APPENDIX A

Field and Laboratory Documentation
Cornell-Dubilier Site
South Plainfield, NJ
April 1998

178384

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: CORNELL - DUBILIER
Project Number: 03347-142-001-2274-01
RFW Contact: SCOTT GRAHAM Phone:

No: 00615

SHEET NO. 1 OF 1

62397

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TAL Metal	Hg		
403	CO_2 BLANK -	Metals TISS. LAB	CO_2	6/18/97	1	32 oz. / 0°C	X			
404	CO_2 BLANK -	Hg	↓	↓	↓	↓		X		
405	CO_2 BLANK -	Metals		6/19/97			X			
406	CO_2 BLANK -	Hg	↓	↓	↓	↓		X		

6/23/97

Special Instructions:

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	[signature]	6/23/97	[signature]	6/23/97	[illegible]						

FORM #4

8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Carroll Dubilier
Project Number: 2-271
RFW Contact: Scott Grossman Phone: 321-4200 (108)

No: 05308

SHEET NO. 1 OF 2

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	BNA			
	C10371	T2-12-5	S	6-18-97	1	8oz glass/4°C	X			
	C10372	T2-7-1								
	C10373	T2-6-7								
	C10374	T2-2-1								
	C10375	T2-5-6								
	~~C10376~~	~~T2-~~								
	C10380*	T2-1-3								
	C10381	T1-1-4								
	C10382	T1-4-5								
	C10383	T1-7-2								
	C10384	T1-3-7								
	C10385	T1-5-6								
	C10386*	T1-10-2								
	C10387	T1-11-4								
	C10388	T1-14-3								
	C10389	T3-1-7								
	C10390	T3-1-13								
	C10391	T3-2-11								
	C10392	T3-3-10								
	C10393	T3-3-16								

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

* TAL/TCL

QC: None

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	Jennifer Rose	7/2/97									

FORM #4

8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 2-27
RFW Contact: Scott Grossman Phone: 321-4200 (908)

No: 05309

SHEET NO. 2 OF 2

Sample Identification / **Analyses Requested**

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	BNA			
	C10394	T3-4-6	S	6-18-97	1	8oz glass/4°C	X			
	C10395	T4-1-4	↓	↓	↓	↓	↓			
	C10396*	T4-1-10	↓	↓	↓	↓	↓			
	C10397	T4-2-19	↓	↓	↓	↓	↓			
	C10398	T4-3-3	↓	↓	↓	↓	↓			
	C10399	T4-4-1	↓	↓	↓	↓	↓			
	C10400	T4-5-6	↓	↓	↓	↓	↓			
X	#10485	Field Blank	S	6-18-97	1	[illegible]	X			

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

* MS/MSD

QC: Home

Cooler #9338

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	[illegible]	6/20/97									

FORM #4 8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 2-274
RFW Contact: [illegible] Phone: 321-[illegible] (908)

No: 05310

SHEET NO. 1 OF 2

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TAL			
	B10371	~~[illegible]~~ T2-12	S	6-15-97	1	[illegible]	X			
	B10372	T2-7 1								
	B10373	T2-6-7								
	B10374	T2-2-1								
	B10375	T2-5-6								
	B10380	T2-1 3								
	B10381	T1-1 4								
	B10382	T1-4-5 *								
	B10383	T1-7-2								
	B10384	T1-3-7								
	B10385	T1-5-6								
	B10386	T1-10-2								
	B10387	T1-11-9								
	B10388	T1-14 3								
	B10389	T3-1-7								
	B10390	T3-1-13 *								
	B10391	T3-2-11								
	B10392	T3-3-10								
	B10393	T3-3-16								
	B10394	T3-4-6								

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

* MS/MSD

Cooler #9347

QC Home

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	[illegible]	2/19									

FORM #4 8/94

* U.S. GPO 1994 382-015

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 2-274
RFW Contact: [illegible] Phone: 321-4[illegible] (4[illegible])

No: 05311

SHEET NO 2 OF 2

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TAL			
	B10395	T4-1-4 *	S	6-18-97	1	8oz glass/4°C	X			
	B10396	T4-1-10	↓	↓	↓	↓	↓			
	B10397	T4-2-19	↓	↓	↓	↓	↓			
	B10398	T4-3-3	↓	↓	↓	↓	↓			
	B10399	T4-4-1	↓	↓	↓	↓	↓			
	B10400	T4-5-6	↓	↓	↓	↓	↓			
	A10377	Field Blank	S	6-18-97	1	8oz glass/4°C	X			

