMS/G-TS-04-NMSD.

The table below summarizes the tissue MS/MSD results which did not meet the recovery criteria.

of 50-120% and/or Relative Percent Difference (RPD) $\leq$ 30% as documented in the Centredale Manor Tasks 19-22 QAPP (5/23/01).

Q-TS-04-N					
Congener	MS % Rec.	MSD % Rec.	%RPD	Action	
				Positive Detects	NDs
HCH	129	181	94	3	0

Professional judgement was used to estimated (J, UJ) values for HCH in all samples since percent recoveries and/or precision were outside the required criteria.

Internal/Clean-Up Standards

- Clean-Up Standards

The following table summarizes the clean-up standard which did not meet the recovery acceptance criterion of 25-150% as specified in Centredale Manor Tasks 19-22 QAPP (5/23/01).

Clean-Up Standard	% Recovery	Action		Affected Sample
		Positive Detects	NDs	
PCB-2378-PCDD	20	J	UJ	A-TS-04-N

Since low recoveries may indicate interference in the clean-up process, the sample was qualified as noted above for all congeners.

Sample Quantitation

Concentrations quantitated below the lowest calibration standard are flagged (J) on the Data Summary Tables. Quantitation is not accurate when the reported results are below the lowest calibration standard.

The detection limits reported on the Data Summary Table for HCH correspond to the concentration in the lowest HCH calibration standard.

2378-TCDD Toxicity Equivalents (TE) and Junger Specificity

All TE values reported on the Data Summary Tables have been calculated by the ESAT data validator using the validated data discussed above in this report. As a result, the TE values in the Data Summary Table differ slightly from the values reported by the laboratory. The validated data accounts for blank contamination. The TE calculations include the reported EMPC values. The bird TEF values used by ESAT are the ones published in Environmental Health Perspectives, volume 106, Number 12, December 1998, "Toxic Equivalency factors (TEFs) for PCBs, PCDDs, PCDFs for Humans and Wildlife."

November 7, 2002

System Performance

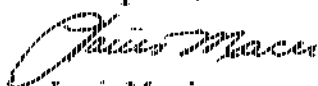
No trends were noted with the dioxin/furan analysis. The results for HCH and TCX indicated analytical problems. The problems included noncompliant initial calibration for TCX, poor HCH chromatography, high MS/MSD recovery for HCH, and poor MS/MSD precision for HCH. There were no additional quality control checks, such as MS/MSD or an LCS, to demonstrate that the method could recover TCX. Therefore, the non-detected results for TCX are rejected.

Very truly yours,

LOCKHEED ENVIRONMENTAL



Janine Bartels
Principal Scientist



Louis Macri
ESAT Program Manager

cc: Cornell Rosiu, EPA Project Manager (DV Memorandum, Data Summary Table)

Attachments: Table I: Recommendation Summary Table
Table II: Overall Evaluation of Data
Data Summary Tables
Data Validation Worksheets
Analytical Method
PE Results
Communication/Phone Logs
Field Sampling Notes

1784 : 1785 [24]

J. A. J.

[illegible][illegible]

Table I
Recommendation Summary Table for Dioxins/Furans

A	-	Accept results.
J ¹	-	SRM %D outside criterion; J detects, UJ non-detects.
J ²	-	Poor chromatography; J detects, UJ non-detects.
J ³	-	Method blank contamination; positive sample results less than the blank action level are reported as non-detects (U) at the concentration reported.
J ⁴	-	Clean-up standard recovery outside criterion; J detects, UJ non-detects.
J ⁵	-	MS/MSD recovery and/or RPD outside criteria; J detects, UJ non-detects.
J ⁶	-	Chromatographic interference; J detects.
R ¹	-	Non-compliant method detection limits and recovery; R non-detects.

EPA-NE - Data Validation Worksheet

Overall Evaluation of Data - Data Validation Memorandum - Table II

DIOXIN/FURAN/PCB/TCX ANALYSIS					
DOO (for all DOOs)	Sampling method Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability	Potential Usability Issues
		Analytical Error	Sampling Error [*]		
The following is a summary of the investigation/assessment objectives as found in Contaminant Master Table 19-22 QAPP (5/23/01): To generate data of quality sufficient to be used for human health (RURHA) and ecological risk assessments (ERA).	Yes, Sampling Method appropriate for all samples. Yes, Analytical Method appropriate for all samples.	Refer to qualification in R/S Key on Table I: JELEISA, R1	Refer to qualification in R/S Key on Table I: NA	--	One Cambridge Isotope Laboratories (CIL) Standard Reference Material (SRM) sample was evaluated for the SDO (CER. EDP 2326 for Dioxin/Furan congeners in fish tissue). All congeners were outside the Contaminant Master Table 19-22 QAPP (5/23/01) specified criterion of 90 % from the consensus value. Since all of the congeners had low recoveries, the results for dioxin/furan in all samples were estimated (E, U) due to the possibility of biased low results. The TCX initial calibration to RSD was noncompliant. The laboratory did not perform additional quality control procedures, neither a laboratory control sample nor matrix spike sample, for the TCX analysis. Therefore, the results of the initial calibration standards were investigated. The low standards in the multi-point initial calibration had an erratic response. The laboratory used the lowest standard as the reporting limit for the non-detected results. The erratic response would indicate that this may not be an appropriate reporting limit. Therefore, the TCX results were rejected (R). The method blanks exhibited low level contamination. This contamination problem does not have an impact on the usability of the dioxin/furan data. Contaminants were found in both the blanks and the field samples. When the analyte concentrations in the field samples were less than the corresponding blank action level, the field sample results reported by the laboratory are qualified as non-detected (U) on the Data Summary Table. See Table I for a summary of the qualifiers applied due to blank contamination. Data validation indicated minor data quality problems which do not significantly impact the usability of the dioxin/furan data. However, the TCX data were rejected. See the data validation memorandum for details. The reported results are usable for the site objectives.

* The evaluation of "sampling error" cannot be completely omitted in the data validation.

** Sampling variability is not assessed in data validation.

Validator: 

Date: 11/7/02

Obstetric Forceps: Mechanism of Injury - The obstetric forceps are used to assist in the delivery of the fetus. They are designed to grasp the fetal head and apply traction to deliver the baby. The mechanism of injury involves the application of force to the fetal head, which can result in skull fractures, intracranial hemorrhage, and facial nerve injury.

FILE: C:\Program Files\Microsoft Office\Office\Word\Word.doc

CASE 15. NITROBENZENE

SDG No. 4 SDG-4: QF

1. DATE _____

SAMPLE NUMBER	Toxicity Equivalency Factors (1)	A-TS-35-N ALLENDALE POND NESTLING	A-TS-40-N ALLENDALE POND NESTLING	A-TS-40-N ALLENDALE POND NESTLING	A-TS-40-N ALLENDALE POND NESTLING	A-TS-40-N ALLENDALE POND NESTLING	A-TS-67-N ALLENDALE POND NESTLING
STATION LOCATION							
BATCH:							
TOXIC/COF CONC:		ppb	DUEMPC	ppb	DUEMPC	ppb	DUEMPC
2,2,7,8-TCDF	1.0	591.41 J		996.03 J		1008.36 J	
1,2,3,7,8-PeCDD	1.0	2.66 J		2.92 J		3.56 J	
1,2,3,4,7,8-HxCDD	0.05	3.22 J		2.70 J		3.97 J	
1,2,3,6,7,8-HxCDD	0.01	10.92 J		8.30 J		15.19 J	
1,2,3,7,8,9-HxCDD	0.1	2.32 J		2.23 J		4.15 J	
1,2,3,4,6,7,8-HpCDD	<0.001	32.05 J		24.36 J		32.59 J	
OCDD	0.0001	UJ	32.89	24.95 J		23.49 J	
2,2,7,8-TCDF	1.0	6.06 J		6.85 J		6.55 J	
1,2,3,7,8-PeCDF	0.1	1.67 J		1.15 J		1.27 J	
2,3,4,7,8-PeCDF	1.0	2.49 J		2.93 J		6.25 J	
1,2,3,4,7,8-HxCDF	0.1	UJ	2.80	1.53 J		3.06 J	
1,2,3,6,7,8-HxCDF	0.1	2.00 J		1.89 J		2.24 J	
1,2,3,7,8,9-HxCDF	0.1	UJ	1.57	UJ	0.57	UJ	0.25
2,3,4,6,7,8-HpCDF	0.1	1.01 J		0.86 J		1.27 J	
1,2,3,4,6,7,8-HpCDF	0.01	6.79 J		3.99 J		4.99 J	
1,2,3,4,7,8,9-HpCDF	0.01	UJ	2.13	0.27 J		0.50 J	
OCDF	0.0001	UJ	1.25	UJ	1.59	11.09 J	
TOTAL TOCD		591.41 J		996.03 J		1008.36 J	
TOTAL PeCDD		UJ	9.72	UJ	3.82	UJ	4.97
TOTAL HxCDD		15.15 J		13.40 J		35.25 J	
TOTAL HxCDD		UJ	33.80	25.06 J		40.56 J	
TOTAL TCDF		UJ	8.06	9.18 J		6.53 J	
TOTAL PeCDF		6.69 J		6.60 J		15.97 J	
TOTAL HxCDF		UJ	10.17	6.24 J		12.09 J	
TOTAL HpCDF		UJ	6.79	4.80 J		6.69 J	
HCB - Hexachlorobenzene		11.80 J		37.34 J		15.26 J	
TCX - Tetrachlorodibenzo-p-dioxin		R		R		R	
TOXIC EQUIVALENTS:		600 J		1000 J		945 J	
PERCENT SOLIDS:		49.1		40.6		42.9	
PERCENT LIPIDS:		6.36		6.51		3.55	
DILUTION FACTOR:		1.0		1.0		1.0	
DATE SAMPLED:		08/12/01		06/09/01		08/12/01	
DATE OF RECEIPT:		07/11/01		07/11/01		07/11/01	
SAMPLE EXTRACTION DATE:		10/03/01		10/03/01		10/03/01	
ANALYSIS DATE:		10/12/01		10/11/01		10/12/01	
LAB SAMPLE NO.		49038-41-14		49038-41-02		49038-41-03	

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(c) The Toxic Equivalency (TEQ) is calculated with the Toxic Equivalency Factors (TEFs) listed in Toxic Equivalency Factors (TEFs) for

Source: *Environmental Health Perspectives*, Volume 105, Number 12, December 1999. Title: *Environmental Health Perspectives*.

Concentrations reported for the laboratory below the lowest standard are shown (1) on the Data Summary Table as estimated values.

^a = The measured average GPC of the TFE values for the compounds in each.

Data Summary Table
(Concentration Analysis - These Samples (ug/g wet weight))

SITE: Cretaceous Massif - N. Project, IN
CASE NO. Nestling B10F1 SED No. 49038-41 OF
LABORATORY: Basile

SAMPLE NUMBER: STATION LOCATION: MATRIX:	Toxicity Equivalency Factor (TEF)	G-75-02-N GREYSTONE MILL POND NESTLING	G-75-04-N GREYSTONE MILL POND NESTLING	G-75-07-N GREYSTONE MILL POND NESTLING	G-75-02-N GREYSTONE MILL POND NESTLING	G-75-09-N GREYSTONE MILL POND NESTLING	
TCDD/TCDF CONCENTRATION		PPB	DU/EMPC*	PPB	DU/EMPC*	PPB	DU/EMPC*
2,3,7,8-TCDD	1.0	0.97 J		25.16 J		0.46 J	1087.26 J
1,2,3,7,8-PeCDD	1.0	1.12 J		2.24 J		1.89 J	2.95 J
1,2,3,4,7,8-HxCDD	0.05	1.29 J		1.84 J		2.32 J	2.85 J
1,2,3,6,7,8-HxCDD	0.01	2.82 J		5.89 J		5.32 J	7.79 J
1,2,3,7,8,9-HxCDD	0.1	0.47 J		1.39 J		0.91 J	1.61 J
1,2,3,4,6,7,8-HpCDD	0.0001	0.15 J		16.77 J		16.52 J	23.00 J
OCDD	0.0001	UJ	10.38	UJ	20.83	UJ	20.33 J
2,3,7,8-TCDF	1.0	0.13 J		4.24 J		0.78 J	7.48 J
1,2,3,7,8-PeCDF	0.1	0.70 J		1.29 J		0.83 J	1.36 J
2,3,4,7,8-PeCDF	1.0	0.79 J		1.75 J		0.89 J	0.79 J
1,2,3,4,7,8-HxCDF	0.1	0.75 J		UJ	2.00	0.87 J	1.74 J
1,2,3,6,7,8-HxCDF	0.1	0.52 J		1.86 J		0.78 J	1.62 J
1,2,3,7,8,9-HxCDF	0.1	UJ	0.26	UJ	1.81	UJ	UJ
2,3,4,6,7,8-HxCDF	0.1	0.30 J		0.85 J		0.88 J	0.74 J
1,2,3,4,6,7,8-HpCDF	0.01	0.80 J		0.39 J		1.37 J	3.42 J
1,2,3,4,7,8,9-HpCDF	0.01	UJ	1.84	UJ	1.88	UJ	0.92 J
OCDF	0.0001	UJ	1.22	UJ	9.83	UJ	0.45
TOTAL TCDD		0.97 J		25.26 J		0.46 J	1087.26 J
TOTAL PeCDD		UJ	1.12	UJ	0.44	UJ	5.08
TOTAL HxCDD		5.09 J		11.85 J		10.92 J	13.51 J
TOTAL HxCDD		0.72 J		UJ	26.86	16.95 J	23.00 J
TOTAL TCDF		4.37 J		UJ	6.74	6.79 J	16.79 J
TOTAL PeCDF		2.88 J		0.87 J		0.88 J	7.29 J
TOTAL HxCDF		2.29 J		UJ	8.18	4.80 J	7.16 J
TOTAL HxCDF		UJ	1.16	UJ	10.84	UJ	1.68
TCX - Hexachlorocyclopentadiene		UJ	26.35	UJ	29.04	UJ	39.57
TCX - Tetrachlorocyclopentadiene		R		R		R	
TOXIC EQUIVALENTS:		18 J		33 J		67 J	1500 J
PERCENT SOLIDS:		26.4		37.6		36.9	35.4
PERCENT LIPIDS:		2.89		4.55		6.59	11.2
DILUTION FACTOR:		1.0		1.0		1.0	1.0
DATE SAMPLED:		05/20/01		05/20/01		05/27/01	06/27/01
DATE OF RECEIPT:		07/11/01		07/11/01		07/11/01	07/11/01
SAMPLE EXTRACTION DATE:		10/30/01		10/30/01		10/30/01	10/30/01
ANALYSIS DATE:		10/12/01		10/12/01		10/12/01	10/12/01
LAB SAMPLE ID:		49038-41-08		49038-41-15		49038-41-08	49038-41-09

* = The values in this column are either the Detection Limit (DL) or the Estimated Maximum Possible Concentration (EMPC). The EMPC results are marked with a "J". The DL values are unmarked.

The EMPC values are not qualified with a "J", since they are already estimated.

(1) The Toxic Equivalent concentration is calculated with the Toxicity Equivalency Factors (TEFs) found in "Toxic Equivalency Factors (TEFs) for

PCBs, PCDDs, PCDFs for Humans and Wildlife", Environmental Health Perspectives, Volume 105, Number 12, December 1999, Table 3, page 782.

Concentrations reported by the laboratory below the broken standard are flagged (J) on the Data Summary Table as estimated values. All other necessary qualifications are defined in Table 1.

U = The upper limit of the TEF values for the compound in this.

R = Result reported from confirmation analysis.

Data Summary Table
Distribution Analysis - Tissue Samples (pcip wet weight)

SITE: Cannock Manor - N. Providence, RI
CASE NO. Nesting 810F1 SOG No. 49038-41 DF
LABORATORY: Details

SAMPLE NUMBER:	Toxicity	LTS-82-M	LTS-82-N	LTS-78-M	LTS-82-N	LTS-82-N
STATION LOCATION:	Equivalency	LYMANVILLE POND	LYMANVILLE POND	LYMANVILLE POND	LYMANVILLE POND	LYMANVILLE POND
MATRIX:	Factors (1)	NESTLING	NESTLING	NESTLING	NESTLING	NESTLING
TOXICITY CONC.		PCDD	PCDF	PCDD	PCDF	PCDD
2,3,7,8-TCDD	1.0	1609.87 J		174.83 J		1515.45 J
1,2,3,7,8-PeCDD	1.0	3.29 J		3.01 J		4.59 J
1,2,3,4,7,8-HxCDD	0.08	5.09 J		2.48 J		4.54 J
1,2,3,6,7,8-HxCDD	0.01	5.03 J		5.85 J		14.29 J
1,2,3,7,8,9-HxCDD	0.1	2.13 J		1.08 J		2.16 J
1,2,3,4,6,7,8-HpCDD	<0.001	23.14 J		18.19 J		33.53 J
CDDs	0.0001	UJ	14.37	25.12 J		21.21 J
2,3,7,8-TCDF	1.0	5.79 J		6.12 J		7.32 J
1,2,3,7,8-PeCDF	0.1	1.48 J		0.92 J		1.46 J
2,3,4,7,8-PeCDF	1.0	2.69 J		UJ	11.87	6.75 J
1,2,3,4,7,8-HxCDF	0.1	2.68 J		2.22 J		3.02 J
1,2,3,6,7,8-HxCDF	0.1	2.98 J		1.57 J		2.87 J
1,2,3,7,8,9-HxCDF	0.1	UJ	1.26	UJ	2.30	UJ
2,3,4,6,7,8-HpCDF	0.1	0.82 J		0.80 J		0.84 J
1,2,3,4,6,7,8-HpCDF	0.01	3.72 J		3.78 J		5.85 J
1,2,3,4,7,8,9-HxCDF	0.01	UJ	1.75	UJ	2.22	0.32 J
CDFs	0.0001	UJ	0.85	UJ	2.89	1.15
TOTAL TCDD		1609.87 J		174.83 J		1515.45 J
TOTAL PeCDD		UJ	5.14	UJ	3.81	4.88
TOTAL HxCDD		15.25 J		9.22 J		22.16 J
TOTAL HpCDD		24.14 J		21.08 J		35.47 J
TOTAL TCDF		12.30 J		7.79 J		22.14 J
TOTAL PeCDF		7.13 J		4.25 J		10.96 J
TOTAL HxCDF		9.40 J		10.11 J		9.31 J
TOTAL HpCDF		5.48 J		6.37 J		5.80 J
HCH - Heptachlorocyclopentadiene		32.88 J		UJ	35.25	21.25 J
TOX - Toxaphene		R		R		R
TOXIC EQUIVALENT(1):		1300 J		180 J		1300 J
PERCENT SOLIDS:		28.4		37.6		35.7
PERCENT LIPIDS:		5.19		8.51		7.03
DILUTION FACTOR:		1.0		1.0		1.0
DATE SAMPLED:		06/09/01		06/07/01		06/09/01
DATE OF RECEIPT:		07/11/01		07/11/01		07/11/01
SAMPLE EXTRACTION DATE:		10/03/01		10/03/01		10/03/01
ANALYSIS DATE:		10/12/01		10/12/01		10/12/01
LAB SAMPLE ID:		49038-41-19		49038-41-10		49038-41-11

* = The values in this column are either the Detection Limit (DL) or the Estimated Maximum Possible Concentration (EMPC). The EMPC results are marked with a "J". The DL values are unmarked.

The EMPC values are not qualified with a "J", since they are already estimated.

(1) The Toxic Equivalent concentration is calculated with the Toxicity Equivalency Factors (TEFs) found in "Toxic Equivalency Factors (TEFs) for

PCDDs, PCDFs for Humans and Wildlife", Environmental Health Perspectives, Volume 108, Number 12, December 1999, Table 3, page 782.

Concentrations reported by the laboratory below the lowest standard are flagged (J) on the Data Summary Table as estimated values. All other necessary qualifications are defined in Table 1.

< = The expected upper limit of the TEF values for the compound in birds.