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

QC: Home

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	Jennifer Royer	6/2/97									

FORM #4 8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Carroll Island
Project Number: ~~2274~~ @ 03347.142-001-2274-01
RFW Contact: [illegible] Phone: 321 (908) 6200

No: 05312

SHEET NO. 1 OF 1

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Grain Size
	A10371	T2 12 5	S	1-18-97	1	32 oz glass/4°C	X
	A10372	T2-7-1 @					
	A10373	T2-6-7 *					
	A10374	T2-2-1					
	A10375	T2-5-6					
	A10380	T2-1-3					
	A10381	T1-F4					
	A10382	T1-6-5					
	A10383	T1-7-2					
	A10384	T1-3-7					
	A10385	T1-5-6					
	A10386	T1-10-2					
	A10387	T1-11-9					
	A10388	T1-12-3					
	A10389	T3-1-7 *					
	A10390	T3-1 13					
	A10391	T3-2-11					

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

* - MS/MSD

Order # 4231

QC (PM)

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	Jennifer Rhyc	1/22/97									

FORM #4 8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2274-01
RFW Contact: Scott Grossman Phone: 321-4200 (905)

No: 05313

SHEET NO. 1 OF 1

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Grain Size			
	A10392	T [illegible]	S	6-18-97	1	32 oz glass/4°C	X			
	A10393	T3-3-16								
	A10394	T3-4-6								
	A10395	T4-1-4 ~~1~~ PD								
	A10396	T4-1-10								
	A10397	T4-2-19								
	A10398	T4-3-3								
	A10399	T4-4-1								
	A10400	T4-5-6								

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

QC. PD

Special Instructions:

~~+ - MS/MSD~~ PD

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analyses	Jennifer Royo	6/20/97									

FORM #4 8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: ~~2-2741~~ (PK) 03347-142-001-2274-01 No: 05314
RFW Contact: Scott Cussman Phone: 321-4200 (908)

SHEET NO 1 OF 2

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Pesticide	PCB		
	D10371	T2 12-5	S	6-18-97	1	5oz glass/4°C	X	X		
	D10372	T2 7-1								
	D10373	T2-6-7								
	D10374	T2-2-1								
	D10375*	T2-5-6								
	D10380	T2-1-3								
	D10381	T1-1-4								
	D10382	T1-4-5								
	D10383	T1-7-2								
	D10384	T1-3-7								
	D10385	T1-5-6								
	D10386	T1-10-2								
	D10387	T1-11-9								
	D10388*	T1-14-3								
	D10389	T3-1-7								
	D10390	T3-1-13								
	D10391	T3-2-11								
	D10392	T3-3-10								
	D10393	T3-3-16								
	D10394	T3-4-6								

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

*MS/MSD

QA (PK)

Coder # 009338

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	[signature]	6/20/97									

FORM #4 8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Carroll Dubuque
Project Number: 2 2741
RFW Contact: [illegible] Phone: 321-4733

No: 05315

SHEET NO 2 OF 2

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Pesticides	PCB		
	D12395	T4-1-4	S	6-18-97	1	8oz glass/4°C	X	X		
	D12396	T4-1-10	↓	↓	↓	↓	↓	↓		
	D12397*	T4-2-19								
	D12398	T4-3-3								
	D12399	T4-4-1								
	D12400	T4-5-6	↓	↓	↓	↓	↓	↓		
(FB) X	A10379	Field Blank	S	6/20/97	1	8oz glass/4°C	X	X		

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

QA - (FB)

* MS/MSD

Cooler # 009338

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	[signature]	6/20/97									

FORM #4 8/94

★ U.S GPO: 1994-383-015

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: ~~2-2774~~ 03347-142-001-2274-01
RFW Contact: [illegible] Phone: 321-4200 (908)

No: 05316

SHEET NO. 1 OF 2

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOA
	E10371	T2-12-5	S	6-15-97	1	4oz-unpk/4°C	X
	E10372	T2-7-1					
	E10373	T2-6-7					
	E10374	T2-2-1					
	E10375	T2-5-6					
	E10380	T2-1-3					
	E10381	T1-1-4					
	E10382	T1-4-5					
	E10383	T1-7-2					
	E10384	T1-3-7					
	E10385	T1-5-6					
	E10386	T1-10-2					
	E10387	T1-11-9					
	E10388	T1-14-3					
	E10389	T3-1-7					
	E10390	T3-1-13					
	E10391	T3-2-11					
	E10392	T3-3-10					
	E10393	T2-3-16					
	E10394	T3-4-6					