Steve Strubbe
US EPA Approval Signature

July 31, 2002
Date

July 24, 2002

B-02-07-Y-3

Revised: July 29, 2002

Ms. Christine Clark
Regional Sample Control Custodian
Office of Environmental Measurement and Evaluation
U.S. EPA Region I
11 Technology Drive
North Chelmsford, MA 01863

Re: TO No. 010, Task No. 2, TDF No. 0452
Case No. Swallow Egg/Diet B1OF1, SDG No. 48985-25 PCB
Battelle Laboratories - Columbus, OH
Centredale Manor, North Providence, RI

209 PCB Congeners: 6/Tissue/A-TS-45-P, A-TS-47-P, A-TS-52-P, L-TS-62-P, L-TS-63-P, L-TS-90-P

1/Fish Tissue SRM/CIL EDF 2526

Dear Ms. Clark:

A Tier III data validation was performed on the 209 PCB congeners analytical data for six swallow egg samples collected by USGS for the U.S. EPA at the Centredale Manor Site in North Providence, RI. The samples were analyzed according to EPA Method 1668A, December 1999, as outlined in the Centredale Manor Tasks 19-22 QAPP (5/23/01). The samples were validated using first the criteria in the Centredale Manor Tasks 19-22 QAPP (5/23/01) prepared by Battelle Duxbury Operations which include the criteria in EPA Method 1668A, December 1999, defaulting next to Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996 criteria, and to EPA Region I's Environmental Services Assistance Team PCB Congener Data Validation ESAT-01-0008 Draft (8/31/01). The data were evaluated based on the following parameters:

- Overall Evaluation of Data and Potential Usability Issues
- Data Completeness (CSF Audit - Tier I)
- * • Preservation and Technical Holding Times
- PE Samples/Accuracy Check
- " • Window Defining Mix
- Initial and Continuing Calibrations
- Chromatographic Resolution
- * • Instrument Sensitivity Check
- Blanks
- * • Matrix Spike/Matrix Spike Duplicate
- Laboratory Control Sample

Ms. Christine Clark
Page 2

July 24, 2002
B-02-07-Y-3
Revised: July 29, 2002

- Laboratory and Field Duplicates
- Internal/Clean-up Standards
- Sample Analysis and Identification
- Sample Quantitation
- Estimated Detection Limits (EDL) and Estimated Maximum Possible Concentration (EMPC)
- 2374-TCDD Toxicity Equivalents (TE) and Isomer Specificity
- Required Sample Retuns and Second Column Confirmation
- System Performance

* - All criteria were met for this parameter.

~~The following information was used to generate the Data Validation Memorandum attachments:~~

Table I: Recommendation Summary Table - summarizes validation recommendations

Table II: Overall Evaluation of Data - summarizes site objectives and potential usability issues

Data Summary Tables - summarize accepted, qualified, and rejected data

Overall Evaluation of Data and Potential Usability Issues

The following is a summary of the site investigation/assessment objectives as found in Centredale Manor Tasks 19-22 QAPP (5/23/01):

- To generate data of quality sufficient to be used for human health (HHRA) and ecological risk assessments (ERA) at the site.

One Cambridge Isotope Laboratories (CIL) Standard Reference Material (SRM) sample was evaluated for this SDG (CIL EDF 2526 for PCB congeners in fish tissue). Three out of five congeners were outside the Centredale Manor Tasks 19-22 QAPP (5/23/01) specified criterion of 30 %D from the consensus value. Since three out of five of the congeners had low recoveries, the results for all congeners in all samples were estimated (J, UJ) due to the possibility of biased low results.

The method blank had low level contamination. However, the concentration in the method blank was insignificant when compared to the concentration found in the field samples. Therefore, the method blank contamination does not impact data usability. When the analyte concentrations in the field samples were less than the corresponding blank action level, the field sample results reported by the laboratory are qualified as non-detected (U) on the Data Summary Table. See Table I for a summary of the qualifiers applied due to blank contamination.

Data validation indicated minor data quality problems which do not significantly impact the usability of the data. See the discussion below for details. The reported results are usable for the site objectives.

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Data Completeness (CSF Audit - Tier I)

The following data or information in the data package had discrepancies and/or were missing:

1. The laboratory was asked to submit 48514-03-15 M1668 PCB 209 mix for 9/26/01 and 9/27/01.
2. The laboratory was asked to submit the percent solids for this batch of samples.

Items 1 and 2 were requested via the TOPO on June 21, 2002. Item 1 was received via the TOPO on July 16, 2002. Item 1 was adequately addressed. The laboratory indicated that percent solids determinations were not performed on the diet samples.

PE Samples/Accuracy Check

One Cambridge Isotope Laboratories (CIL) Standard Reference Material (SRM) sample was evaluated for this SDG (CIL EDF 2526 for PCB congeners in fish tissue). Three out of five congeners were outside the Centredale Manor Tasks 19-22 QAPP (5/23/01) specified criterion of 30 %D from the consensus value.

The following table summarizes the SRM sample (48985-25-18 FISH SRM) results which did not meet the criterion and the resulting sample qualifications:

PE Sample Number	Congener	%D from the consensus value	Action	
			Positive Detects	NDs
CIL EDF 2526	PCB-77	41	J	UJ
CIL EDF 2526	PCB-126	50	J	UJ
CIL EDF 2526	PCB-169	46	J	UJ

Professional judgement was used to estimate (J, UJ) all the results since three out of five of the congeners had low recoveries indicating the possibility of biased low results.

The laboratory documented in their report that the low recoveries of the congeners in the SRM may be due to the lipid content. The laboratory indicated that for future analyses of associated samples the SRM preparation procedures will be modified.

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Initial and Continuing Calibrations

The following table summarizes the Calibration Verification (VER) results which did not meet Method 1668A recovery criterion and the resulting sample qualifications:

VER Date	Compound	Recovery (ng/ml)	Acceptable Recovery Range (ng/ml)	Action		Affected Samples
				Positive Detects	NDe	
9/25/01 (Beginning)	¹²⁶ C ₁₂ -PCB-126	159	50-150	J	UJ	A-TS-45-P, A-TS-52-P, L-TS-62-P, L-TS-63-P
9/27/01 (Ending)	¹²⁶ C ₁₂ -PCB-105	171	50-150	J	UJ	A-TS-45-P, A-TS-52-P, L-TS-62-P, L-TS-63-P
9/27/01 (Ending)	¹²⁶ C ₁₂ -PCB-126	173	50-150	J	UJ	A-TS-45-P, A-TS-52-P, L-TS-62-P, L-TS-63-P
9/27/01 (Ending)	¹²⁶ C ₁₂ -PCB-169	170	50-150	J	UJ	A-TS-45-P, A-TS-52-P, L-TS-62-P, L-TS-63-P

The data associated with recoveries of noncompliant calibration verifications are qualified due to the high variability. The quantitation of the associated analytes in the samples could be biased.

Chromatographic Resolution

Many PCB congeners coeluted on the SPB-Octyl gas chromatography column used for this project. This situation was documented in Centredale Manor Tasks 19-22 QAPP (5/23/01). The laboratory reported the coeluting concentrations as totals. These totals are reported on the Data Summary Tables in this report and are not affected by the coelution of the congeners. Three of the "toxic congeners" with TEF values coeluted: PCB-123, PCB-156, and PCB-157.

Coeluting Congeners	Reported as on the Data Summary Table:
PCB-12, PCB-13	PCB-12/PCB-13
PCB-18, PCB-30	PCB-18/PCB-30
PCB-20, PCB-21, PCB-28, PCB-33	PCB-20/PCB-21/PCB-28/PCB-33
PCB-24, PCB-27	PCB-24/PCB-27
PCB-26, PCB-29	PCB-26/PCB-29
PCB-40, PCB-41, PCB-71	PCB-40/PCB-41/PCB-71
PCB-43, PCB-52, PCB-73	PCB-43/PCB-52/PCB-73
PCB-44, PCB-47, PCB-65	PCB-44/PCB-47/PCB-65
PCB-45, PCB-51	PCB-45/PCB-51
PCB-49, PCB-69	PCB-49/PCB-69
PCB-50, PCB-53	PCB-50/PCB-53

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Cochuting Congeners	Reported as on the Data Summary Table:
PCB-59, PCB-62, PCB-75	PCB-59/PCB-62/PCB-75
PCB-61, PCB-70, PCB-74, PCB-76	PCB-61/PCB-70/PCB-74/PCB-76
PCB-83, PCB-99	PCB-83, PCB-99
PCB-85, PCB-116, PCB-117	PCB-85/PCB-116/PCB-117
PCB-86, PCB-87, PCB-97, PCB-109, PCB-119, PCB-125	PCB-86/PCB-87/PCB-97/PCB-109/PCB-119/PCB-125
PCB-90, PCB-101, PCB-113	PCB-90/PCB-101/PCB-113
PCB-88, PCB-91	PCB-88/PCB-91
PCB-93, PCB-95, PCB-98, PCB-100, PCB-102	PCB-93/PCB-95/PCB-98/PCB-100/PCB-102
PCB-108, PCB-124	PCB-108/PCB-124
PCB-110, PCB-115	PCB-110/PCB-115
PCB-106, PCB-107, PCB-123	PCB-106/PCB-107/2344'5-PentaCB (#123)
PCB-128, PCB-166	PCB-128/PCB-166
PCB-129, PCB-138, PCB-160, PCB-163	PCB-129/PCB-138/PCB-160/PCB-163
PCB-134, PCB-143	PCB-134/PCB-143
PCB-135, PCB-151, PCB-154	PCB-135/PCB-151/PCB-154
PCB-137, PCB-164	PCB-137/PCB-164
PCB-146, PCB-161	PCB-146/PCB-161
PCB-147, PCB-149	PCB-147/PCB-149
PCB-153, PCB-168	PCB-153/PCB-168
PCB-156, PCB-157	233'44'5-HexaCB(#156)/233'44'5'-HexaCB(#157)
PCB-171, PCB-173	PCB-171/PCB-173
PCB-180, PCB-193	PCB-180/PCB-193
PCB-198, PCB-199	PCB-198/PCB-199

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Blanks

The blank associated with this SDG was evaluated for possible sources of contamination. The following table lists the highest concentration of contamination that was detected in the blank. The table lists the action levels and the samples affected:

Congener	Type of Blank	Blank Concentration (ng/Kg) 1.6g Sample	Action Level (ng/Kg) 1.6g Sample	Sample Affected
PCB-1	Method Blank (9/26/01)	29	140	A-TS-45-P, A-TS-52-P, L-TS-62-P, L-TS-63-P, L-TS-90-P
PCB-3	Method Blank (9/26/01)	24	120	A-TS-45-P, A-TS-52-P, L-TS-62-P, L-TS-63-P, L-TS-90-P
PCB-4	Method Blank (9/26/01)	40	200	All
PCB-6	Method Blank (9/26/01)	23	120	All
PCB-8	Method Blank (9/26/01)	124	620	All
PCB-12/PCB-13	Method Blank (9/26/01)	24	120	All
PCB-16	Method Blank (9/26/01)	35	180	A-TS-45-P, A-TS-47-P, A-TS-52-P, L-TS-63-P, L-TS-90-P
PCB-17	Method Blank (9/26/01)	32	160	A-TS-45-P, A-TS-52-P
PCB-18/PCB-30	Method Blank (9/26/01)	65	320	A-TS-45-P, A-TS-52-P
PCB-19	Method Blank (9/26/01)	8.3	42	A-TS-45-P, A-TS-52-P, L-TS-63-P, L-TS-90-P
PCB-22	Method Blank (9/26/01)	66	330	A-TS-45-P, A-TS-52-P, L-TS-62-P, L-TS-63-P, L-TS-90-P
PCB-32	Method Blank (9/26/01)	21	105	L-TS-63-P
PCB-46	Method Blank (9/26/01)	8.1	40	A-TS-52-P, L-TS-90-P
PCB-56	Method Blank (9/26/01)	72	360	A-TS-52-P

Blank actions are based on Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996 and EPA Region I's Environmental

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Services Assistance Team PCB Congener data Validation ESAT-01-0008 Draft (8/31/01) criteria. Blank action levels are calculated as five times the highest concentration of the contaminant determined in any blank. The positive sample results that are less than the blank action level are reported as non-detects (U) at the reported concentration on the Data Summary Table.

Laboratory Control Sample

The laboratory extracted and analyzed one OPR/LCS with this group of samples. The following table summarizes the Ongoing Precision and Recovery (OPR) result which did not meet Centredale Manor Tasks 19-22 QAPP (5/23/01) recovery criterion and the resulting sample qualifications:

OPR Date	Compound	% Recovery	% Recovery Range	Action		Affected Samples
				Positive Detects	NDs	
09/26/01	PCB-118	176	50-150	J	A	All

The data associated with high recoveries of a noncompliant OPR/LCS are estimated (J).

Laboratory and Field Duplicates

One laboratory duplicate pair was evaluated for this SDG (A-TS-47-P/A-TS-47-PDup).

The table below summarizes the laboratory duplicate results which did not meet the duplicate criterion of Relative Percent Difference (RPD) < 30% as specified by Centredale Manor Tasks 19-22 QAPP (5/23/01).

Congener	A-TS-47-P	A-TS-47-P	RPD	Action		Affected Samples
	Sample Conc. (ng/Kg)	Duplicate Conc. (ng/Kg)		Positive Detects	Non-Detects	
PCB-81	870	ND	NC	J	UJ	All

NC RPD is not calculated when one concentration is non-detected.

Professional judgment was used to estimate (J, UJ) results for PCB-81 in all samples since PCB-81 congener's laboratory duplicate precision was outside criterion.

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Internal/Clean-up Standards

• Clean-up Standards

The following table summarizes the Clean-up standard with recovery values which did not meet the Centredale Manor Tasks 19-22 QAPP (5/23/01) acceptance criterion of 30-135%:

Clean-up Standard	% Recovery	Action		Affected Samples
		Positive Detects	NDs	
² C ₁₂ -PCB-28	161	J	WJ	A-TS-45-P
² C ₁₂ -PCB-28	159	J	WJ	L-TS-63-P

Since high recoveries may indicate interference in the clean-up process, the sample was qualified as noted above for all congeners.

Sample Quantitation

Concentrations quantitated below the lowest calibration standard are flagged (J) on the Data Summary Tables. Quantitation is not accurate when the reported results are below the lowest calibration standard.

2378-TCDD Toxicity Equivalents (TE) and Isomer Specificity

TE values were not calculated by the laboratory. All TE values reported on the Data Summary Tables have been calculated by the ESAT data validator using the validated data discussed above in this report. The validated data accounts for blank contamination. The bird TEF values for the PCBs are published in "Toxic Equivalency Factors (TEFs) for PCBs, PCDDs, PCDFs for Humans and Wildlife", Environmental Health Perspectives, Volume 106, Number 12, December 1998, Table 3, page 782.

System Performance

No trends noted.

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Very truly yours,

LOCKHEED ENVIRONMENTAL



Jarine Bartels
Principal Scientist



Louis Macri
ESAT Program Manager

cc: Cornell Rosin, EPA Project Manager (DV Memorandum, Data Summary Table)

Attachments: Table I: Recommendation Summary Table
Table II: Overall Evaluation of Data
Data Summary Tables
Data Validation Worksheets
Analytical Method
PE Scores
Communication/Phone Logs
Field Sampling Notes

Table I
 Recommendation Summary Table for 209 PCB Congeners
 Centredale Manor Site
 Case No.: Swallow Egg/Diet B10F1/SDG No. 48985-25 PCB

Sample Nos.	A-TS-45-P	A-TS-47-P	A-TS-52-P	L-TS-62-P	L-TS-63-P	L-TS-90-P
Compound						
PCB-1	J ^{1,4,5}	J ¹	J ^{1,5}	J ^{1,5}	J ^{1,4,5}	J ^{1,5}
PCB-3	J ^{1,4,5}	J ¹	J ^{1,5}	J ^{1,5}	J ^{1,4,5}	J ^{1,5}
PCB-4	J ^{1,4,5}	J ^{1,5}	J ^{1,5}	J ^{1,5}	J ^{1,4,5}	J ^{1,5}
PCB-5	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-6	J ^{1,4,5}	J ^{1,5}	J ^{1,5}	J ^{1,5}	J ^{1,4,5}	J ^{1,5}
PCB-7	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-8	J ^{1,4,5}	J ^{1,5}	J ^{1,5}	J ^{1,5}	J ^{1,4,5}	J ^{1,5}
PCB-9	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-10	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-12/PCB-13	J ^{1,4,5}	J ^{1,5}	J ^{1,5}	J ^{1,5}	J ^{1,4,5}	J ^{1,5}
PCB-16	J ^{1,4,5}	J ^{1,5}	J ^{1,5}	J ¹	J ^{1,4,5}	J ^{1,5}
PCB-17	J ^{1,4,5}	J ¹	J ^{1,5}	J ¹	J ^{1,4}	J ¹
PCB-18/PCB-20	J ^{1,4,5}	J ¹	J ^{1,5}	J ¹	J ^{1,4}	J ¹
PCB-19	J ^{1,4,5}	J ¹	J ^{1,5}	J ¹	J ^{1,4,5}	J ^{1,5}
PCB-20/PCB-21/PCB-25/PCB-33	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-22	J ^{1,4,5}	J ¹	J ^{1,5}	J ^{1,5}	J ^{1,4,5}	J ^{1,5}
PCB-24/PCB-27	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-25	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-26/PCB-29	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹

Table I
 Recommendation Summary Table for 209 PCB Congeners
 Centredale Manor Site
 Case No.: Swallow Egg/Diet BIOF1/SDG No. 48985-25 PCB

Sample Nos.	A-TS-45-P	A-TS-47-P	A-TS-52-P	L-TS-62-P	L-TS-63-P	L-TS-90-P
Compound						
PCB-31	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-32	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4,5}	J ¹
PCB-40/PCB-41/PCB-71	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-42	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-43/PCB-52/PCB-73	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-44/PCB-47/PCB-65	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-45/PCB-51	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-46	J ^{1,4}	J ¹	J ^{1,3}	J ¹	J ^{1,4}	J ^{1,3}
PCB-48	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-49/PCB-69	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-50/PCB-53	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-56	J ^{1,4}	J ¹	J ^{1,3}	J ¹	J ^{1,4}	J ¹
PCB-59/PCB-62/PCB-75	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-60	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-63	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-64	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-66	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-61/PCB-70/PCB-74/PCB-76	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
33'44'-TetraCB (#77)	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹

Table I
 Recommendation Summary Table for 209 PCB Congeners
 Centredale Manor Site
 Case No.: Swallow Egg/Diet BIOF1/SDG No. 48985-25 PCB

Sample Nos.	A-TS-45-P	A-TS-47-P	A-TS-52-P	L-TS-62-P	L-TS-63-P	L-TS-90-P
Compound						
344'5-TetraCB (#81)	J ^{1,2,4}	J ^{1,2}	J ^{1,2}	J ^{1,2}	J ^{1,2,4}	J ^{1,2}
PCB-82	J ^{1,2,4}	J ¹	J ^{1,2}	J ^{1,2}	J ^{1,2,4}	J ¹
PCB-83/PCB-99	J ^{1,2,4}	J ¹	J ^{1,2}	J ^{1,2}	J ^{1,2,4}	J ¹
PCB-84	J ^{1,2,4}	J ¹	J ^{1,2}	J ^{1,2}	J ^{1,2,4}	J ¹
PCB-85/PCB-116/PCB-117	J ^{1,2,4}	J ¹	J ^{1,2}	J ^{1,2}	J ^{1,2,4}	J ¹
PCB-86/PCB-87/PCB-97/PCB-109/PCB-119/PCB-125	J ^{1,2,4}	J ¹	J ^{1,2}	J ^{1,2}	J ^{1,2,4}	J ¹
PCB-89	J ^{1,2,4}	J ¹	J ^{1,2}	J ^{1,2}	J ^{1,2,4}	J ¹
PCB-90/PCB-101/PCB-113	J ^{1,2,4}	J ¹	J ^{1,2}	J ^{1,2}	J ^{1,2,4}	J ¹
PCB-88/PCB-91	J ^{1,2,4}	J ¹	J ^{1,2}	J ^{1,2}	J ^{1,2,4}	J ¹
PCB-92	J ^{1,2,4}	J ¹	J ^{1,2}	J ^{1,2}	J ^{1,2,4}	J ¹
PCB-93/PCB-95/PCB-98/PCB-100/PCB-102	J ^{1,2,4}	J ¹	J ^{1,2}	J ^{1,2}	J ^{1,2,4}	J ¹
233'44'5-PentaCB (#105)	J ^{1,2,4}	J ¹	J ^{1,2}	J ^{1,2}	J ^{1,2,4}	J ¹
PCB-108/PCB-124	J ^{1,2,4}	J ¹	J ^{1,2}	J ^{1,2}	J ^{1,2,4}	J ¹
PCB-110/PCB-115	J ^{1,2,4}	J ¹	J ^{1,2}	J ^{1,2}	J ^{1,2,4}	J ¹
2344'5-PentaCB (#114)	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
23'44'5-PentaCB (#118)	J ^{1,4,6}	J ^{1,6}	J ^{1,6}	J ^{1,6}	J ^{1,4,6}	J ^{1,6}
PCB-106/PCB-107/2'344'5-PentaCB (#123)	J ^{1,2,4}	J ¹	J ^{1,2}	J ^{1,2}	J ^{1,2,4}	J ¹
33'44'5-PentaCB (#126)	J ^{1,2,4}	J ¹	J ^{1,2}	J ^{1,2}	J ^{1,2,4}	J ¹

Table I
Recommendation Summary Table for 209 PCB Congeners
Centredale Manor Site
Case No.: Swallow Egg/Diet B1OF1/SDG No. 48985-25 PCB

Sample Nos.	A-TS-45-P	A-TS-47-P	A-TS-52-P	L-TS-62-P	L-TS-63-P	L-TS-90-P
Compound						
PCB-128/PCB-166	J ^{1,4}	J ¹	J ²	J ¹	J ^{1,4}	J ¹
PCB-129/PCB-138/PCB-160/PCB-163	J ^{1,4}	J ¹	J ²	J ¹	J ^{1,4}	J ¹
PCB-130	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-131	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-132	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-134/PCB-143	J ^{1,4}	J ¹	J ¹	J ²	J ^{1,4}	J ¹
PCB-135/PCB-151/PCB-154	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-136	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-137/PCB-164	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-141	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-144	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-146/PCB-161	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-147/PCB-149	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-153/PCB-168	J ^{1,4}	J ¹	J ²	J ¹	J ^{1,4}	J ¹
233'44'5-HexaCB (#156)/233'44'5'-HexaCB (#157)	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-158	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
23'44'55'-HexaCB (#167)	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
33'44'55'-HexaCB (#169)	J ^{1,4}	J ¹	J ^{1,3}	J ^{1,3}	J ^{1,3,4}	J ¹
PCB-170	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹

Table I
 Recommendation Summary Table for 209 PCB Congeners
 Centredale Manor Site
 Case No.: Swallow Egg/Diet B10F1/SDG No. 48985-25 PCB

Sample Nos.	A-TS-45-P	A-TS-47-P	A-TS-52-P	L-TS-62-P	L-TS-63-P	L-TS-90-P
Compound						
PCB-171/PCB-173	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-172	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-174	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-175	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-176	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-177	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-178	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-180/PCB-193	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-182	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-183	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-184	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-185	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-187	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
233'44'55'-HeptaCB (#159)	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-190	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-191	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-194	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-195	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-196	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-197	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹

Table I
 Recommendation Summary Table for 209 PCB Congeners
 Centredale Manor Site
 Case No.: Swallow Egg/Diet B10F1/SDG No. 48985-25 PCB

Sample Nos.	A-TS-45-P	A-TS-47-P	A-TS-52-P	L-TS-62-P	L-TS-63-P	L-TS-90-P
Compound						
PCB-198/PCB-199	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-200	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-201	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-203	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-205	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-206	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-207	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹
PCB-209	J ^{1,4}	J ¹	J ¹	J ¹	J ^{1,4}	J ¹

Table I
Recommendation Summary Table for PCB Congeners

A	-	Accept all results.
J ¹	-	PE %D outside criterion; J detects, UJ non-detects.
J ²	-	Duplicate precision outside criterion; J detects, UJ non-detects.
J ³	-	VER recoveries outside criterion; J detects, UJ non-detects.
J ⁴	-	Clean-up standard recoveries outside criterion; J detects, UJ non-detects.
J ⁵	-	Method blank contamination; positive sample results less than the blank action level are reported as non-detects (U) at the concentration reported.
J ⁶	-	OPR/LCS recovery outside criterion; J detects.

EPA-NE - Data Validation Worksheet

Overall Evaluation of Data - Data Validation Memorandum - Table II

PCB ANALYSIS					
DQO (Excl DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability	Potential Usability Issues
		Analytical Error	Sampling Error*		
The following is a summary of the site investigation/assessment objectives as stated in Remedial Action Tasks 19-22 QAPP (5/23/01): To generate data of quality sufficient to be used for human health (HHRA) and ecological risk assessments (ERA) at the site.	Yes, Sampling Method appropriate for all samples Yes, Analytical Method appropriate for all samples	Refer to qualification in R/S Key on Table I: YES	Refer to qualification in R/S Key on Table I: NA	**	One Cambridge Isotope Laboratories (CIL) Standard Reference Material (SRM) sample was evaluated for this SDG (CIL EDF 2526 for PCB congeners in fish tissue). Three out of five congeners were outside the Remedial Action Tasks 19-22 QAPP (5/23/01) specified criterion of 30 %D from the consensus value. Since three out of five of the congeners had low recoveries, the results for all congeners in all samples were estimated (L, U) due to the possibility of biased low results. The method blank had low level contamination. However, the concentration in the method blank was insignificant when compared to the concentrations found in the field samples. Therefore, the method blank contamination does not impact data usability. When the analyte concentrations in the field samples were less than the corresponding blank action level, the field sample results reported by the laboratory are qualified as non-detected (U) on the Data Summary Table. See Table I for a summary of the qualifiers applied due to blank contamination. Data validation indicated minor data quality problems which do not significantly impact the usability of the data. See the data validation memorandum for details. The reported results are usable for the site objectives.

* The evaluation of "sampling error" cannot be completely assessed in the data validation.
 ** Sampling variability is not assessed in data validation.

Validator: 

Date: 7/29/02

[illegible]

1000 1000 1000 1000 1000 1000 1000 1000 1000 1000

[illegible][illegible]

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Arar and Collins (1971) using a Shimadzu 1010 UV-Visible Spectrophotometer. The concentration of chlorophylls was expressed in mg/L.

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

DOI: 10.1002/for

Steve Stralaha
US EPA Approval Signature

July 3, 2002
Date
June 14, 2002
L-02-06-Z-05
Revised: July 3, 2002

Ms. Christine Clark
Regional Sample Control Custodian
Office of Environmental Measurement and Evaluation
U.S. EPA Region I
11 Technology Drive
North Chelmsford, MA 01863

Re: TO No. 010, Task No. 2, TDF No. 0454B
Case No. Nestling B10F1, SDG No. 49038-41 PCB
Battelle Laboratories - Columbus, OH
Centredale Manor, North Providence, RI

209 PCB Congeners: 3/Tissue/A-TS-35-N, G-TS-04-N, L-TS-62-N

1/Fish Tissue SRM/CIL EDF 2526

Dear Ms. Clark:

A Tier III data validation was performed on the 209 PCB congeners analytical data for three Swallow Nestlings tissue samples collected by USGS for the U.S. EPA at the Centredale Manor Site in North Providence, RI. The samples were analyzed according to EPA Method 1668A, December 1999, as outlined in the Centredale Manor Tasks 19-22 QAPP (5/23/01). The samples were validated using first the criteria in the Centredale Manor Tasks 19-22 QAPP (5/23/01) prepared by Battelle Duxbury Operations which include the criteria in EPA Method 1668A, December 1999, defaulting next to Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996 criteria, and to EPA Region I's Environmental Services Assistance Team PCB Congener Data Validation ESAT-01-0008 Draft (8/31/01). The data were evaluated based on the following parameters:

- Overall Evaluation of Data and Potential Usability Issues
- Data Completeness (CSF Audit - Tier I)
- Preservation and Technical Holding Times
- PE Samples/Accuracy Check
- Window Defining Mix
- Initial and Continuing Calibrations
- Chromatographic Resolution
- Instrument Sensitivity Check
- Blanks
- Matrix Spike/Matrix Spike Duplicates

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- * • Laboratory Control Sample
- * • Laboratory and Field Duplicates
- Internal/Clean-up Standards
- " • Sample Analysis and Identification
- Sample Quantitation
- " • Estimated Detection Limits (EDL) and Estimated Maximum Possible Concentration (EMPC)
- 2378-TCDD Toxicity Equivalents (TE) and Isomer Specificity
- * • Required Sample Retuns and Second Column Confirmation
- System Performance

" - All criteria were met for this parameter.

The following information was used to generate the Data Validation Memorandum attachments:

Table I: Recommendation Summary Table - summarizes validation recommendations

Table II: Overall Evaluation of Data - summarizes site objectives and potential usability issues

Data Summary Tables - summarize accepted, qualified, and rejected data

Overall Evaluation of Data and Potential Usability Issues

The following is a summary of the site investigation/assessment objectives as found in Centredale Manor Tasks 19-22 QAPP (5/23/01):

- To generate data of quality sufficient to be used for human health (HHRA) and ecological risk assessments (ERA) at the site.

One Cambridge Isotope Laboratories (CIL) Standard Reference Material (SRM) sample was evaluated for this SDG (CIL EDF 2526 for PCB congeners in fish tissue). Since the majority of congeners were outside the Centredale Manor Tasks 19-22 QAPP (5/23/01) specified criterion of 30 %ID from the consensus value and all of the congeners had low recoveries, the results for all congeners in all samples were estimated (J, UJ) due to the possibility of biased low results.

The method blank had low level contamination. However, the concentration in the method blank was insignificant when compared to the concentration found in the field samples. Therefore, the method blank contamination does not impact data usability. When the analyte concentrations in the field samples were less than the corresponding blank action level, the field sample results reported by the laboratory are qualified as non-detected (U) on the Data Summary Table. See Table I for a summary of the qualifiers applied due to blank contamination.

Data validation indicated minor data quality problems which do not significantly impact the usability of the data. See the discussion below for details. The reported results are usable for the site objectives.

Data Completeness (CSF Audit - Tier I)

The following data or information in the data package had discrepancies and/or were missing:

1. The laboratory was asked to submit the original Chain-of-Custody completed by the sampler and received by the laboratory for this batch of samples.
2. The laboratory was asked to submit internal Chain-of-Custody records showing custody of the samples throughout the laboratory: from the time they were received at Battelle MSL to their arrival at Battelle Columbus on August 11, 2001. In addition, the laboratory was asked to provide records indicating conditions/temperature of the sample storage.
3. The laboratory was asked to submit tabulated results of percent recoveries and RPD values for the matrix spike and matrix spike duplicate samples.
4. The laboratory was asked to submit tabulated results for SRM associated with this batch of samples.
5. The laboratory was asked to provide the SOP for PCB analysis Using Modified Method 1668, Revision A.
6. The laboratory was asked to provide the quantitation reference for PCB congeners (if this reference was not included in the SOP).

All items were requested via the TOPO on March 5, 2002. The response was received via the TOPO on March 20, 2002. All items were adequately addressed.

REL Samples/Accuracy Check

One Cambridge Isotope Laboratories (CIL) Standard Reference Material (SRM) sample was evaluated for this SDG (CIL EDF 2526 for PCB congeners in fish tissue). Three out of five congeners were outside the Centredale Manor Tasks 19-22 QAPP (5/23/01) specified criterion of 30 %D from the consensus value.

The following table summarizes the SRM sample (49038-41-20 FISH SRM) results which did not meet the criterion and the resulting sample qualifications:

PE Sample Number	Congener	%D from consensus value	Action	
			Positive Detects	NDs
CIL EDF 2526	PCB-77	60.7	J	UJ
CIL EDF 2526	PCB-126	64.1	J	UJ
CIL EDF 2526	PCB-169	56.2	J	UJ

Since the majority of congeners had low recoveries and non-compliant %Ds, the results for all PCB congeners in all samples were estimated (J, UJ) due to the possibility of biased low results.

The laboratory documented in their report that the low recoveries of the congeners in the SRM may be due to the lipid content. The laboratory indicated that for future analyses of associated samples the SRM preparation procedures will be modified.

Initial and Continuing Calibration

The following table summarizes the Calibration Verification (VER) results which did not meet Method 1668A recovery criterion and the resulting sample qualifications:

VER Date	Compound	Recovery (ng/ml)	Acceptable Recovery Range (ng/ml)	Action		Affected Samples
				Positive Detects	NDs	
12/09/01 (Ending)	²⁰ PCB-19	152	50-150	1	UJ	All

The data associated with recoveries of noncompliant calibration verifications are qualified due to the high variability. The quantitation of the associated analytes in the samples could be biased.

Chromatographic Resolution

Many PCB congeners coeluted on the SPB-Octyl column used for the analysis. The laboratory reported the total concentration for the coeluting PCBs. These total concentrations are reported on the Data Summary Table. Three of the "toxic congeners" with TEF values coeluted: PCB-123, PCB-156, and PCB-157.

Coeluting Congeners	Reported as on the Data Summary Table:
PCB-12, PCB-13	PCB-12/PCB-13
PCB-16, PCB-24, PCB-27	PCB-16/PCB-24/PCB-27
PCB-18, PCB-30	PCB-18/PCB-30
PCB-20, PCB-21, PCB-28, PCB-33	PCB-20/PCB-21/PCB-28/PCB-33
PCB-26, PCB-29	PCB-26/PCB-29
PCB-40, PCB-41, PCB-71	PCB-40/PCB-41/PCB-71
PCB-43, PCB-52, PCB-73	PCB-43/PCB-52/PCB-73
PCB-44, PCB-47, PCB-65	PCB-44/PCB-47/PCB-65
PCB-45, PCB-51	PCB-45/PCB-51
PCB-49, PCB-69	PCB-49/PCB-69
PCB-50, PCB-53	PCB-50/PCB-53

Cooling Condensers	Repeated as on the Data Summary Table:
PCB-59, PCB-61, PCB-73	PCB-59/PCB-61/PCB-73
PCB-61, PCB-70, PCB-74, PCB-76	PCB-61/PCB-70/PCB-74/PCB-76
PCB-83, PCB-99, PCB-112	PCB-83/PCB-99/PCB-112
PCB-85, PCB-116, PCB-117	PCB-85/PCB-116/PCB-117
PCB-86, PCB-87, PCB-97, PCB-109, PCB-119, PCB-125	PCB-86/PCB-87/PCB-97/PCB-109/PCB-119/PCB-125
PCB-90, PCB-101, PCB-113	PCB-90/PCB-101/PCB-113
PCB-88, PCB-91	PCB-88/PCB-91
PCB-93, PCB-98, PCB-100, PCB-102	PCB-93/PCB-98/PCB-100/PCB-102
PCB-108, PCB-124	PCB-108/PCB-124
PCB-110, PCB-115	PCB-110/PCB-115
PCB-106, PCB-107, PCB-123	PCB-106/PCB-107/2'344'5-PentaCB (#123)
PCB-128, PCB-166	PCB-128/PCB-166
PCB-129, PCB-138, PCB-160, PCB-163	PCB-129/PCB-138/PCB-160/PCB-163
PCB-134, PCB-143	PCB-134/PCB-143
PCB-135, PCB-151, PCB-154	PCB-135/PCB-151/PCB-154
PCB-137, PCB-164	PCB-137/PCB-164
PCB-146, PCB-161	PCB-146/PCB-161
PCB-147, PCB-149	PCB-147/PCB-149
PCB-153, PCB-160	PCB-153/PCB-160
PCB-156, PCB-157	2'3'4'4'5-HexaCB (#136)/2'3'3'4'4'5-HexaCB (#157)
PCB-171, PCB-173	PCB-171/PCB-173
PCB-174, PCB-183, PCB-185	PCB-174/PCB-183/PCB-185
PCB-180, PCB-193	PCB-180/PCB-193
PCB-197, PCB-200	PCB-197/PCB-200
PCB-198, PCB-199	PCB-198/PCB-199

Blanks

One blank was associated with this SDG and was evaluated for possible sources of contamination. The following table lists the highest concentration of contamination that was detected in this blank. The table lists the action levels/actions and the samples affected:

Congener	Type of Blank	Blank Concentration ng/Kg	Action Level ng/Kg	Samples Affected
PCB-1	Method Blank (10/03/01)	16	81	A-TS-35-N, L-TS-62-N
PCB-3	Method Blank (10/03/01)	21	100	A-TS-35-N, L-TS-62-N
PCB-4	Method Blank (10/03/01)	40	200	A-TS-35-N
PCB-8	Method Blank (10/03/01)	70	350	All samples
PCB-197/PCB-200	Method Blank (10/03/01)	53	270	A-TS-35-N, G-TS-04-N

Blank actions are based on Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, December 1996 and EPA Region I's Environmental Services Assistance Team PCB Congener data Validation ESAT-01-0008 Draft (8/31/01) criteria. Blank action levels are calculated as five times the highest concentration of the contaminant determined in any blank. The positive sample results that are less than the blank action level are reported as non-detects (U) at the reported concentration on the Data Summary Table.

Internal/Clean-up Standards

- Internal Standards

The following table summarizes the internal standard recoveries that did not meet Centredale Manor Tracts 19-22 QAPP (5/23/01) acceptance criterion of 25-150%:

Standard	% Recovery	Action		Affected Sample
		Positive Detects	NDs	
¹³ C ₁₂ -PCB-209	24	J	U	L-TS-62-N

The corresponding non-labeled congener results are estimated as shown in the table due to internal standard percent recoveries outside method acceptance criterion.

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Sample Quantitation

Concentrations quantitated below the lowest calibration standard are flagged (J) on the Data Summary Tables. Quantitation is not accurate when the reported results are below the lowest calibration standard.

2378-TCDD Toxicity Equivalents (TE) and Isomer Specificity

All TE values reported on the Data Summary Tables have been calculated by the ESAT data validator using the validated data discussed above in this report. The validated data accounts for blank contamination. The TE calculations include the reported EMPC values. The fish TEF values for the PCBs are published in "Toxic Equivalency Factors (TEFs) for PCBs, PCDDs, PCDFs for Humans and Wildlife", Environmental Health Perspectives, Volume 106, Number 12, December 1998, Table 2, page 780.

System Performance

No trends noted.