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

QA: (PW)

cooler # 717

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	[signature]	6/20/97									

FORM #4 8/94

* U.S. GPO: 1994-383-015

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 2-274
RFW Contact: Scott Crossman Phone: 321-4200

No: 05317

SHEET NO. 2 OF 2

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOA			
	E10395	T4-1-9	S	6-18-97	1	4oz sptal 4°C	X			
	E10396	T4-1-10	↓	↓	↓	↓	↓			
	E10397	T4 2-19	↓	↓	↓	↓	↓			
	E10398	T4-3-3	↓	↓	↓	↓	↓			
	E10399	T4-4-1	↓	↓	↓	↓	↓			
	E10400	T4-5-6	↓	↓	↓	↓	↓			

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	[signature]	6/20/97									

FORM #4 8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: ~~2-274~~ (PR) 03347-142-001-2274-01 No: 05319
RFW Contact: Scott Cussman Phone: 321-4200 (908)

SHEET NO 2 OF 2

Sample Identification **Analyses Requested**

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TOC			
	F10395	T4 1-4	S	6-18-97	1	8oz glass 4°C	X			
	F10396	T4-1-10	↓	↓	↓	↓	↓			
	F10397	T4-2-19	↓	↓	↓	↓	↓			
	F10398	T4-3-3	↓	↓	↓	↓	↓			
	F10399	T4-4-1	↓	↓	↓	↓	↓			
	F10400	T4 5-6	↓	↓	↓	↓	↓			

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

QA (PW)

Special Instructions:

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	[signature]	6/20/97									

FORM #4 8/94

★ U.S. GPO: 1994-383-015

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell - Dubilier
Project Number: 2-274
RFW Contact: Scott Grossman Phone: 908 321-4200

No: 05322

SHEET NO 2 OF 3

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TAL	PEST/PCB	% Lipid	% Solid
	10454	AS-PS-9	✓	6/17/97	1	Cool 0°C	X	X	✓	✓
	10455	AS-PS-10		6/17/97						
	10456	A1-PS-1		6/18/97						
	10457	A1-PS-2								
	10458	A1-PS-3								
	10459	A1-PS-4								
	10460	A1-PS-5								
	10461	A1-PS-6								
	10462	A3-PS-1		6/18/97						
	10463	A3-PS-2								
	10464	A3-PS-3								
	10465	A3-PS-4								
	10466	A3-PS-5								
	10467	A3-PS-6								
	10468	A3-PS-7								
	10469	A3-PS-8								
	10470	A2-PS-1		6/17/97						
	10471	A2-PS-2								
	10472	A2-PS-3								
	10473	A2-PS-4								

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

y = Fish Tissue
QC Grp

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	M Horne	6/20/97									

FORM #4 8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03342-142-011-2274-01
RFW Contact: JOHN JOHNSON Phone: (908) 321-4200

No: 05330

SHEET NO 2 OF 2

Sample Identification							Analyses Requested			
REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	PCB	PESTICIDE	% MOIST	% LIPID
	B10421	T3-1-11	T	17 June 1997	1	FOIL/DRY ICE	✓	✓	✓	✓
	B10422	T3-4-20		↓						
	B10423	T3-4-1		18 June 1997						
	B10424	T3-3-15		17 June 1997						
	B10425	T3-1-5		↓						
	B10426	T4-2-23		18 June 1997						
	B10427	T4-1-1								
	B10428	T4-1-27								
	B10429	T4-5-3								
	B10430	T4-2-24		↓						
	B10431	T4-2-2		18 June 1997						
	B10432	T4-3-5		17 June 1997						
	B10433	T4-2-7	↓	↓	↓	↓	↓	↓	↓	↓

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

10% MS/MSD

QC: M Harris

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ALL/ANALYSIS	[signature]	6/26/97									

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2274-01
RFW Contact: JOHN JOHNSON Phone: (908) 321-4200