Very truly yours,

LOCKHEED ENVIRONMENTAL

Maria E. Baca

Maria E. Baca
Senior Scientist

Louis Macri

Louis Macri
ESAT Program Manager

cc: Cornell Rosiu, EPA RPM (DV Memorandum, Data Summary Table)

Attachments: Table I: Recommendation Summary Table
Table II: Overall Evaluation of Data
Data Summary Tables
Data Validation Worksheets
Analytical Method
PE Scores
Communication/Phone Logs
Field Sampling Notes

Table I
Recommendation Summary Table for 209 PCB Congeners
Centredale Manor Site
Case No.: Nestling B10F1/SDG No. 49038-41 PCB

Sample Nos.	A-TS-35-N	G-TS-04-N	L-TS-62-N
Compound			
PCB-1	J ^{1,2}	J ¹	J ^{1,2}
PCB-3	J ^{1,2}	J ¹	J ^{1,2}
PCB-4	J ^{1,2}	J ¹	J ¹
PCB-5	J ¹	J ¹	J ¹
PCB-6	J ¹	J ¹	J ¹
PCB-7	J ¹	J ¹	J ¹
PCB-8	J ^{1,2}	J ^{1,2}	J ^{1,2}
PCB-9	J ¹	J ¹	J ¹
PCB-10	J ¹	J ¹	J ¹
PCB-12/PCB-13	J ¹	J ¹	J ¹
PCB-16/PCB-24/PCB-27	J ^{1,2}	J ^{1,2}	J ^{1,2}
PCB-17	J ^{1,2}	J ^{1,2}	J ^{1,2}
PCB-18/PCB-30	J ^{1,2}	J ^{1,2}	J ^{1,2}
PCB-19	J ^{1,2}	J ^{1,2}	J ^{1,2}
PCB-20/PCB-21/PCB-28/PCB-33	J ^{1,2}	J ^{1,2}	J ^{1,2}
PCB-22	J ^{1,2}	J ^{1,2}	J ^{1,2}
PCB-25	J ^{1,2}	J ^{1,2}	J ^{1,2}
PCB-26/PCB-29	J ^{1,2}	J ^{1,2}	J ^{1,2}
PCB-31	J ^{1,2}	J ^{1,2}	J ^{1,2}
PCB-32	J ^{1,2}	J ^{1,2}	J ^{1,2}
PCB-40/PCB-41/PCB-71	J ¹	J ¹	J ¹
PCB-42	J ¹	J ¹	J ¹

Table I
 Recommendation Summary Table for 209 PCB Congeners
 Centredale Manor Site
 Case No.: Nestling B10F1/SDG No. 49038-41 PCB

Sample Nos.	A-TS-35-N	G-TS-04-N	L-TS-62-N
Compound			
PCB-43/PCB-52/PCB-73	J ¹	J ¹	J ¹
PCB-44/PCB-47/PCB-65	J ¹	J ¹	J ¹
PCB-45/PCB-51	J ¹	J ¹	J ¹
PCB-46	J ¹	J ¹	J ¹
PCB-48	J ¹	J ¹	J ¹
PCB-49/PCB-69	J ¹	J ¹	J ¹
PCB-50/PCB-53	J ¹	J ¹	J ¹
PCB-56	J ¹	J ¹	J ¹
PCB-59/PCB-62/PCB-75	J ¹	J ¹	J ¹
PCB-60	J ¹	J ¹	J ¹
PCB-63	J ¹	J ¹	J ¹
PCB-64	J ¹	J ¹	J ¹
PCB-66	J ¹	J ¹	J ¹
PCB-61/PCB-70/PCB-74/PCB-76	J ¹	J ¹	J ¹
33/44-TetraCB (#77)	J ¹	J ¹	J ¹
344/5-TetraCB (#81)	J ¹	J ¹	J ¹
PCB-82	J ¹	J ¹	J ¹
PCB-83/PCB-99/PCB-112	J ¹	J ¹	J ¹
PCB-84	J ¹	J ¹	J ¹
PCB-85/PCB-116/PCB-117	J ¹	J ¹	J ¹
PCB-86/PCB-87/PCB-97/PCB-109/PCB-119/PCB-125	J ¹	J ¹	J ¹
PCB-89	J ¹	J ¹	J ¹

Table I
Recommendation Summary Table for 209 PCB Congeners
Centredale Manor Site
Case No.: Nestling B10F1/SDG No. 49038-41 PCB

Sample Nos.	A-TS-95-N	G-TS-04-N	L-TS-52-N
Compound			
PCB-90/PCB-101/PCB-113	J ¹	J ¹	J ¹
PCB-88/PCB-91	J ¹	J ¹	J ¹
PCB-92	J ¹	J ¹	J ¹
PCB-93/PCB-95/PCB-100/PCB-102	J ¹	J ¹	J ¹
PCB-95	J ¹	J ¹	J ¹
233'44'-PentaCB (#105)	J ¹	J ¹	J ¹
PCB-108/PCB-124	J ¹	J ¹	J ¹
PCB-110/PCB-115	J ¹	J ¹	J ¹
2344'5'-PentaCB (#114)	J ¹	J ¹	J ¹
23'44'5'-PentaCB (#118)	J ¹	J ¹	J ¹
PCB-106/PCB-107/2'344'5'-PentaCB (#123)	J ¹	J ¹	J ¹
33'44'5'-PentaCB (#126)	J ¹	J ¹	J ¹
PCB-128/PCB-166	J ¹	J ¹	J ¹
PCB-129/PCB-135/PCB-160/PCB-163	J ¹	J ¹	J ¹
PCB-130	J ¹	J ¹	J ¹
PCB-131	J ¹	J ¹	J ¹
PCB-132	J ¹	J ¹	J ¹
PCB-134/PCB-143	J ¹	J ¹	J ¹
PCB-135/PCB-151/PCB-154	J ¹	J ¹	J ¹
PCB-136	J ¹	J ¹	J ¹
PCB-137/PCB-164	J ¹	J ¹	J ¹
PCB-141	J ¹	J ¹	J ¹

Table I
Recommendation Summary Table for 209 PCB Congeners
Centredale Manor Site
Case No.: Nestling B10F1/SDG No. 49038-41 PCB

Sample Nos.	A-TS-35-N	G-TS-04-N	L-TS-62-N
Compound			
PCB-144	J ¹	J ¹	J ¹
PCB-146/PCB-161	J ¹	J ¹	J ¹
PCB-147/PCB-149	J ¹	J ¹	J ¹
PCB-153/PCB-168	J ¹	J ¹	J ¹
233'44'5'-HexaCB (#156)/233'44'5'-HexaCB (#157)	J ¹	J ¹	J ¹
PCB-158	J ¹	J ¹	J ¹
23'44'55'-HexaCB (#167)	J ¹	J ¹	J ¹
33'44'55'-HexaCB (#169)	J ¹	J ¹	J ¹
PCB-170	J ¹	J ¹	J ¹
PCB-171/PCB-173	J ¹	J ¹	J ¹
PCB-172	J ¹	J ¹	J ¹
PCB-174/PCB-183/PCB-185	J ¹	J ¹	J ¹
PCB-175	J ¹	J ¹	J ¹
PCB-176	J ¹	J ¹	J ¹
PCB-177	J ¹	J ¹	J ¹
PCB-178	J ¹	J ¹	J ¹
PCB-180/PCB-193	J ¹	J ¹	J ¹
PCB-182	J ¹	J ¹	J ¹
PCB-184	J ¹	J ¹	J ¹
PCB-187	J ¹	J ¹	J ¹
233'44'55'-HexaCB (#189)	J ¹	J ¹	J ¹
PCB-190	J ¹	J ¹	J ¹

Table I
Recommendation Summary Table for 209 PCB Congeners
Centredale Manor Site
Case No.: Nestling B10F1/SDG No. 49038-41 PCB

Sample Nos.	A-TS-35-N	G-TS-04-N	L-TS-62-N
Compound			
PCB-191	J ¹	J ¹	J ¹
PCB-194	J ¹	J ¹	J ¹
PCB-195	J ¹	J ¹	J ¹
PCB-196	J ¹	J ¹	J ¹
PCB-197/PCB-200	J ^{1,3}	J ^{1,3}	J ¹
PCB-198/PCB-199	J ¹	J ²	J ¹
PCB-201	J ¹	J ²	J ¹
PCB-203	J ²	J ¹	J ²
PCB-205	J ¹	J ¹	J ¹
PCB-206	J ¹	J ¹	J ¹
PCB-207	J ¹	J ¹	J ¹
PCB-209	J ²	J ¹	J ^{1,4}

Table I
Recommendation Summary Table for PCB Congeners

A	-	Accept all results.
J ¹	"	PE %D outside criterion; J detects, UJ non-detects.
J ²	"	VER recoveries outside criterion; J detects, UJ non-detects.
J ³	"	Method blank contamination; positive sample results less than the blank action level are reported as non-detects (U) at the concentration reported.
J ⁴	"	Internal standard recoveries outside criterion; J detects, UJ non-detects.

EPA-NE - Data Validation Worksheet

Overall Evaluation of Data - Data Validation Memorandum - Table II

PCB ANALYSIS					
DQO (See all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability	Potential Usability Issues
		Analytical Error	Sampling Error*		
The following is a summary of the site investigation/assessment objectives as found in Camanche Manor Tasks 19-22 QAPP (5/23/01): To generate data of quality sufficient to be used for human health (HHRA) and ecological risk assessments (ERA) at the site.	Yes, Sampling Method appropriate for all samples Yes, Analytical Method appropriate for all samples.	Refer to qualification in R/S Key on Table I: pass	Refer to qualification in R/S Key on Table I: NA	—	One Cambridge Isotope Laboratories (CIL) Standard Reference Material (SRM) sample was evaluated for this HRC (CIL EDP 2526 for PCB congeners in fish tissue). Since the majority of congeners were outside the Camanche Manor Tasks 19-22 QAPP (5/23/01) specified criterion of 30 %D from the consensus value and all of the congeners had low recoveries, the results for all congeners in all samples were estimated (U, UU) due to the probability of biased low results. The method blank had low level contamination. However, the concentration in the method blank was insignificant when compared to the concentration found in the field samples. Therefore, the method blank contamination does not impact data usability. When the analyte concentrations in the field samples were less than the corresponding blank action level, the field sample results reported by the laboratory are qualified as non-detected (L) on the Data Summary Table. See Table I for a summary of the qualifiers applied due to blank contamination. Data validation indicated minor data quality problems which do not significantly impact the usability of the data. See the data validation memorandum for details. The reported results are usable for the site objectives.

* The evaluation of "sampling error" cannot be completely assessed in the data validation.

Sampling variability is not assessed in data validation.

Validator: Harv' Blair

Date: 7/3/02

Data Summary Table
Polychlorinated Biphenyl Analysis - Tissue Samples (wet weight)

Site: Grinnale Manor - E. Providence, RI
 Case No.: Hasting B10F1 SDG NO.: 48038-41 PCB
 Laboratory: BATTILLE

SAMPLE NUMBER STATION LOCATION MATRIX	Tissue Exposure Factor (1)	A-75-35-M Alameda Pond TISUE		G-75-04-N Grinnale Mill Pond TISUE		L-75-02-M Lyonsville Pond TISUE	
		ng/g	DU/EMPC*	ng/g	DU/EMPC*	ng/g	DU/EMPC*
PCB-1		11	18.74	472.68 J		11	10.87
PCB-2		11	25.48	150.66 J		11	9.12
PCB-3		11	60.03	2439.53 J		11	169.42
PCB-4		11	33.82	11	33.36	11	18.84
PCB-5		11	33.82	11	33.36	11	18.84
PCB-6		11	33.82	11	33.36	11	18.84
PCB-7		11	33.82	11	33.36	11	18.84
PCB-8		11	33.82	11	33.36	11	18.84
PCB-9		11	33.82	11	33.36	11	18.84
PCB-10		11	33.82	11	33.36	11	18.84
PCB-11		11	79.84	31.14 J		11	37.88
PCB-12		145.46 J		431.67 J		145.46 J	
PCB-13		165.82 J		210.08 J		89.84 J	
PCB-14		322.44 J		229.24 J		147.20 J	
PCB-15		34.16 J		774.08 J		27.26 J	
PCB-16		600.08 J		3243.28 J		21834.68 J	
PCB-17		685.28 J		223.04 J		262.62 J	
PCB-18		215.21 J		63.08 J		304.97 J	
PCB-19		242.16 J		164.48 J		184.28 J	
PCB-20		360.88 J		1188.24 J		4884.40 J	
PCB-21		285.08 J		570.24 J		184.13 J	
PCB-22		145.46 J		285.24 J		2132.48 J	
PCB-23		2143.28 J		285.24 J		8728.32 J	
PCB-24		1688.88 J		3238.08 J		48388.88 J	
PCB-25		9138.88 J		1638.08 J		18438.88 J	
PCB-26		217.84 J		488.24 J		324.62 J	
PCB-27		63.08 J		63.08 J		63.08 J	
PCB-28		434.22 J		165.27 J		508.34 J	
PCB-29		803.88 J		772.08 J		2223.00 J	
PCB-30		687.88 J		638.08 J		814.84 J	
PCB-31		1945.88 J		381.08 J		1174.78 J	
PCB-32		681.88 J		137.88 J		1884.71 J	
PCB-33		1782.76 J		685.78 J		4884.04 J	
PCB-34		745.88 J		288.52 J		2348.81 J	
PCB-35		603.88 J		1078.21 J		12828.48 J	
PCB-36		1877.28 J		5887.21 J		62926.82 J	
PCB-37		1661.88 J		4881.08 J		87841.02 J	
PCB-38	0.05	1388.18 J		677.04 J		2788.79 J	
PCB-39	0.1	685.74 J		18.28 J		11	188.42
PCB-40		7838.10 J		838.27 J		4384.81 J	
PCB-41		38775.88 J		6884.08 J		32877.38 J	
PCB-42		2285.88 J		488.08 J		6881.37 J	
PCB-43		603.88 J		1888.29 J		28844.80 J	
PCB-44		2845.28 J		4018.87 J		84842.08 J	
PCB-45		75.56 J		17.83 J		112.36 J	
PCB-46		6448.18 J		8888.88 J		188875.11 J	
PCB-47		3488.88 J		788.88 J		8187.88 J	
PCB-48		9782.88 J		1888.04 J		27188.84 J	
PCB-49		885.88 J		223.36 J		1774.88 J	
PCB-50		18218.78 J		3088.11 J		47871.73 J	
PCB-51	0.0001	14817.87 J		3878.87 J		84884.88 J	
PCB-52		885.88 J		288.88 J		1388.70 J	
PCB-53		42382.44 J		8884.19 J		114821.82 J	
PCB-54	0.0001	885.88 J		884.16 J		2438.78 J	
PCB-55	0.0001	6884.82 J		12227.89 J		138483.38 J	
PCB-56	0.0001	8848.33 J		1888.88 J		13783.84 J	
PCB-57	0.1	885.88 J		68.11 J		312.88 J	
PCB-58		885.88 J		2888.82 J		24181.08 J	
PCB-59		87812.88 J		18888.78 J		188497.32 J	

Data Summary Table
Polybrominated Biphenyls Analysis - Tissue Samples (wet weight)

SITE: Centerville Minor - H. Providence, RI
CASE NO.: Meeting #10F1 \$DG NO.: 40038-41 PCB
LABORATORY: BATTELLE

SAMPLE NUMBER STATION LOCATION MATRIX	Toxicity Equivalency Factors (1)	A-TS-35-N Attleboro Pond TISUE		G-TS-04-N Greystone Mill Pond TISUE		L-TS-02-N Lyonsville Pond TISUE	
		ng/g	DL-EMPC*	ng/g	DL-EMPC*	ng/g	DL-EMPC*
PCB-100		4411.84 J		1037.08 J		5170.30 J	
PCB-101		454.76 J		50.00 J		100.00 J	100.00
PCB-102		6000.33 J		1000.00 J		1000.00 J	
PCB-103PCB-143		695.30 J		273.70 J		2000.00 J	
PCB-103PCB-103PCB-104		6897.00 J		2000.00 J		2100.00 J	
PCB-105		874.20 J		200.00 J		200.00 J	
PCB-107PCB-104		8919.46 J		1764.84 J		1700.00 J	
PCB-101		7003.70 J		2070.19 J		2000.00 J	
PCB-104		1304.10 J		841.68 J		3700.00 J	
PCB-105PCB-101		8750.70 J		2700.00 J		2000.00 J	
PCB-107PCB-104		22200.40 J		4124.70 J		21700.00 J	
PCB-105PCB-105		76800.30 J		10123.24 J		10000.00 J	
2,3,7,8,9-HexCB (1150), 2,3,7,8,9-HexCB (1157)	0.0001	8778.70 J		2175.20 J		1000.00 J	
PCB-105		8880.20 J		1632.48 J		1700.00 J	
2,3,7,8,9-HexCB (1157)	0.0001	4000.00 J		500.17 J		2700.00 J	
2,3,7,8,9-HexCB (1157)	0.001	146.70 J		224.13 J		400.00 J	
PCB-170		7700.11 J		2000.72 J		1700.00 J	
PCB-171PCB-173		1687.90 J		707.88 J		4700.00 J	
PCB-172		1012.81 J		1204.24 J		3000.00 J	
PCB-174PCB-103PCB-105		7401.84 J		3071.04 J		1000.00 J	
PCB-175		283.36 J		161.88 J		470.70 J	
PCB-176		213.10 J		80.31 J		500.00 J	
PCB-177		2700.28 J		1627.60 J		7000.70 J	
PCB-178		1000.22 J		1200.88 J		2000.00 J	
PCB-103PCB-105		16364.00 J		6022.62 J		10000.00 J	
PCB-105		61.12 J		42.18 J		170.00 J	
PCB-106		10.10 J		10.50 J		51.71 J	
PCB-107		6023.07 J		6067.16 J		16700.00 J	
2,3,7,8,9-HexCB (1150)	0.00001	302.70 J		187.20 J		700.00 J	
PCB-108		1848.00 J		581.00 J		2000.00 J	
PCB-101		201.10 J		130.00 J		100.00 J	
PCB-104		3000.84 J		1822.00 J		6000.00 J	
PCB-105		680.71 J		985.71 J		1000.00 J	
PCB-106		1000.17 J		1682.37 J		2000.00 J	
PCB-107PCB-105		10300.00 J	200.00	10000.00 J	274.00	10000.00 J	
PCB-108PCB-105		727.90 J		807.84 J		1000.00 J	
PCB-101		5701.70 J		4200.45 J		7000.00 J	
PCB-105		170.00 J		131.30 J		200.00 J	
PCB-106		8720.82 J		11740.66 J		10000.00 J	
PCB-107		682.97 J		985.74 J		1100.00 J	
PCB-108		8710.40 J		4111.87 J		7000.00 J	
TOTAL PCB		710877.81 J		211100.03 J		171000.00 J	
TOXIC EQUIVALENCY(1)		100 J		27 J		100 J	
PERCENT SOLIDS		60.1		37.5		30.0	
PERCENT LIPIDS		0.36		4.00		0.10	
DILUTION FACTOR		1		1		1	
DATE SAMPLED		08/12/01		08/09/01		04/08/01	
DATE OF RECEIPT		07/11/01		07/11/01		07/11/01	
SAMPLE EXTRACTION DATE		10/03/01		10/03/01		10/03/01	
ANALYSIS DATE		12/04/01		12/04/01		12/04/01	
LABORATORY SAMPLE ID:		40038-41-14		40038-41-10		40038-41-08	

* - The values in this column are either the Detection Limits (DL) or the Estimated Maximum Possible Concentration (EMPC). The EMPC results are marked with a "J". The DL values are unmarked.
The EMPC values are not marked with a "J", since they are already estimated.

(1) The Toxic Equivalency Concentration is calculated with the Toxicity Equivalency Factors (TEFs) found in "Toxic Equivalency Factors (TEFs) for PCBs, PCDDs, PCDFs for Humans and Wildlife", Environmental Health Perspectives, Volume 106, Number 12, December 1998, Table A, pages 780 & 783.

Section 1 Quality Assurance Review

A. Organic Data

The organic analyses of 61 tissue samples (including QC samples) were performed by Battelle Laboratories of Duxbury, Massachusetts. The samples were analyzed for pesticide/PCB compounds by Battelle Method SOP 5-128-05. These analyses are specified on Table 1. The laboratory organized the samples into four sample delivery groups (SDGs 01-380, 01-568, 01-571, and 01-587).

these represent small SDGs.

The findings in this report are based upon a US EPA Region I Tier II (Tier II) review of holding times, condition of samples upon laboratory receipt, blank analysis results, laboratory control sample (LCS) recoveries, matrix spike (MS)/matrix spike duplicate (MSD) recoveries and precision, surrogate recoveries, laboratory and field duplicate/split sample precision, instrument sensitivity, analytical sequence, calibrations, overall system performance, and quantitation of positive results.

*SDGs.
Duxbury
8/8/02*

Overall, the organic data quality is satisfactory. The data reviewer has edited the laboratory-reported data and QC forms based on the deficiencies and comments listed in this QA review. Analytical and reporting requirements defined in the QAPP were met for this data set, with the exception of the items identified in the following sections of this QA review; it should be emphasized that these items do not necessarily impact data usability. Based upon a Tier II review of the data provided, the organic data qualifiers associated with the samples that underwent limited data validation are presented in the subsequent Organic Data Qualifiers section. These qualifiers should not be applied to any organic results that did not undergo data validation. Data usability issues represent an interpretation of the QC results obtained for the project samples. Quite often, data qualifications address issues relating to sample matrix problems. Similarly, the validation guidelines specify areas of the data that require qualification, yet the methods used for analysis do not require any corrective action by the laboratory. Accordingly, the data usability issues that follow should not necessarily be construed as an indication of laboratory performance.