No: 05331

SHEET NO. 1 OF 2

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Histopathology
	B10401	T1-14-2	T	17 June 1997	1	40ml GLASS / FORMALIN	✓
	B10402	T1-14-9					
	B10403	T1-8-3					
	B10404	T1-10-6					
	B10405	T1-3-4					
	B10406	T1-14-10					
	B10407	T1-5-5		↓			
	B10408	T1-13-10		18 JUNE 1997			
	B10409	T1-9-7		17 June 1997			
	B10410	~~T1~~ T1-14-6		↓			
	B10411	T2-12-8		18 June 1997			
	B10412	T2-4-5		↓			
	B10413	T2-2-7		17 June 1997			
	B10414	T2-3-6					
	B10415	T2-12-3					
	B10416	T2-12-10					
	B10417	T2-2-1					
	B10418	T3-4-5		↓			
	B10419	T3-4-2		18 June 1997			
	B10420	T3-1-8	↓	17 June 1997	↓	↓	↓

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

T - Tissue (Palamyscus lacustris)

Special Instructions:

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ALL ANALYSIS	[signature]	6/20/97									

FORM #4 8/94

★ U.S. GPO: 1994-383-015

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-~~X~~ 142-001-2274-01
RFW Contact: JOHN JOHNSON Phone: (908) 321-4200

No: 05335

SHEET NO 2 OF 2

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Histopathology			
	B10421	T3-1-11	T	17 June 1997	1	40 ml glass / Formalin	✓			
	B10422	T3-4-20	↓	↓	↓	↓	↓			
	B10423	T3-4-1		18 June 1997						
	B10424	T3-3-15		17 June 1997						
	B10425	T3-1-5		↓						
	B10426	T4-23		18 June 1997						
	B10427	T4-1-1								
	B10428	T4-1-27								
	B10429	T4-5-3								
	B10430	T4-2-24		↓						
	B10431	T4-2 2		18 June 1997						
	B10432	T4-3-5		17 June 1997						
	B10433	T4-2-7	↓	↓	↓	↓	↓			

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

T - Tissue (Paramyscus leucopus)

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ALL/ANALYSIS	[signature]	6/20/97									

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 23347-142-001-[illegible]
RFW Contact: [illegible] Phone: (908) 321-4200

No: 05336

SHEET NO. 1 OF 1

Sample Identification | **Analyses Requested**

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Grain Size			
	A10486	A1-1	Sd	6-18-97	1	8207 glass 14°C	X			
	A10487	A1-2								
	A10488	A1-3								
	A10489	A1-4								
	A10490	A1-5								
	A10491	A1-6								
	A10492	A2-1		6-19-97						
	A10493	A2-2								
	A10494	A4-1								
	A10495	A4-2								
	A10496	A5-1								
	A10497	A5-2								
	A10498	A6-1								
	A10262	A6-2								
	A10263	A7-1								
	A10264	A3-1		6-20-97						
	A10265	A9-1								
	A10266	A9-2								
	A10267	A3-2								

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

Cooler #[illegible]

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

QC, [illegible]

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	Jennifer Roya	6/20/97									

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-1712-001-2273-01
RFW Contact: [illegible] Phone: (908) 321-4200

No: 05338

SHEET NO. 1 OF 1

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TOC			
	F10486	A1-1	Sd	6-18-97	1	8oz glass/4°C	X			
	F10487	A1-2								
	F10488	A1-3								
	F10489	A1-4								
	F10490	A1-5								
	F10491	A1-6								
	F10492	A2-1		6-19-97						
	F10493	A2-2								
	F10494	A4-1								
	F10495	A4-2								
	F10496	A5-1								
	F10497	A5-2								
	F10498	A6-1								
	F10262	A6-2								
	F10263	A7-1								
	F10264	A3-1		6-20-97						
	F10265	A9-1								
	F10266	A9-2								
	F10267	A3-2								

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

Cooler #6363

FOR SUBCONTRACTING USE ONLY
FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	[illegible]	6/17/97									

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 23347-112-001-2223.11
RFW Contact: Scott Clawson Phone: (908) 321-4200

No: 05339

SHEET NO. 1 OF 1

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Tox Test			
	J10265	A9-1	SD	6-20-97	2	32oz glass/4°C	X			
	J10264	A3-1		6-20-97						
	J10262	A6-2		6-19-97						
	J10497	A5-2		6-19-97						
	J10494	A4-1								
	J10493	A2-2								
	J10486	A1-1		6-18-97						