Noncorrectable Deficiencies

1. For the pesticide/PCB fractions of all SDGs, the laboratory quantitated several samples for pesticides using response factors generated from an initial calibration that was analyzed after the samples had been analyzed. According to Battelle Duxbury Method 5-128-05 (Section 3.1), a valid multi-point initial calibration should be analyzed at the beginning of each set of continuous sample analyses. The laboratory did analyze an initial calibration at the beginning of the analytical sequence. The laboratory, however, indicated that due to the nature of the sample matrix, a loss of instrument sensitivity was observed in the associated pesticide CCV standards (see Non-Correctable Deficiency #4). The laboratory recalibrated the instrument (as required, due to the non-compliant CCV standards) but did not reanalyze the samples analyzed prior to the recalibration because the laboratory concluded that the sample matrix negatively impacted the instrument's column condition (as evidenced by the non-compliant pesticide CCV standards that followed the second initial calibration in the sequence). Battelle laboratory personnel indicated to the data reviewer that these sample analyses already represented reextractions and that the initial extractions and analyses exhibited similar matrix problems that impacted calibration stability. Reanalysis of project samples, therefore, was not warranted because similar

conditions would likely be encountered. Based on an evaluation of both initial calibrations and all CCV standards in the analytical sequence, the laboratory determined that the second initial calibration was the "better" of the two calibrations. The results for all samples and standards in the analytical sequence were processed against the response factors generated from this calibration. Qualification of data due to loss of instrument sensitivity is addressed in the subsequent Organic Data Qualifiers section.

2. For SDG 01-568, the laboratory did not reextract and reanalyze all samples associated with a preparation blank that exhibited zero percent surrogate recoveries. According to the QAPP (Worksheet #24a), the corrective action for surrogate recoveries outside of performance criteria is to reextract and/or reanalyze associated samples. The laboratory stated in the Case Narrative that it appeared that the aforementioned preparation blank had not been fortified with surrogate compounds and that target pesticide/PCB compound contamination is rare in preparation blanks; thus, no further corrective action was taken. Acceptable surrogate recoveries were observed in all investigative sample analyses in SDG 01-568. Qualification of data was not warranted due to this issue.
3. For SDG 01-380, the laboratory did not reanalyze the independent check standard (ICS) in which the majority of target analytes did not meet QC acceptance criteria (percent difference [%D] <15%). Although stipulated in the QAPP (Worksheet #24a) that the ICS is an internal QC check, the failure of the majority of target analytes to meet QC acceptance criteria demonstrates that the instrument conditions were not optimized prior to sample analyses. The laboratory performed a second initial calibration (see Noncorrectable Deficiency #1); consequently, only those samples analyzed after the aforementioned ICS and prior to the second initial calibration (specifically, samples A-TS-35-N and A-TS-46-N) were impacted. Qualification of data due to high %Ds in the ICS is addressed in the Organic Data Qualifiers section.
4. For SDG 01-380, the laboratory did not reanalyze samples A-TS-35-N and A-TS-46-N, which were bracketed by a non-compliant (i.e., %Ds>25%) continuing calibration check standard. According to Battelle SOP 5-128-05 (Section 3.4), if the check standard fails to meet calibration check criteria, the check standard and associated samples must be reanalyzed. Qualification of data due to high percent differences in the aforementioned check standard is addressed in the Organic Data Qualifiers section. ** A-TS-35-N re-extracted with batch 01-672. DTG 6/20/02*
5. For SDGs 01-380 and 01-587, the temperature of the samples upon laboratory receipt was 19.7°C. According to the QAPP (Worksheet #22a), samples must be frozen when shipped. Due to the stability of the target compounds at temperatures less than 20°C, qualification of data was not warranted due to the elevated sample temperature.

Comments

1. For SDG 01-587, the Case Narrative states that the tissue samples were not immediately logged in upon receipt at Battelle Duxbury laboratory and were allowed to warm to room temperature. Due to the stability of the target analytes, the data reviewer did not qualify data due to this issue.

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① Not relevant to summary data packages. PL 5-29-02



2. For SDGs 01-571 and 01-587, the sample collection dates were not recorded on the associated Chain-of-Custody forms. The data reviewer was able to obtain the sample collection dates from the electronic disk deliverables provided.
3. For SDG 01-587, the laboratory received split samples for samples LPX-CF-4001-0000-01 (W6480 and W6835), LPX-CF-4004-0000-01 (W6484 and W6836), and WRL-CF-4005-000-01 (W6485 and W6834) from the Battelle Columbus laboratory (see Project Correspondence). The Environmental Standards data reviewer considered the sample splits as field duplicates for data evaluation purposes. The Environmental Standards data reviewer has referred to the split samples by using the client sample identifier followed by the laboratory sample identifier in parentheses in this report.

With respect to data usability, the principal areas of concern include high check standard percent differences (%Ds), low LCS recoveries, high continuing calibration %Ds, low surrogate standard recoveries, high and low MS/MSD recoveries, high MS/MSD relative percent differences (RPDs), laboratory duplicate and field imprecision, and quantitation of results below the project-required quantitation limits. Based on the Tier II review of the data provided, the following organic data qualifiers are offered. The following data usability issues represent an interpretation of the QC results obtained for the project samples. Quite often, data qualifications address issues relating to sample matrix problems. Similarly, the data validation guidelines routinely specify areas of the data that require qualification, yet the methods used for analysis may not require corrective action by the laboratory. Accordingly, the following data usability issues should not be construed as an indication of laboratory performance.

Organic Data Qualifiers

- The analysis for endosulfan I in SDG 01-380 sample L-TS-70-N should be considered unusable, and the "not-detected" result has been flagged "R" on the data tables. Very low recoveries (<10%) were observed for endosulfan I in the associated MS/MSD analyses.
- The quantitation limits for the following compounds in the samples listed on the table below may be biased low, and the "not-detected" results have been flagged "UJ" (unless previously flagged "R") on the data tables. In addition, any reported positive results for these compounds should be considered estimated and have been flagged "J" on the data tables. High %Ds (>25%) were observed for these compounds in the associated independent check standard.

Compound(s)	SDG	Samples With Qualified Quantitation Limits ("UJ") or Estimated Positive Results ("J")
All single-component pesticides except 4,4'-DDE	01-380	* A-TS-35-N and A-TS-46-N
heptachlor epoxide	01-568	All samples

* Sample re-extracted with batch 01-672. WTS data 6/20/02

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① Not relevant to swallow data packages. BL 5-29-02



The quantitation limits for the following compounds in the samples listed below may be biased low, and the "not-detected" results have been flagged "UJ" (unless previously flagged "R") on the data tables. In addition, any reported positive results for these compounds should be considered estimated and have been flagged "J" on the data tables. High %Ds (>25%) were observed for these compounds in the associated continuing calibration verification standards.

Compounds	SDG	Samples With Qualified Quantitation Limits ("UJ") or Estimated Positive Results ("J")
All single-component pesticides except 4,4'-DDE	01-380	A-TS-35-N and A-TS-46-N
endrin	01-380	L-TS-62-N, L-TS-63-N, L-TS-70-N, L-TS-84-N, and L-TS-89-N

* Samples re-extracted with batch 01-672. DP 6/20/02

The quantitation limits for all pesticide/PCB compounds and total Aroclors in the samples listed below may be higher than reported, and the "not-detected" results have been flagged "UJ" (unless previously flagged "R") on the data tables. In addition, the reported positive results for the following compounds in the samples listed below should be considered estimated and have been flagged "J" on the data tables. Low recoveries (<40%) were observed for one or more of the surrogate compounds in the analyses of these samples.

Compounds	SDG	Samples With Qualified Quantitation Limits ("UJ") and/or Estimated Positive Results ("J")
All compounds	01-380	L-TS-70-N, L-TS-89-N, A-TS-35-N, A-TS-46-N, A-TS-48-N, A-TS-57-N, G-TS-02-N, G-TS-22-N, G-TS-29-N, L-TS-62-N, L-TS-63-N, and L-TS-84-N
All compounds	01-571	GMS-EW-4002-0000-01, LPS-EW-4004-0000-01, GMS-EW-4002-0000-01, and CMS-EW-4005-0000-01

* Samples A-TS-35-N, A-TS-57-N, G-TS-02-N, and L-TS-63-N were re-extracted with batch 01-672. DP 6/20/02

The quantitation limits for the following compounds in the samples listed below may be higher than reported, and the "not-detected" results have been flagged "UJ" on the data tables. Low recoveries (<40%) were observed for these compounds in the associated LCS analyses.

Compound	SDG	Samples With Qualified Quantitation Limits ("UJ")
endrin aldehyde	01-380	All samples
	01-568	All samples
endosulfan II	01-571	All samples

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① Not relevant to swallow data packages. R 5-28-02



The quantitation limits for the following compounds in the samples listed below may be higher than reported, and the "not-detected" results have been flagged "UJ" on the data tables. In addition, the reported positive results for the following compounds in the samples listed below should be considered estimated and have been flagged "J" on the data tables. Low recoveries (<40%) were observed for these compounds in the associated MS/MSD analyses.

Compound(s)	SDG	Samples With Qualified Quantitation Limits ("UJ") and/or Estimated Positive Results ("J")
endosulfan II and endrin aldehyde	01-380	L-TS-70-N
~~4,4'-DDE, aldrin, alpha-BHC, alpha-chlordane, beta-BHC, delta-BHC, endosulfan I, endosulfan II, endrin aldehyde, gamma-BHC, gamma-chlordane, heptachlor, and heptachlor-epoxide~~	~~01-571~~	~~RWR-EW-5002-0000-01~~ ①
~~endosulfan I~~	~~01-587~~	~~RWR-CF-5003-0000-01~~

The quantitation limits for 4,4-DDD; 4,4'-DDE; 4,4-DDT; alpha-chlordane; endosulfan II; endrin aldehyde; endrin ketone; gamma-chlordane; heptachlor; and heptachlor epoxide in SDG 01-571 sample RWR-EW-5002-0000-01 may be higher than reported, and the "not-detected" results have been flagged "UJ" on the data tables. In addition, the reported positive results for 4,4-DDD; 4,4'-DDE; alpha-chlordane; and gamma-chlordane in SDG 01-571 sample RWR-EW-5002-0000-01 should be considered estimated and have been flagged "J" on the data tables. High RPDs (>30%) were observed between the results for these compounds in the associated MS/MSD analyses.

The reported positive results for dieldrin, heptachlor epoxide, Aroclor-1254, and total Aroclors in SDG 01-568 sample L-TS-73-P should be considered estimated and have been flagged "J" on the data tables. High RPDs (>30%) were observed between the results for dieldrin, heptachlor, epoxide, and Aroclor-1254 in the associated laboratory duplicate analyses. *True - except that concentrations of dieldrin and heptachlor epoxide in the lab duplicates were 43x the detection limit. DAD 6/20/02*

The reported positive result for 4,4'-DDE in SDG 01-568 sample A-TS-33-P should be considered estimated and has been flagged "J" on the data tables. A high recovery (>120%) was observed for 4,4'-DDE in the associated MS analysis. *True - but the concentration of 4,4'-DDE in the MS was 4.5x background levels. DAD 6/20/02*

The reported positive results for Total Aroclor in all samples with estimated positive results (flagged "J"), for Aroclor-1254, and/or for Aroclor-1268 should be considered estimated and have been flagged "J" on the data tables. The laboratory-reported results for Total Aroclor represent the sum of the observed positive results for all Aroclor compounds.

Three split sample pairs [SDG 01-587 sample LPX-CF-4001-01 (W6485) and its split sample LPX-CF-4001-01 (W6834), SDG 01-587 sample LPX-CF-4004-0000-01 (W6480) and its split sample LPX-CF-4004-0000-01 (W6835), and SDG 01-587 sample

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WRL-CF-4005-0000-01 (W6484) and its split duplicate, sample LPX-CF-4004-0000-01 (W6836)] were submitted to the laboratory with this data set. Acceptable precision and sample representativeness were demonstrated by the correlation observed between the results in the split sample pairs (i.e., when both results were $\geq 3\times$ the quantitation limit, the RPD was $\leq 50\%$ or when one of the results was $\leq 3\times$ the quantitation limit, the difference between results was $\leq 3\times$ the quantitation limit). Complete comparisons of the quantitatively confident positive results in the split sample pairs have been included in Section 3.

One field duplicate pair (SDG 01-571 sample CMS-EW-4001-0000-01 and its field duplicate sample CMS-DU-072001-A) was submitted to the laboratory with this data set. Acceptable precision and sample representativeness were demonstrated by all reported results in these field QC samples except the results for dieldrin and methoxychlor. A positive result for methoxychlor was reported in sample CMS-DU-072001-A and methoxychlor was not observed in sample CMS-EW-4001-0000-01. The quantitation limit for methoxychlor in SDG 01-571 sample CMS-EW-4001-0000-01 may be higher than reported, and the "not-detected" result has been flagged "UJ" on the data tables. In addition, the reported positive results for dieldrin and methoxychlor in SDG 01-571 sample CMS-DU-072001-A and for dieldrin in SDG 01-571 sample CMS-EW-4001-0000-01 should be considered estimated and have been flagged "J" on the data tables. The differences between the reported results for these compounds were greater than three-times the quantitation limit and at least one of the results was less than five-times the quantitation limit.

Based on the project-specific reporting requirements, all reported positive results with concentrations between the laboratory method detection limit and the project quantitation limit should be considered estimated and have been flagged "J" on the data tables.

Complete support documentation for this organic QA review is presented in Section 3 of this report. The cover sheet for this section is a checklist of all QA procedures required by the methods and examined in this data review.

① Not relevant to swallow data packages.

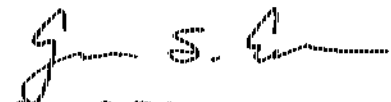
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C. Conclusions

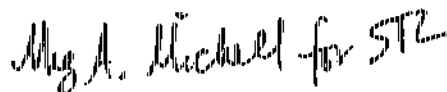
Overall, the data quality is satisfactory. Based on this QA review, one organic result was qualified as unusable due to very low matrix spike/matrix spike duplicate recoveries. In addition, several organic results were qualified as estimated due to high check standard %Ds, low laboratory control sample recoveries, high continuing calibration %Ds, low surrogate standard recoveries, low matrix spike/matrix spike duplicate recoveries, high matrix spike/matrix spike duplicate RPDs, laboratory and field duplicate imprecision, and quantitation of results below the project-required quantitation limits. Overall, the data are acceptable for use, provided the data user understands the limitations and qualifications stated in this QA review. The Laboratory Case Narratives, Chain-of-Custody Records, and Project Correspondence are presented in Sections 4, 5, and 6, respectively.

Report prepared by:



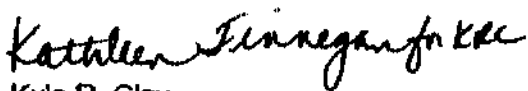
Glenn S. Esler
Quality Assurance Chemist

Report reviewed by:



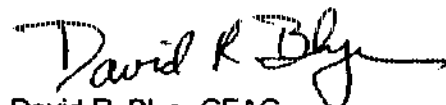
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Date: 2/7/02



Swallow Re-extract
Batch (01-672) for
Rest/PCB.
D. Dahlen 8/14/02

Section 1 Quality Assurance Review

A. Organic Data

The organic analyses of 20 tissue samples (including QC samples) were performed by Battelle Laboratories (Battelle) of Duxbury, Massachusetts. The samples were collectively analyzed for select polynuclear aromatic hydrocarbons (PAH) by selective ion monitoring by Battelle Method SOP 5-157-05 and for pesticide/PCB compounds by Battelle Method SOP 5-128-05. These analyses are specified on Table 1. The laboratory organized the samples into one sample delivery group (SDG 01-672). => Re-extract batch - D. Dahlen 8/14/02

The findings in this report are based upon a rigorous review of holding times, condition of samples upon laboratory receipt, blank analysis results, laboratory control sample (LCS) recoveries, matrix spike (MS)/matrix spike duplicate (MSD) recoveries and precision, laboratory duplicate precision, surrogate recoveries, instrument sensitivity, analytical sequence, and calibrations.

Overall, the organic data quality appears to be acceptable. Analytical and reporting requirements defined in the QAPP were met for this data set, with the exception of the items identified in the following sections of this QA review; it should be emphasized that these items do not necessarily impact data usability. Based upon a Tier II review of the data provided, the organic data qualifiers associated with the samples that underwent limited data validation are presented in the subsequent Organic Data Qualifiers section. These qualifiers should not be applied to any organic results that did not undergo data validation. Data usability issues represent an interpretation of the QC results obtained for the project samples. Quite often, data qualifications address issues relating to sample matrix problems. Similarly, the validation guidelines specify areas of the data that require qualification, yet the methods used for analysis do not require any corrective action by the laboratory. Accordingly, the data usability issues that follow should not necessarily be construed as an indication of laboratory performance.

Noncorrectable Deficiencies

1. High percent differences (%Ds > 25%) were observed for gamma-BHC and delta-BHC in continuing calibration verifications (CCVs) associated with project samples. According to the QAPP (Worksheet #21), the laboratory should reanalyze the Check Standard Solution or recalibrate the system if any percent difference is greater than 25%. The laboratory did not reanalyze the standards or recalibrate the system. The impact on data usability due to the high %Ds is addressed in the subsequent Organic Data Qualifiers section.
2. The reported sample cooler temperature upon laboratory receipt for the sample cooler containing samples A-TS-35-N, A-TS-57-N, G-TS-02-N, and L-TS-63-N was 19.7°C. According to the QAPP (Worksheet #22A), samples must be frozen when shipped. Due to the stability of the target compounds at temperatures less than 20°C, qualification of data was not warranted due to the elevated sample temperature upon receipt.

Comments

1. For the PAH fraction, the tentatively identified compounds (TICs) reported for the project samples were evaluated for the presence of target compounds or surrogate standards. Target compounds and surrogate standards were not reported as TICs for the project samples.
2. The laboratory did not provide sample receipt information (sample custody records, Sample Receipt Forms, and sample login reports) for samples LPX-LB-4004-0000-01, GMP-LB-5005-0000-01, and MAP-LB-4001-0000-01. The data reviewer was able to obtain these data from other project data packages.

With respect to data usability, the principal areas of concern include blank contamination, MS/MSD results, laboratory duplicate imprecision, a continuing calibration issue, and quantitation of results below the project-required quantitation limit. Based on a Tier II review of the data provided, the following organic data qualifiers are offered. The following data usability issues represent an interpretation of the QC results obtained for the project samples. Quite often, data qualifications address issues relating to sample matrix problems. Similarly, the data validation guidelines routinely specify areas of the data that require qualification, yet the methods used for analysis may not require corrective action by the laboratory. Accordingly, the following data usability issues should not be construed as an indication of laboratory performance.

Organic Data Qualifiers

- Due to the trace-level presence of the following compounds in the associated method blanks, the reported positive results for the following compounds in the samples listed below should be considered "not-detected" and have been flagged "U" on the data tables. Furthermore, results that were reported below the sample-specific quantitation limit were replaced with the quantitation limit and the appropriate "U" qualifier. It should be noted that sample weights were taken into consideration when evaluating blank contamination.

Compound(s)	Sample(s) With Results Qualified as "Not-Detected" ("U")
biphenyl and naphthalene	all samples
2-methylnaphthalene	GMP-LB-5005-0000-01 and LPX-LB-4004-0000-01
anthracene and fluoranthene	LPX-LB-4004-0000-01 and MAP-LB-4001-0000-01
chrysene and pyrene	GMP-LB-5005-0000-01, LPX-LB-4004-0000-01, and MAP-LB-4001-0000-01
phenanthrene	LPX-LB-4004-0000-01

- The quantitation limits for endrin aldehyde in sample LPX-LB-4003-0000-01; for endosulfan I, endosulfan II, and endrin aldehyde in sample GMP-LB-5005-0000-01; and for endosulfan I and endrin aldehyde in sample CMS-EW-4003-0000-01 may be higher

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Not related to Swallow Data Report. bc 8-12-02

than reported and have been flagged "JJ" on the data tables. Low recoveries (<40%) were observed for endosulfan I, endosulfan II, and endrin aldehyde in the associated MS/MSD analyses.

- The reported positive result for 4,4'-DDE in sample GMP-LB-5005-0000-01 should be considered estimated and has been flagged "J" on the data tables. High recoveries (>125%) was observed for 4,4'-DDE in the associated MS/MSD analyses. ①
- The reported positive result for *alpha*-chlordane in sample GMP-LB-5005-0000-01 should be considered estimated and has been flagged "J" on the data tables. A high relative percent difference (RPD>30%) was observed for *alpha*-chlordane in the associated MS/MSD analyses. ①
- The reported positive results for fluoranthene, phenanthrene, and Total PAHs in sample GMP-LB-5005-0000-01 and for phenanthrene in sample LPX-LB-4003-0000-01 should be considered estimated and have been flagged "J" on the data tables. High RPDs (>30%) were observed for these compounds in the associated laboratory duplicate analyses. ①
- The reported positive results for Aroclor-1254, Aroclor-1268, Total Aroclor, and technical chlordane in sample LPX-LB-4003-0000-01; for 4,4'-DDT; *alpha*-chlordane, dieldrin, Aroclor-1254, Aroclor-1268, Total Aroclor; and technical chlordane in sample GMP-LB-5005-0000-01; and for *alpha*-chlordane, *gamma*-chlordane, technical chlordane, Aroclor-1254, and Total Aroclor in sample CMS-EW-4005-0000-01 should be considered estimated and have been flagged "J" on the data tables. High RPDs (>30%) were observed for these compounds in the associated laboratory duplicate analyses. ①
- The quantitation limits for *gamma*-BHC and *delta*-BHC in all samples may be higher than reported, and the "not-detected" results have been flagged "JJ" on the data tables. High percent differences (%Ds>25%) were observed for these compounds in associated continuing calibration standards.
- The reported positive results for Total Aroclor in all samples with estimated positive results (flagged "J"), for Aroclor-1254, and/or for Aroclor-1268 should be considered estimated and have been flagged "J" on the data tables. The laboratory-reported results for Total Aroclor represent the sum of the observed positive results for all Aroclor compounds.
- The reported positive results for Total PAHs in all samples with estimated positive results (flagged "J") for any PAH compound should be considered estimated and have been flagged "J" on the data tables. The laboratory-reported results for Total PAHs represent the sum of the observed positive results for all PAH compounds. ①
- Based on the project-specific reporting requirements, all reported positive results with concentrations between the laboratory method detection limit and the project quantitation limit should be considered estimated and have been flagged "J" on the data tables.

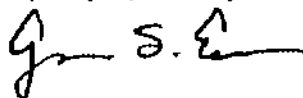
① Not related to Swallow Data Report. BL 8-12-02

Complete support documentation for this organic QA review is presented in Section 3 of this report. The cover sheet for this section is a checklist of all QA procedures required by the methods and examined in this data review.

B. Conclusions

Overall, the data quality is acceptable. Based on this QA review, several PAH results were qualified as "not-detected" due to blank contamination. In addition, several PAH and pesticide/PCB results were qualified as estimated due to MS/MSD results, a continuing calibration issue, laboratory duplicate imprecision, and quantitation of results below the project-required reporting limit. Overall, the data are acceptable for use, provided the data user understands the limitations and qualifications stated in this QA review. The Laboratory Case Narratives, and Chain-of-Custody Records are presented in Sections 4 and 5 respectively.

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Glenn S. Esler
Quality Assurance Chemist

Report reviewed by:



Stephen T. Zeiner, CEAC, CPC
Senior Quality Assurance Chemist III

Report reviewed and approved by:



Kyle R. Clay
Senior Quality Assurance Chemist II/
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Quality Assurance Specialist/
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Date: 3/6/02

Section 1 Quality Assurance Review

A. Inorganic Data

The inorganic analyses of 19 tissue samples (including QC samples) 16 crayfish samples (including QC samples), 18 worm samples (including QC samples), and 204 fish samples (including QC samples) were performed by Battelle Marine Sciences Laboratory (MSL) of Sequim, Washington. The samples were collectively analyzed for beryllium, aluminum, vanadium, chromium, manganese, iron, zinc, and silver by Battelle-MSL Method MSL-I-027-03; for cobalt, nickel, arsenic, molybdenum, copper, cadmium, antimony, thallium, barium, and lead by Battelle-MSL Method MSL-I-022-04; for methylmercury by Battelle Method MSL-I-015-05; for selenium by Battelle-MSL Method MSL-I-029-03; and for mercury by Battelle-MSL Method MSL-I-016-03. These analyses are specified on Table 1. The laboratory organized the samples into one SDG (SDG 1678).

The findings in this report are based upon a Tier II review of sample holding times, condition of samples upon laboratory receipt, blank analysis results, laboratory and field duplicate precision, blank spike recoveries, matrix spike/matrix spike duplicate (MS/MSD) recoveries and precision, standard reference material (SRM) results, instrument sensitivity, method detection limits (MDLs), and calibrations.

Overall, the inorganic appears to be acceptable. The data reviewer has edited the QC forms based on the deficiencies listed in this QA review. Analytical and reporting requirements defined in the QAPP were met for this data set, with the exception of the items identified in the following sections of this QA review; it should be emphasized that these items do not necessarily impact data usability. Based upon a Tier II review of the data provided, the inorganic data qualifiers associated with the samples that underwent a Tier II review are presented in the subsequent Inorganic Data Qualifiers Section. These qualifiers should not be applied to any inorganic results that did not undergo a Tier II review. Data usability issues represent an interpretation of the QC results obtained for the project samples. Quite often, data qualifications address issues relating to sample matrix problems. Similarly, the validation guidelines specify areas of the data that require qualification, yet the methods used for analysis do not require any corrective action by the laboratory. Accordingly, the data usability issues that follow should not necessarily be construed as an indication of laboratory performance.

Correctable Deficiencies

1. The laboratory-reported sequence numbers on the ICP/MS Sample Entry Report and on the Data Set summary for data set 1678-3 do not correspond. The data reviewer was able to determine the sequence numbers are "off" by six.
2. The laboratory did not report all of the samples analyzed on 11/10/01 on the associated ICP Analytical Sequence form.
3. The laboratory did not summarize the results of the initial calibrations for the majority of the analyses in this data set. The data reviewer was unable to evaluate the linearity of the calibrations for these analyses. All continuing calibration verification (CCV) standard recoveries were within the acceptance limits; therefore, data were not qualified due to this issue.

4. The laboratory did not summarize calibration blank results for any of the analyses in this data set. The data reviewer used the procedural blank results to evaluate the usability of the project sample data.
5. The laboratory did not summarize the internal standard responses for the ICPMS analyses performed by Battelle-MSL Method MSL-I-022-04. According to the method (Section 6.8), the internal standard responses should be within 60-125% of the original response in the calibration blank. The data reviewer could not evaluate the internal standard responses for compliance.
6. The laboratory flagged the lead results with a "U" on the sample results summary form for several fish tissue samples analyzed on 9/10/01. The levels of lead in these samples were above the MDL and the results should not have been flagged "U". The data reviewer deleted the "U" flags from the data tables.
7. The laboratory reported sample IDs of "LPX-LB-4009-0000-00" and "LPX-LB-4010-0000-00" on the sample results summary form for samples LPX-LB-4009-0000-01 and LPX-LB-4010-0000-01.
8. The laboratory did not summarize the calibration verification standard, calibration blank, interference check sample, and/or serial dilution results for the ICP analyses performed on 9/12/01 and 9/25/01. The data reviewer was able to evaluate these QC samples only on a pass/fail basis using the results reported on the analytical sequence lists.
9. The laboratory reported a collection date of "6/23/01" on the Sample Login form for samples GMP-LB-5003-0000-01F, GMP-LB-5003-0000-01O, GMP-LB-5004-0000-01F, GMP-LB-5004-0000-01O, GMP-LB-5005-0000-01F, GMP-LB-5005-0000-01O, GMP-LB-5006-0000-01F, GMP-LB-5006-0000-01O, GMP-LB-5007-0000-01F, GMP-LB-5007-0000-01O, GMP-LB-5008-0000-01F, GMP-LB-5008-0000-01O, GMP-LB-5009-0000-01F, GMP-LB-5009-0000-01O, GMP-LB-5010-0000-01F, GMP-LB-5010-0000-01O, and GMP-AE-5010-0000-01. According to the Chain-of-Custody record, these samples were collected on 6/25/01.

Noncorrectable Deficiencies

1. The laboratory analyzed more than 10 samples between calibration verification standards for the methylmercury sequences analyzed on 8/8/01 and 9/4/01. According to Battelle Method MSL-I-015-05 (Table 1), methylmercury calibration verification standards must be analyzed every 10 samples. The associated project samples were bracketed by QC-compliant verification standards; therefore, qualification of data was not warranted due to this issue.
2. The laboratory did not perform serial dilution analyses in association with the ICP samples analyzed on 9/20/01, 9/25/01, 11/10/01, 11/11/01, and 11/12/01. According to Battelle-MSL Method MSL-I-027-03 (Section 7.2.1), a serial dilution analysis must be performed with each batch of samples. The Environmental Standards data reviewer was

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① Not relevant to Swallow data packages. BL 5-31-02

unable to assess chemical or physical interferences that would be demonstrated by serial dilution results. *Serial dilutions were run if instrument problem(s) were suspected; serial dilutions, if any, were identified with L in sample ID.*

3. The temperatures of the coolers received by the laboratory on 6/22/01 were 14.5°C and 8.3°C. In addition, laboratory comments on the Chain-of-Custody records indicated that the samples received on 6/29/01 were frozen. According to the QAPP (Worksheet #22a), the cooler temperature for tissue samples must be < 6°C and the samples must be visually inspected upon receipt to determine if the samples are frozen. Data were not qualified due to this deficiency.

L in sample ID. sup. will be reviewed and modified to account describe this procedure

Comments

1. The laboratory reported all observed detections as positive results. Battelle project management indicated to the Environmental Standards data reviewer that this reporting convention was consistent with project requirements. US EPA reporting conventions typically dictate that results with concentrations less than the MDL or the instrument detection limit (IDL) are reported as "not-detected" results. As part of this Tier II review, the Environmental Standards data reviewer did not alter the laboratory-reported results. The impact of this reporting issue on data quality is addressed in the Inorganic Data Qualifiers section.
2. Samples DYP-AE-5001-0000-01, DYP-AE-5002-0000-01, and DYP-AE-5003-0000-01 were reported with 4000-series ID numbers on the data tables. The 5000-series ID numbers were used to refer to these samples in this QA review. As instructed by Battelle personnel, the Environmental Standards data reviewer did not edit the sample identifications on the electronic data deliverables or data tables. D
3. The laboratory noted on the Chain-of-Custody record that the samples received on 6/26/01 were mislabeled with 4000-series ID numbers and that the samples should have been labeled with 5000-series IDs. The 5000-series IDs were used to refer to the samples in question in this QA review. As instructed by Battelle personnel, the Environmental Standards data reviewer did not edit the sample identifications on the electronic data deliverables or data tables.

With respect to data usability, the principal areas of concern are blank contamination, laboratory and field duplicate imprecision, low and high MS/MSD recoveries, MS/MSD imprecision, SRM imprecision, low and high blank spike recoveries, and results below the MDL. Based on a rigorous review of the data provided, the following inorganic and wet chemistry data qualifiers are offered. The following data usability issues represent an interpretation of the QC results obtained for the project samples. Quite often, data qualifications address issues relating to sample matrix problems. Similarly, the data validation guidelines routinely specify areas of the data that require qualification, yet the methods used for analysis may not require corrective action by the laboratory. Accordingly, the following data usability issues should not be construed as an indication of laboratory performance.

0 Not relevant to swallow data packages. BL 5-31-02

Inorganic Data Qualifiers

Due to the trace-level presence of the following compounds in the associated method blanks and/or calibration blanks, the reported positive results for the following compounds in the samples listed below should be considered "not-detected" and have been flagged "U" on the data tables. Furthermore, results that were reported below the sample specific detection limits were replaced with the detection limit and the appropriate "U" qualifier. It should be noted that sample weights were taken into consideration when evaluating blank contamination.

Analyte	Samples With Positive Results Qualified as "Not-Detected" ("U")
aluminum	GMP-OF-5001-0000-01, RAB-CF-5004-0000-01, CMS-CF-4003-0000-01, LPX-CF-4004-0000-01, all fish samples except LPX-WS-4001-0000-01, LPX-WS-4002-0000-01, LPX-WS-4005-0000-01, LPX-WS-4007-0000-01, LPX-WS-4008-0000-01, LPX-WS-4009-0000-01, LPX-AE-4004-0000-01, LPX-LB-4006-0000-01F, LPX-LB-4008-0000-01O, LPX-DU-062101-0000-DF, LPX-DU-062101-0000-DQ, GMP-WS-5001-0000-01, GMP-WS-5002-0000-01, GMP-WS-5003-0000-01, GMP-WS-5004-0000-01, GMP-WS-5005-0000-01, GMP-WS-5006-0000-01, GMP-WS-5007-0000-01, GMP-WS-5008-0000-01, GMP-WS-5009-0000-01, GMP-WS-5010-0000-01, GMP-AE-5001-0000-01, GMP-AE-5002-0000-01, GMP-AE-5003-0000-01, GMP-AE-5004-0000-01, GMP-AE-5005-0000-01, and GMP-AE-5006-0000-01
arsenic	All fish samples, except LPX-WS-4009-0000-01O All crayfish samples
antimony	GMP-OF-5001-0000-01, RAB-CF-5004-0000-01, CMS-CF-4003-0000-01, LPX-CF-4004-0000-01, all fish samples except LPX-WS-4001-0000-01, LPX-WS-4002-0000-01, LPX-WS-4005-0000-01, LPX-WS-4007-0000-01, LPX-WS-4008-0000-01, LPX-WS-4009-0000-01, LPX-AE-4004-0000-01, LPX-LB-4006-0000-01F, LPX-LB-4008-0000-01O, LPX-DU-062101-0000-DF, LPX-DU-062101-0000-DQ, GMP-WS-5001-0000-01, GMP-WS-5002-0000-01, GMP-WS-5003-0000-01, GMP-WS-5004-0000-01, GMP-WS-5005-0000-01, GMP-WS-5006-0000-01, GMP-WS-5007-0000-01, GMP-WS-5008-0000-01, GMP-WS-5009-0000-01, GMP-WS-5010-0000-01, GMP-AE-5001-0000-01, GMP-AE-5002-0000-01, GMP-AE-5003-0000-01, GMP-AE-5004-0000-01, GMP-AE-5005-0000-01, and GMP-AE-5006-0000-01
barium	LPX-LB-4006-0000-01F, MAP-LB-4002-0000-01F, MAP-LB-4003-0000-01F, GMP-LB-5002-0000-01F, GMP-LB-5003-0000-01F, GMP-LB-5005-0000-01F, GMP-LB-5006-0000-01F, GMP-LB-5007-0000-01F, GMP-LB-5010-0000-01F, LPX-LB-4009-0000-01F, RAB-LB-5001-0000-01F, RAB-LB-5003-0000-01F, and RAB-LB-5004-0000-01F

① Not relevant to swallowed data packages. R 5-31-02

Samples With Positive Results Qualified as "Not-Detected" ("U")

chromite 

APC-WS-4004-0000-01, APC-WS-4004-0000-01, APC-WS-4004-0000-01,
LPX-WS-4004-0000-01, LPX-DU-062101-A, LPX-AE-4001-0000-01,
LPX-AE-4002-0000-01, LPX-AE-4003-0000-01, GMP-LB-5002-0000-01F,
GMP-LB-5003-0000-01F, GMP-LB-5003-0000-10, GMP-LB-5004-0000-01F,
GMP-LB-5004-0000-010, GMP-LB-5005-0000-01F, GMP-LB-5005-0000-010,
GMP-LB-5006-0000-01F, GMP-LB-5006-0000-010, GMP-LB-5007-0000-01F,
LPX-AE-4005-0000-01, LPX-DU-062101-B, LPX-AE-4006-0000-01,
LPX-AE-4007-0000-01, LPX-AE-4008-0000-01, LPX-AE-4009-0000-01,
LPX-AE-4010-0000-01, LPX-LB-4001-0000-01F, LPX-LB-4001-0000-010,
LPX-LB-4002-0000-01F, LPX-LB-4002-0000-010, LPX-LB-4003-0000-01F,
LPX-LB-4004-0000-01F, LPX-LB-4004-0000-010, LPX-DU-062101-0000-CF,
LPX-DU-062101-0000-CO, LPX-LB-4005-0000-01F, LPX-LB-4005-0000-010,
LPX-LB-4006-0000-01F, LPX-LB-4006-0000-010, LPX-LB-4007-0000-01F,
LPX-LB-4007-0000-010, LPX-LB-4008-0000-01F, LPX-DU-062101-0000-DF,
GMP-WS-5003-0000-01, GMP-WS-5005-0000-01, GMP-WS-5008-0000-01,
GMP-WS-5009-0000-01, GMP-AE-5001-0000-01, GMP-AE-5002-0000-01,
GMP-AE-5003-0000-01, GMP-AE-5006-0000-01, GMP-AE-5007-0000-01,
GMP-AE-5008-0000-01, GMP-AE-5009-0000-01, GMP-LB-5001-0000-01F,
GMP-LB-5007-0000-010, GMP-LB-5008-0000-01F, GMP-LB-5008-0000-010,
GMP-LB-5009-0000-01F, RAB-AE-5004-0000-01, RAB-AE-5005-0000-01,
MAP-LB-4002-0000-01F, RAB-AE-5006-0000-01, GMP-CF-5001-0000-01,
RAB-CF-5004-0000-01, and LPX-CF-4004-0000-01

INDEX

GMP-5B-5003-0000-01F, RA5-12B-5003-0000-01F, RA5-12B-5004-0000-01F

Analyte

Samples With Positive Results Qualified as "Not-Detected" ("U")

lead

APC-AE-4008-0000-01, APC-WS-4002-0000-01, APC-WS-4003-0000-01, APC-WS-4004-0000-01, APC-WS-4007-0000-01, GMP-LB-5001-0000-01F, GMP-LB-5002-0000-01F, GMP-LB-5003-0000-01F, GMP-LB-5004-0000-01F, GMP-LB-5006-0000-01F, GMP-LB-5007-0000-01F, GMP-LB-5008-0000-01F, GMP-LB-5009-0000-01F, GMP-LB-5010-0000-01F, LPX-LB-4009-0000-01F, RAB-LB-5001-0000-01F, RAB-LB-5002-0000-01F, RAB-LB-5003-0000-01F, RAB-LB-5003-0000-01O, RAB-LB-5004-0000-01F, MAP-LB-4002-0000-01F, MAP-LB-4003-0000-01F, RAB-AE-5006-0000-01, and GMP-LB-5005-0000-01F

selenium

GMP-LB-5001-0000-01F, GMP-LB-5002-0000-01F, GMP-LB-5003-0000-01F, GMP-LB-5004-0000-01F, GMP-LB-5005-0000-01F, GMP-LB-5006-0000-01F, GMP-LB-5007-0000-01F, GMP-LB-5008-0000-01F, GMP-LB-5009-0000-01F, GMP-LB-5010-0000-01F, LPX-LB-4009-0000-01F, RAB-LB-5003-0000-01F, and MAP-LB-4003-0000-01F

LPX-LB-4008-0000-01F, LPX-LB-4009-0000-01O, LPX-DU-062101-0000-DF, GMP-WS-5001-0000-01, GMP-WS-5002-0000-01, GMP-WS-5003-0000-01, GMP-WS-5004-0000-01, GMP-WS-5005-0000-01, GMP-WS-5006-0000-01, GMP-WS-5007-0000-01, GMP-WS-5008-0000-01, GMP-WS-5009-0000-01, GMP-WS-5010-0000-01, GMP-AE-5001-0000-01, GMP-AE-5002-0000-01, GMP-AE-5003-0000-01, GMP-AE-5004-0000-01, GMP-AE-5005-0000-01, GMP-AE-5006-0000-01, RAB-LB-5004-0000-01O, RAB-AE-5004-0000-01, RAB-AE-5005-0000-01, MAP-LB-4001-0000-01F, MAP-LB-4001-0000-01O, MAP-LB-4002-0000-01F, MAP-LB-4002-0000-01O, MAP-LB-4003-0000-01F, MAP-LB-4003-0000-01O, RAB-BB-5003-0000-01, RAB-AE-5006-0000-01, DYP-AE-5001-0000-01, DYP-AE-5002-0000-01, DYP-AE-5003-0000-01, GMP-LB-5003-0000-01F, GMP-LB-5006-0000-01F, and GMP-LB-5007-0000-01F

cadmium

LPX-LB-4001-0000-01F, LPX-LB-4002-0000-01F, LPX-LB-4003-0000-01F, LPX-LB-4004-0000-01F, LPX-DU-062101-0000-DF, LPX-LB-4005-0000-01F, LPX-LB-4006-0000-01F, LPX-LB-4007-0000-01F, GMP-LB-5001-0000-01F, GMP-LB-5002-0000-01F, GMP-LB-5003-0000-01F, GMP-LB-5004-0000-01F, GMP-LB-5005-0000-01F, GMP-LB-5006-0000-01F, GMP-LB-5007-0000-01F, GMP-LB-5008-0000-01F, GMP-LB-5009-0000-01F, LPX-LB-4009-0000-01F, RAB-LB-5001-0000-01F, RAB-LB-5002-0000-01F, MAP-LB-4001-0000-01F, and MAP-LB-4003-0000-01F

Analyte

Samples With Positive Results Qualified as "Not-Detected" ("U")

mercury

LPX-AE-4007-0000-01, LPX-AE-4008-0000-01, LPX-AE-4009-0000-01,
LPX-AE-4010-0000-01, LPX-LB-4001-0000-01F, LPX-LB-4001-0000-01O,
LPX-LB-4002-0000-01F, LPX-LB-4002-0000-01O, LPX-LB-4003-0000-01F,
LPX-LB-4003-0000-01O, LPX-LB-4004-0000-01F, LPX-LB-4004-0000-01O,
LPX-DU-062101-0000-CF, LPX-DU-062101-0000-CO, LPX-LB-4005-0000-01F,
LPX-LB-4005-0000-01O, LPX-LB-4006-0000-01F, LPX-LB-4006-0000-01O,
LPX-LB-4007-0000-01F, LPX-LB-4007-0000-01O, GMP-AE-5002-0000-01,
GMP-AE-5004-0000-01, GMP-AE-5005-0000-01, and GMP-AE-5006-0000-01

methylodentum

APC-AE-4001-0000-01, APC-AE-4002-0000-01, APC-AE-4003-0000-01,
APC-AE-4004-0000-01, APC-AE-4005-0000-01, APC-AE-4006-0000-01,
APC-AE-4007-0000-01, APC-AE-4008-0000-01, APC-AE-4009-0000-01,
APC-AE-4010-0000-01, APC-AE-4001-0000-01F, APC-AE-4002-0000-01F,
APC-AE-4003-0000-01F, APC-AE-4004-0000-01F, APC-AE-4005-0000-01F,
APC-AE-4006-0000-01F, APC-AE-4007-0000-01F, APC-AE-4008-0000-01F,
APC-AE-4009-0000-01F, APC-AE-4010-0000-01F, GMP-AE-5001-0000-01,
GMP-AE-5002-0000-01, GMP-AE-5003-0000-01, GMP-AE-5004-0000-01,
GMP-AE-5005-0000-01, GMP-AE-5006-0000-01, GMP-AE-5007-0000-01,
GMP-AE-5008-0000-01, GMP-AE-5009-0000-01, GMP-AE-5010-0000-01,
GMP-LB-5001-0000-01F, GMP-LB-5001-0000-01O, GMP-LB-5002-0000-01F,
GMP-LB-5002-0000-01O, GMP-LB-5003-0000-01F, GMP-LB-5003-0000-01O,
GMP-LB-5004-0000-01F, GMP-LB-5004-0000-01O, GMP-LB-5005-0000-01F,
GMP-LB-5005-0000-01O, GMP-LB-5006-0000-01F, GMP-LB-5006-0000-01O,
GMP-LB-5007-0000-01F, GMP-LB-5007-0000-01O, GMP-LB-5008-0000-01F,
GMP-LB-5008-0000-01O, GMP-LB-5009-0000-01F, GMP-LB-5009-0000-01O,
GMP-LB-5010-0000-01F, GMP-LB-5010-0000-01O, GMP-AE-5010-0000-01,
LPX-LB-4009-0000-01F, LPX-LB-4009-0000-01O, LPX-LB-4010-0000-01F,
LPX-LB-4010-0000-01O, RAB-LB-5001-0000-01F, RAB-LB-5002-0000-01F,
RAB-LB-5002-0000-01O, LPX-AE-4001-0000-01, LPX-AE-4002-0000-01,
LPX-AE-4003-0000-01, LPX-AE-4004-0000-01, LPX-AE-4005-0000-01,
LPX-AE-4006-0000-01, LPX-AE-4007-0000-01, LPX-AE-4008-0000-01,
LPX-AE-4009-0000-01, LPX-AE-4010-0000-01, LPX-LB-4001-0000-01F,
LPX-LB-4002-0000-01F, LPX-LB-4003-0000-01F, LPX-LB-4004-0000-01F,
LPX-DU-062101-0000-CF, LPX-LB-4005-0000-01F, LPX-LB-4006-0000-01F,
LPX-LB-4007-0000-01O, LPX-LB-4008-0000-01F, LPX-LB-4008-0000-01O,
LPX-DU-062101-0000-CF, LPX-DU-062101-0000-CO, RAB-BB-5001-0000-01,
RAB-BB-5002-0000-01, RAB-AE-5001-0000-01, RAB-AE-5002-0000-01,
RAB-AE-5003-0000-01, RAB-LB-5003-0000-01F, RAB-LB-5003-0000-01O,
RAB-LB-5004-0000-01F, RAB-LB-5004-0000-01O, GMP-AE-5001-0000-01,
GMP-AE-5002-0000-01, GMP-AE-5003-0000-01, GMP-AE-5004-0000-01,
GMP-AE-5005-0000-01, GMP-AE-5006-0000-01, GMP-AE-5007-0000-01,
GMP-AE-5008-0000-01, GMP-AE-5009-0000-01, GMP-AE-5010-0000-01,
GMP-AE-5001-0000-01, GMP-AE-5002-0000-01, GMP-AE-5003-0000-01,
GMP-AE-5004-0000-01, GMP-AE-5005-0000-01, GMP-AE-5006-0000-01,
GMP-AE-5007-0000-01, GMP-AE-5008-0000-01, GMP-AE-5009-0000-01,
GMP-AE-5010-0000-01, MAP-LB-4002-0000-01F, MAP-LB-4003-0000-01,
MAP-LB-4004-0000-01, MAP-LB-4005-0000-01, MAP-LB-4006-0000-01,
MAP-LB-4007-0000-01, MAP-LB-4008-0000-01, MAP-LB-4009-0000-01,
MAP-LB-4010-0000-01, and DYP-AE-5003-0000-01

Analyte

Samples With Positive Results Qualified as "Not-Detected" ("U")

thallium

APC-AE-4001-0000-01, APC-AE-4002-0000-01, APC-AE-4003-0000-01, APC-AE-4004-0000-01, APC-DU-062101-0000-B, APC-AE-4005-0000-01, APC-AE-4006-0000-01, APC-AE-4007-0000-01, APC-AE-4008-0000-01, APC-AE-4009-0000-01, APC-AE-4010-0000-01, APC-WS-4001-0000-01, APC-WS-4002-0000-01, APC-WS-4003-0000-01, APC-WS-4004-0000-01, APC-WS-4005-0000-01, APC-WS-4006-0000-01, APC-WS-4007-0000-01, APC-WS-4008-0000-01, APC-DU-062101-0000-4, APC-WS-4009-0000-01, APC-WS-4010-0000-01, LPX-WS-4001-0000-01, LPX-WS-4002-0000-01, LPX-WS-4003-0000-01, LPX-WS-4004-0000-01, LPX-WS-4005-0000-01, LPX-DU-062101-A, LPX-WS-4006-0000-01, LPX-WS-4007-0000-01, LPX-WS-4008-0000-01, LPX-WS-4009-0000-01, LPX-WS-4010-0000-01, LPX-AE-4001-0000-01, LPX-AE-4002-0000-01, LPX-AE-4003-0000-01, LPX-AE-4004-0000-01, LPX-AE-4005-0000-01, LPX-DU-062101-B, LPX-AE-4006-0000-01, GMP-AE-5010-0000-01, RAB-BB-5001-0000-01, RAB-AE-5003-0000-01, RAB-AE-5005-0000-01, MAP-LB-4002-0000-01F, MAP-LB-4003-0000-01F, RAB-BB-5003-0000-01, RAB-AE-5006-0000-01, DYP-AE-5001-0000-01, DYP-AE-5002-0000-01, DYP-AE-5003-0000-01, GMP-WS-5001-0000-01, GMP-WS-5006-0000-01, GMP-WS-5010-0000-01, CMS-CF-4006-0000-01, CMS-CF-4006-0000-01, and LPX-CF-4002-0000-01

silver

APC-DU-062101-0000-B, APC-AE-4005-0000-01, APC-AE-4007-0000-01, APC-AE-4008-0000-01, APC-AE-4010-0000-01, APC-WS-4001-0000-01, APC-WS-4002-0000-01, APC-WS-4003-0000-01, APC-WS-4004-0000-01, APC-WS-4005-0000-01, APC-WS-4006-0000-01, APC-WS-4007-0000-01, APC-WS-4008-0000-01, APC-WS-4009-0000-01, APC-WS-4010-0000-01, GMP-AE-5004-0000-01, GMP-AE-5005-0000-01, GMP-AE-5006-0000-01, GMP-AE-5007-0000-01, GMP-AE-5008-0000-01, GMP-AE-5009-0000-01, GMP-LB-5001-0000-01F, GMP-LB-5001-0000-01O, GMP-LB-5002-0000-01F, GMP-LB-5002-0000-01O, GMP-LB-5003-0000-01F, GMP-LB-5003-0000-01O, GMP-LB-5004-0000-01F, GMP-LB-5004-0000-01O, GMP-LB-5005-0000-01F, GMP-LB-5005-0000-01O, GMP-LB-5006-0000-01O, GMP-LB-5007-0000-01F, GMP-LB-5007-0000-01O, GMP-LB-5008-0000-01F, GMP-LB-5008-0000-01O, GMP-LB-5009-0000-01F, MAP-LB-4003-0000-01F, MAP-LB-4003-0000-01O, RAB-BB-5003-0000-01, RAB-AE-5006-0000-01, DYP-AE-5001-0000-01, DYP-AE-5002-0000-01, DYP-AE-5003-0000-01, RAB-BB-5003-0000-01, RAB-AE-5004-0000-01, RAB-AE-5005-0000-01, MAP-LB-4001-0000-01F, MAP-LB-4001-0000-01O, MAP-LB-4002-0000-01F, MAP-LB-4002-0000-01O, LPX-AE-4007-0000-01, LPX-AE-4008-0000-01, LPX-AE-4009-0000-01, LPX-LB-4001-0000-01F, LPX-LB-4001-0000-01O, LPX-LB-4002-0000-01F, LPX-LB-4002-0000-01O, LPX-LB-4003-0000-01F, LPX-LB-4003-0000-01O, LPX-LB-4004-0000-01F, LPX-LB-4004-0000-01O, LPX-DU-062101-0000-B, LPX-DU-062101-0000-CO, LPX-LB-4005-0000-01F, LPX-LB-4005-0000-01O, LPX-LB-4006-0000-01F, LPX-LB-4006-0000-01O, LPX-LB-4007-0000-01F, LPX-LB-4007-0000-01O, LPX-LB-4008-0000-01F, LPX-LB-4008-0000-01O, LPX-DU-062101-0000-BO, GMP-WS-5001-0000-01, GMP-WS-5002-0000-01, GMP-WS-5003-0000-01, GMP-WS-5004-0000-01, GMP-WS-5005-0000-01, GMP-WS-5006-0000-01, GMP-WS-5007-0000-01, GMP-WS-5008-0000-01, GMP-WS-5009-0000-01,

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① Not relevant to swallow data packages.

BL 5-31-02

Analyte Samples With Positive Results Qualified as "Not-Detected" ("U")

Silver

~~GMP-WS-5000-0000-01, GMP-AE-5002-0000-01, GMP-AE-5003-0000-01, A-TS-35-L, A-TS-48-L, A-TS-48-L, A-TS-57-L, G-TS-02-L, G-TS-07-L, G-TS-22-L, G-TS-29-L, L-TS-63-L, L-TS-70-L, and L-TS-89-L~~

vanadium

~~APC-AE-4002-0000-01, APC-AE-4003-0000-01, APC-AE-4004-0000-01, APC-DU-062001-0000-B, APC-AE-4006-0000-01, APC-AE-4007-0000-01, APC-AE-4008-0000-01, APC-AE-4009-0000-01, APC-AE-4010-0000-01, APC-WS-4002-0000-01, APC-WS-4003-0000-01, APC-WS-4005-0000-01, APC-WS-4006-0000-01, APC-WS-4007-0000-01, LPX-AE-4009-0000-01, APC-WS-4009-0000-01, LPX-AE-4007-0000-01, LPX-LB-4001-0000-01O, LPX-LB-4002-0000-01F, LPX-LB-4002-0000-01O, LPX-AE-4002-0000-01, LPX-AE-4003-0000-01, LPX-AE-4004-0000-01, LPX-AE-4005-0000-01, LPX-DU-062101-B, LPX-WS-4004-0000-01, LPX-WS-4005-0000-01, GMP-AE-5007-0000-01, GMP-AE-5008-0000-01, GMP-AE-5009-0000-01, GMP-LB-5001-0000-01O, GMP-LB-5002-0000-01F, GMP-LB-5002-0000-01O, GMP-LB-5003-0000-01O, GMP-LB-5004-0000-01F, GMP-LB-5004-0000-01O, GMP-LB-5005-0000-01F, GMP-LB-5005-0000-01O, GMP-LB-5006-0000-01O, RAB-CF-5004-0000-01, LPX-LB-4004-0000-01F, LPX-LB-4006-0000-01O, LPX-LB-4007-0000-01F, LPX-LB-4008-0000-01F, LPX-DU-062101-0000-DF, GMP-WS-5001-0000-01, GMP-WS-5003-0000-01, GMP-AE-5004-0000-01, GMP-AE-5006-0000-01, GMP-AE-5008-0000-01O, GMP-LB-5009-0000-01F, A-TS-35-L, A-TS-48-L, A-TS-49-L, G-TS-04-L, G-TS-29-L, L-TS-63-L, L-TS-70-L, L-TS-89-L, and A-TS-57-L~~

zinc

~~RAB-LB-5004-0000-01O, RAB-AE-5004-0000-01, RAB-AE-5006-0000-01, MAP-LB-4001-0000-01F, MAP-LB-4001-0000-01O, MAP-LB-4002-0000-01F, MAP-LB-4002-0000-01O, MAP-LB-4003-0000-01F, MAP-LB-4003-0000-01O, RAB-BB-5003-0000-01, RAB-AE-5006-0000-01, GMP-AE-5001-0000-01, GMP-AE-5002-0000-01, and DYP-AE-5003-0000-01~~

aluminum, cobalt, nickel,
arsenic, antimony,
barium, thallium, and lead

All tissue samples

chromium, selenium, and
cadmium

All tissue samples except A-TS-57-L

The detection limits for the following analytes in the samples listed below may be higher than reported, and the "not-detected" results have been flagged "UJ" on the data tables. In addition, any reported positive results for these analytes in the samples listed below should be considered estimated and have been flagged "J" (unless previously flagged "U") on the data tables. High %Ds (>25%), coupled with a bias towards lower recoveries, were obtained between the observed and true concentrations of these analytes in the associated SRM analyses.

Samples With Qualified Detection Limits ("UJ")
or Estimated Positive Results ("J")

Analyte

aluminum

APC-AE-4001-0000-01, APC-AE-4002-0000-01, APC-AE-4003-0000-01, APC-AE-4004-0000-01, APC-AE-4005-0000-01, APC-AE-4006-0000-01, APC-AE-4007-0000-01, APC-AE-4008-0000-01, APC-AE-4009-0000-01, APC-AE-4010-0000-01, APC-WS-4001-0000-01, APC-WS-4002-0000-01, APC-WS-4003-0000-01, APC-WS-4004-0000-01, APC-WS-4005-0000-01, APC-WS-4006-0000-01, APC-WS-4007-0000-01, APC-WS-4008-0000-01, APC-WS-4009-0000-01, APC-WS-4010-0000-01, all grayfish samples,

selenium

LPX-AE-4007-0000-01, LPX-AE-4008-0000-01, LPX-AE-4009-0000-01, LPX-AE-4010-0000-01, LPX-LB-4001-0000-01F, LPX-LB-4001-0000-01O, LPX-LB-4002-0000-01F, LPX-LB-4002-0000-01O, LPX-LB-4003-0000-01F, LPX-LB-4003-0000-01O, LPX-LB-4004-0000-01F, LPX-LB-4004-0000-01O, LPX-DU-062101-0000-CF, LPX-DU-062101-0000-CO, LPX-LB-4005-0000-01F, LPX-LB-4005-0000-01O, LPX-LB-4006-0000-01F, LPX-LB-4006-0000-01O, LPX-LB-4007-0000-01F, LPX-LB-4007-0000-01O, LPX-LB-4008-0000-01F, LPX-LB-4008-0000-01O, LPX-DU-062101-0000-DF, LPX-DU-062101-0000-DO, GMP-WS-5001-0000-01, GMP-WS-5002-0000-01, GMP-WS-5003-0000-01, GMP-WS-5004-0000-01, GMP-WS-5005-0000-01, GMP-WS-5006-0000-01, GMP-WS-5007-0000-01, GMP-WS-5008-0000-01, GMP-WS-5009-0000-01, GMP-WS-5010-0000-01, GMP-AE-5001-0000-01, GMP-AE-5002-0000-01, GMP-AE-5003-0000-01, GMP-AE-5004-0000-01, GMP-AE-5005-0000-01, GMP-AE-5006-0000-01, GMP-LB-5009-0000-01O, GMP-LB-5010-0000-01F, GMP-LB-5010-0000-01O, GMP-AE-5010-0000-01, LPX-LB-4009-0000-01F, LPX-LB-4009-0000-01O, LPX-4010-0000-01F, LPX-4010-0000-01O, RAB-LB-5001-0000-01F, RAB-LB-5001-0000-01O, RAB-LB-5002-0000-01F, RAB-LB-5002-0000-01O, RAB-BE-5001-0000-01, RAB-BE-5002-0000-01, RAB-AE-5001-0000-01, RAB-AE-5002-0000-01, RAB-AE-5003-0000-01, RAB-LB-5003-0000-01F, RAB-LB-5003-0000-01O, and RAB-LB-5004-0000-01F

The reported positive results for the following analytes in the samples listed below should be considered estimated and have been flagged "J" (unless previously flagged "U") on the data tables. High %Ds (>25%), couple with a bias towards higher recoveries, were obtained between the observed and true concentrations of these analytes in the associated SRM analyses.

Analyte(s)	Samples With Estimated Positive Results ("J")
aluminum, selenium, and lead	~~All tissue samples and all worm samples~~ ① APC-WS-4009-0000-01, APC-WS-4010-0000-01, LPX-WS-4001-0000-01, LPX-WS-4002-0000-01, LPX-WS-4003-0000-01, LPX-WS-4004-0000-01, LPX-WS-4005-0000-01, LPX-DU-062101-A, LPX-WS-4006-0000-01, LPX-WS-4007-0000-01, LPX-WS-4008-0000-01, LPX-WS-4009-0000-01, LPX-WS-4010-0000-01, LPX-AE-4001-0000-01, LPX-AE-4002-0000-01, LPX-AE-4003-0000-01, LPX-AE-4004-0000-01, LPX-AE-4005-0000-01, LPX-DU-062101-B, LPX-AE-4006-0000-01, GMP-LB-5010-0000-01F, LMP-LB-4009-0000-01F, RAB-LB-5001-0000-01F, RAB-LB-5002-0000-01F, RAB-LB-5003-0000-01F, RAB-LB-5004-0000-01F, GMP-LB-5009-0000-01O, GMP-LB-5010-0000-01O, GMP-AE-5010-0000-01, LPX-LB-4009-0000-01O, LPX-LB-4010-0000-01F, LPX-LB-4010-0000-01O, RAB-LB-5001-0000-01O, RAB-LB-5002-0000-01O, RAB-BB-5001-0000-01, RAB-BB-5002-0000-01, RAB-AE-5001-0000-01, RAB-AE-5002-0000-01, RAB-AE-5003-0000-01, and RAB-LB-5003-0000-01O
lead, iron, and zinc	LPX-AE-4007-0000-01, LPX-AE-4008-0000-01, LPX-AE-4009-0000-01, LPX-AE-4010-0000-01, LPX-LB-4001-0000-01F, LPX-LB-4001-0000-01O, LPX-LB-4002-0000-01F, LPX-LB-4002-0000-01O, LPX-LB-4003-0000-01F, LPX-LB-4003-0000-01O, LPX-LB-4004-0000-01F, LPX-LB-4004-0000-01O, LPX-LB-4005-0000-01F, LPX-LB-4005-0000-01O, LPX-LB-4006-0000-01F, LPX-LB-4006-0000-01O, LPX-LB-4007-0000-01F, and LPX-LB-4007-0000-01O
aluminum and chromium	All tissue samples

The detection limits for the following analytes in the samples listed below may be higher than reported, and the "not-detected" results have been flagged "UJ" on the data tables. In addition, any reported positive results for these analytes in the samples listed below should be considered estimated and have been flagged "J" (unless previously flagged "U") on the data tables. Low recoveries (<70%) and/or high RPDs (>30%) were observed for these analytes in the associated MS/MSD analyses.

Analyte

manganese

Samples With Biased Detection Limits ("UJ")
or Estimated Positive Results ("J")

APC-AE-4001-0000-01, APC-AE-4002-0000-01, APC-AE-4003-0000-01,
APC-AE-4004-0000-01, APC-DU-062001-0000-B, APC-AE-4005-0000-01,
APC-AE-4006-0000-01, APC-AE-4008-0000-01, APC-AE-4009-0000-01,
APC-AE-4010-0000-01, APC-WS-4001-0000-01, APC-WS-4002-0000-01,
APC-WS-4003-0000-01, APC-WS-4004-0000-01, APC-WS-4005-0000-01,
APC-WS-4006-0000-01, APC-WS-4007-0000-01, APC-WS-4008-0000-01,
and APC-DU-062101-0000-4

GMP-AE-5001-0000-01, GMP-AE-5002-0000-01, GMP-AE-5009-0000-01,
GMP-LB-5001-0000-01F, GMP-LB-5001-0000-01O, GMP-LB-5002-0000-01F,
GMP-LB-5002-0000-01O, GMP-LB-5003-0000-01F, GMP-LB-5003-0000-01O,
GMP-LB-5004-0000-01F, GMP-LB-5004-0000-01O, GMP-LB-5005-0000-01O,
GMP-LB-5007-0000-01F, GMP-LB-5007-0000-01O, GMP-LB-5008-0000-01F,
GMP-LB-5008-0000-01O, GMP-LB-5009-0000-01F, GMP-LB-5009-0000-01O,
GMP-LB-5010-0000-01F, GMP-LB-5010-0000-01O, GMP-AE-5010-0000-01,
LPX-LB-4001-0000-01F, LPX-LB-4001-0000-01O, LPX-LB-4010-0000-01F,
LPX-LB-4010-0000-01O, RAB-LB-5001-0000-01F, RAB-LB-5001-0000-01O,
RAB-LB-5002-0000-01F, RAB-LB-5002-0000-01O, RAB-BB-5002-0000-01,
RAB-AE-5001-0000-01, RAB-AE-5002-0000-01, RAB-AE-5003-0000-01,
RAB-LB-5003-0000-01F, and RAB-LB-5004-0000-01F

zinc

LPX-AE-4007-0000-01, LPX-AE-4008-0000-01, LPX-AE-4009-0000-01,
LPX-AE-4010-0000-01, LPX-LB-4001-0000-01F, LPX-LB-4001-0000-01O,
LPX-LB-4002-0000-01F, LPX-LB-4002-0000-01O, LPX-LB-4003-0000-01F,
LPX-LB-4003-0000-01O, LPX-LB-4004-0000-01F, LPX-LB-4004-0000-01O,
LPX-DU-062101-0000-CF, LPX-DU-062101-0000-CO, LPX-LB-4005-0000-01F,
LPX-LB-4005-0000-01O, LPX-LB-4006-0000-01F, LPX-LB-4006-0000-01O,
LPX-LB-4007-0000-01F, and LPX-LB-4007-0000-01O

beryllium,
aluminum,
vanadium,
barium,
chromium,
and selenium

All relevant samples (1)

① Not relevant to swallow data packages. BL 5-31-02

Samples With Biased Detection Limits ("U")
or Estimated Positive Results ("J")

Analyte

selenium

LPX-LB-4008-0000-01F, LPX-LB-4008-0000-01O, LPX-DU-062101-0000-DF,
LPX-DU-062101-0000-DO, GMP-WS-5001-0000-01, GMP-WS-5003-0000-01,
GMP-WS-5004-0000-01, GMP-WS-5005-0000-01, GMP-WS-5006-0000-01,
GMP-WS-5007-0000-01, GMP-WS-5008-0000-01, GMP-WS-5009-0000-01,
GMP-WS-5010-0000-01, GMP-AE-5002-0000-01, GMP-AE-5003-0000-01,
GMP-AE-5004-0000-01, GMP-AE-5005-0000-01, GMP-AE-5006-0000-01,
RAB-LB-5004-0000-01O, RAB-AE-5004-0000-01, RAB-AE-5005-0000-01,
MAP-LB-4001-0000-01F, MAP-LB-4001-0000-01O, MAP-LB-4002-0000-01F,
MAP-LB-4002-0000-01O, MAP-LB-4003-0000-01F, MAP-LB-4003-0000-01O,
RAB-BB-5003-0000-01, RAB-AE-5006-0000-01, DYP-AE-5001-0000-01,
DYP-AE-5002-0000-01, and DYP-AE-5003-0000-01

vanadium

GMP-AE-5007-0000-01, GMP-AE-5008-0000-01, GMP-AE-5009-0000-01,
GMP-LB-5001-0000-01F, GMP-LB-5001-0000-01O, GMP-LB-5002-0000-01F,
GMP-LB-5002-0000-01O, GMP-LB-5003-0000-01O, GMP-LB-5004-0000-01F,
GMP-LB-5004-0000-01O, GMP-LB-5006-0000-01O, GMP-LB-5007-0000-01F,
GMP-LB-5007-0000-01O, GMP-LB-5008-0000-01F, GMP-LB-5008-0000-01O,
GMP-LB-5009-0000-01F, GMP-LB-5009-0000-01O, GMP-LB-5010-0000-01F,
GMP-LB-5010-0000-01O, GMP-AE-5010-0000-01, LPX-LB-4009-0000-01F,
LPX-LB-4009-0000-01O, LPX-LB-4010-0000-01F, LPX-LB-4010-0000-01O,
RAB-LB-5001-0000-01F, RAB-LB-5001-0000-01O, RAB-LB-5002-0000-01F,
RAB-LB-5002-0000-01O, RAB-AE-5001-0000-01, RAB-BB-5002-0000-01,
RAB-AE-5001-0000-01, RAB-AE-5002-0000-01, RAB-AE-5003-0000-01,
RAB-LB-5003-0000-01O, and RAB-LB-5004-0000-01F

The reported positive results for the following analytes in the samples listed below should be considered estimated and have been flagged "J" (unless previously flagged "U") on the data tables. High recoveries (>130%) and/or high RPDs (>30%) were observed for these analytes in the associated MS/MSD analyses.

Analyte

Samples With Estimated Positive Results ("J")

nickel

GMP-AE-5007-0000-01, GMP-AE-5008-0000-01, GMP-AE-5009-0000-01,
GMP-LB-5001-0000-01F, GMP-LB-5001-0000-01O, GMP-LB-5002-0000-01F,
GMP-LB-5002-0000-01O, GMP-LB-5003-0000-01F, GMP-LB-5004-0000-01F,
GMP-LB-5004-0000-01O, GMP-LB-5007-0000-01F, GMP-LB-5007-0000-01O,
GMP-LB-5008-0000-01F, GMP-LB-5008-0000-01O, and GMP-LB-5009-0000-01F

copper

LPX-AE-4007-0000-01, LPX-AE-4008-0000-01, LPX-AE-4009-0000-01,
LPX-AE-4010-0000-01, LPX-LB-4001-0000-01F, LPX-LB-4001-0000-01O,
LPX-LB-4002-0000-01F, LPX-LB-4002-0000-01O, LPX-LB-4003-0000-01F, LPX-LB-
4003-0000-01O, LPX-LB-4004-0000-01F, LPX-LB-4004-0000-01O, LPX-DU-062101-
0000-CF, LPX-DU-062101-0000-CO, LPX-LB-4005-0000-01F,
LPX-LB-4005-0000-01O, LPX-LB-4006-0000-01F, LPX-LB-4006-0000-01O, LPX-LB-
4007-0000-01F, and LPX-LB-4007-0000-01O

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① Not relevant to summary data packages. BL 5-31-02

Samples With Estimated Positive Results (%)

manganese

zinc

The detection limits for silver and/or mercury in the following samples may be higher than reported, and the "not-detected" results have been flagged "UJ" on the data tables. In addition, any reported positive results for silver and/or mercury in these samples should be considered estimated and have been flagged "J" (unless previously flagged "U") on the data tables. Low recoveries (<70%) were observed for silver in the associated blank spike analyses.

Samples With Qualified Detection Limits ("UJ")
or Estimated Positive Results ("J")

Analyte(s)

silver

LPX-AE-4007-0000-01, LPX-AE-4008-0000-01, LPX-AE-4009-0000-01,
LPX-AE-4010-0000-01, LPX-LB-4001-0000-01F, LPX-LB-4001-0000-01O,
LPX-LB-4002-0000-01F, LPX-LB-4002-0000-01O, LPX-LB-4003-0000-01F,
LPX-LB-4003-0000-01O, LPX-LB-4004-0000-01F, LPX-LB-4004-0000-01O,
LPX-LB-4005-0000-01F, LPX-LB-4005-0000-01O, LPX-LB-4006-0000-01F,
LPX-LB-4006-0000-01O, LPX-LB-4007-0000-01F, and LPX-LB-4007-0000-01O

silver and
mercury

GMP-AE-5007-0000-01, GMP-AE-5008-0000-01, GMP-AE-5009-0000-01,
GMP-LB-5001-0000-01F, GMP-LB-5001-0000-01O, GMP-LB-5002-0000-01F,
GMP-LB-5002-0000-01O, GMP-LB-5003-0000-01F, GMP-LB-5003-0000-01O,
GMP-LB-5004-0000-01F, GMP-LB-5004-0000-01O, GMP-LB-5005-0000-01F,
GMP-LB-5005-0000-01O, GMP-LB-5006-0000-01F, GMP-LB-5006-0000-01O,
GMP-LB-5007-0000-01F, GMP-LB-5007-0000-01O, GMP-LB-5008-0000-01F,
GMP-LB-5008-0000-01O, and GMP-LB-5009-0000-01F

The reported positive results for the following analytes in the samples listed below
should be considered estimated and have been flagged "J" on the data tables. Large
discrepancies were obtained for these analytes in the associated laboratory duplicate
analyses.

Analyte

Sample(s) With Estimated Positive Results ("J")

barium

All fish samples except LPX-LB-4004-0000-01O, LPX-LB-4006-0000-01F,
LPX-LB-4010-0000-01O, RAB-LB-5004-0000-01O, RAB-AE-5004-0000-01,
RAB-AE-5005-0000-01, MAP-LB-4001-0000-01F, MAP-LB-4001-0000-01O,
MAP-LB-4002-0000-01F, MAP-LB-4002-0000-01O, MAP-LB-4003-0000-01F,
MAP-LB-4003-0000-01O, RAB-BB-5003-0000-01, RAB-AE-5006-0000-01,
DYP-AE-5001-0000-01, DYP-AE-5002-0000-01, and DYP-AE-5003-0000-01

beryllium

All worm samples... ①

copper

APC-AE-4001-0000-01, APC-AE-4002-0000-01, APC-AE-4003-0000-01,
APC-AE-4004-0000-01, APC-DU-062001-0000-B, APC-AE-4005-0000-01,
APC-AE-4006-0000-01, APC-AE-4007-0000-01, APC-AE-4008-0000-01,
APC-AE-4009-0000-01, APC-AE-4010-0000-01, APC-WS-4001-0000-01,
APC-WS-4002-0000-01, APC-WS-4003-0000-01, APC-WS-4004-0000-01,
APC-WS-4005-0000-01, APC-WS-4006-0000-01, APC-WS-4007-0000-01,
APC-DU-062001-0000-B, LPX-LB-4003-0000-01F, LPX-DU-062101-0000-DF,
LPX-DU-062101-0000-DF, GMP-WS-5001-0000-01, GMP-WS-5002-0000-01,
GMP-WS-5003-0000-01, GMP-WS-5004-0000-01, GMP-WS-5005-0000-01,
GMP-WS-5006-0000-01, GMP-WS-5007-0000-01, GMP-WS-5008-0000-01,
GMP-WS-5009-0000-01, GMP-WS-5010-0000-01, GMP-AE-5001-0000-01,
GMP-AE-5002-0000-01, GMP-AE-5003-0000-01, GMP-AE-5004-0000-01,
GMP-AE-5005-0000-01, and GMP-AE-5006-0000-01

① Not relevant to swallow data packages.

BL 5-31-02

Analyte

Sample(s) With Estimated Positive Results ("J")

iron

All crayfish samples

lead

APC-AE-4001-0000-01, APC-AE-4002-0000-01, APC-AE-4003-0000-01, APC-AE-4004-0000-01, APC-DU-062001-0000-B, APC-AE-4005-0000-01, APC-AE-4006-0000-01, APC-AE-4007-0000-01, APC-AE-4008-0000-01, APC-AE-4009-0000-01, APC-AE-4010-0000-01, APC-WS-4001-0000-01, APC-WS-4002-0000-01, APC-WS-4003-0000-01, APC-WS-4004-0000-01, APC-WS-4005-0000-01, APC-WS-4006-0000-01, APC-WS-4007-0000-01, APC-WS-4008-0000-01, APC-WS-4009-0000-01, APC-WS-4010-0000-01, LPX-LB-4008-0000-01O

manganese

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zinc

LPX-AE-4007-0000-01, LPX-AE-4008-0000-01, LPX-AE-4009-0000-01, LPX-AE-4010-0000-01, LPX-LB-4001-0000-01F, LPX-LB-4001-0000-01O, LPX-LB-4002-0000-01F, LPX-LB-4002-0000-01O, LPX-LB-4003-0000-01F, LPX-LB-4003-0000-01O, LPX-DU-062101-0000-CF, LPX-DU-062101-0000-CC, LPX-LB-4005-0000-01F, LPX-LB-4005-0000-01O, LPX-LB-4006-0000-01F, LPX-LB-4006-0000-01O, LPX-LB-4007-0000-01F, LPX-LB-4007-0000-01O, GMP-AE-5007-0000-01, GMP-AE-5008-0000-01, GMP-AE-5009-0000-01, GMP-LB-5001-0000-01F, GMP-LB-5001-0000-01O, GMP-LB-5002-0000-01F, GMP-LB-5002-0000-01O, GMP-LB-5003-0000-01F, GMP-LB-5003-0000-01O, GMP-LB-5004-0000-01F, GMP-LB-5004-0000-01O, GMP-LB-5005-0000-01F, GMP-LB-5005-0000-01O, GMP-LB-5006-0000-01F, GMP-LB-5006-0000-01O, GMP-LB-5007-0000-01F, GMP-LB-5007-0000-01O, GMP-LB-5008-0000-01F, GMP-LB-5008-0000-01O, and GMP-LB-5009-0000-01F

- The reported positive results for zinc in all tissue samples should be considered estimated and have been flagged "J" (unless previously flagged "U") on the data tables. Low recoveries (<70%) were observed for these analytes in the associated MS/MSD analyses.
- The reported positive results for iron in all tissue samples should be considered estimated and have been flagged "J" on the data tables. High recoveries (>125%) were observed for these analytes in the associated blank spike analyses.
- Nine field duplicate pairs (sample APC-AE-4004-0000-01 and its field duplicate, sample APC-DU-062001-0000-B; sample APC-WS-4008-0000-01 and its field duplicate, sample APC-DU-062001-0000-4; sample LPX-WS-4005-0000-01 and its field duplicate, sample LPX-DU-062101-A; sample LPX-AE-4005-0000-01 and its field duplicate, sample LPX-DU-062101-B; sample LPX-LB-4004-0000-01F and its field duplicate, sample LPX-DU-062101-0000-CF; sample LPX-LB-4004-0000-01O and its field duplicate, sample LPX-DU-062101-0000-CO; sample LPX-LB-4008-0000-01F and its field duplicate sample LPX-DU-062101-0000-DF; sample LPX-LB-4008-0000-01O and its field duplicate sample LPX-DU-062101-0000-D2; and sample CMS-EVW-4001-0000-01 and its field duplicate, sample CMS-DU-072001-A) were submitted to the laboratory with this data set. Acceptable precision and sample representativeness were demonstrated by the reported positive results in these field QC samples with the following exceptions. The detection limits for the following analytes in the samples listed below may be higher than reported, and the "not-detected" results have been flagged "UJ" on the data tables. In addition, any reported positive results for these analytes in the samples listed below should be considered estimated and have been flagged "J" (unless previously flagged "U") on the data tables. Large discrepancies (RPD>40% when both results were $\geq 5 \times$ the MDL or difference $> 2 \times$ the MDL when one or both results was $< 5 \times$ the MDL) were observed between the results for these analytes in the field duplicate analyses. A complete comparison of the field duplicate results is included in Section 3.

Analyte(s)

Samples With Qualified Detection Limits ("UJ")
or Estimated Positive Results ("J")

methylmercury
and lead

LPX-LB-4004-0000-01O and LPX-DU-062101-0000-BO

aluminum,

LPX-LB-4008-0000-01F and LPX-DU-062101-0000-DF

copper,

manganese,

and zinc

- Based on standard project reporting requirements, all positive results reported with concentrations below the project-required quantitation limits have been flagged "J" (unless previously flagged "U") on the data tables.

① Not relevant to swallow data packages.

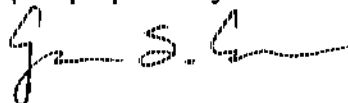
BL 5-31-02

Complete support documentation for this inorganic QA review is presented in Section 3 of this report. The cover sheet for this section is a checklist of all QA procedures required by the methods and examined in this data review.

B. Conclusions

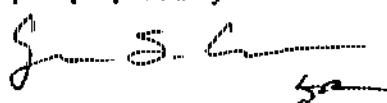
Overall, the data quality is satisfactory. Based on this QA review, several inorganic results were qualified due to blank contamination, laboratory and field duplicate imprecision, low and high MS/MSD recoveries, MS/MSD imprecision, SRM imprecision, low and high blank spike recoveries, and results below the MDL. Overall, the data are acceptable for use, provided the data user understands the limitations and qualifications stated in this QA review. The Laboratory Case Narratives and Chain-of-Custody Records are presented in Sections 4 and 5, respectively.

Report prepared by:



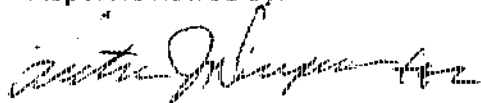
Glenn S. Esler
Quality Assurance Chemist

Report prepared by:



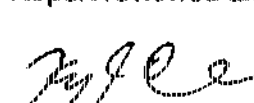
Thomas H. Weinmann
Quality Assurance Chemist

Report reviewed by:



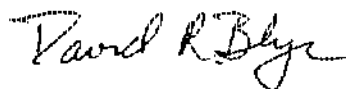
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