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: [illegible] Dubilier
Project Number: [illegible]-142-[illegible]-2274 [illegible]
RFW Contact: [illegible] Phone: (908) 321-4200

No: 05340

SHEET NO. 1 OF 1

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TAI			
	B10486	A1-1	Sd	6-18-97	1	8oz glass 4°C	X			
	B10487	A1-2								
	B10488	A1-3								
	B10489	A1-4								
	B10490	A1-5								
	B10491	A1-6								
	B10492	A2-1 *		6-19-97						
	B10493	A2-2								
	B10494	A4-1								
	B10495	A4-2								
	B10496	A5-1								
	B10497	A5-2								
	B10498	A6-1 *								
	B10262	A6-2								
	B10263	~~A7-1~~ A7-1								
	B10264	A3-1		6-20-97						
	B10265	A9-1								
	B10266	A9-2								
	B10267	A3-2								

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

* MS/MSD

Cooler # ~~9335~~ 4642

FOR SUBCONTRACTING USE ONLY
FROM CHAIN OF CUSTODY #

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2274-01
RFW Contact: Scott Crossman Phone: (908) 321-4200

No: 05341

SHEET NO. 1 OF 1

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Pest/PCB			
	D1[illegible]	A1-1	Sd	[illegible]	1	8oz glass/4°C	X			
	D1[illegible]	A1-2								
	D1[illegible]	A1-3								
	D1[illegible]	A1-4								
	D1[illegible]	A1-5								
	D1[illegible]	A1-6								
	D1[illegible]	A2-1 *		6-19-97						
	D1[illegible]	A2-2								
	D1[illegible]	A4-1								
	D1[illegible]	A4-2								
	D1[illegible]	A5-1								
	D1[illegible]	A5-2								
	D1[illegible]	A6-1 *								
	D1[illegible]	A6-2								
	D1[illegible]	A7-1								
	D1[illegible]	A3-1		[illegible]						
	D1[illegible]	A9-1								
	D1[illegible]	A9-2								
	D1[illegible]	A3-2								

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:
* MS/MSD

coder #9385

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	Jennifer Kaye	6/20/97									

FORM #4 8/94

★ U.S. GPO: 1994-383-015

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Small Bubbles
Project Number: 03317-142-201-2270-21
RFW Contact: [illegible] Phone: (908) 321-4200

No: 05342

SHEET NO. 1 OF 1

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	BNA
	C1J486	A1-1	SD	6-15-97	1	8oz glass/4°C	X
	C1J487	A1-2					
	C1J488	A1-3					
	C1J489	A1-4					
	C1J490	A1-5					
	C1J491	A1-6					
	C1J492	A2-1 *		6-[illegible]-97			
	C1J493	A2-2					
	C1J[illegible]	A4-1					
	C1J[illegible]	A4-2					
	C1J[illegible]	A5-1					
	C1J[illegible]	A5-2					
	C1J[illegible]	A6-1 *					
	C1J[illegible]	A6-2					
	C1J[illegible]	A7-1					
	C1J[illegible]	A3-1		6-[illegible]-97			
	C1J[illegible]	A9-1					
	C1J[illegible]	A9-2					
	C1J[illegible]	A3-2					

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

* MS/MSD

Cooler # 2376

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	[illegible]	6/25/97									

FORM #4

8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2274-01
RFW Contact: Scott Grossman Phone: (908) 321-4200

No: 05344

SHEET NO. 1 OF 1

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Ammonia	TPH		
	H10486	A1-1	Sd	6-18-97	1	8oz glass/4°C	X			
	H10262	A6-2		6-19-97						
	H10494	A4-1								
	H10493	A2-2								
	H10497	A5-2								
	H10264	A3-1		6-20-97						
	H10265	A9-1		6-20-97						
	I10493	A2-2		6-19-97				X		
	I10494	A4-1		6-19-97						
	I10486	A1-1		6-18-97						
	I10497	A5-2		6-19-97						
	I10262	A6-2		6-19-97						
	I10264	A3-1		6-20-97						
	I10265	A9-1		6-20-97						
	A10376	Field Blank		6-19-97			X	X		
	A10378	Field Blank	X	6-20-97	X	X	X	X		

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

cooler # 1309

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All / Analysis	[illegible]	6/20/97									

FORM #4 8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347 102-001-2274-01
RFW Contact: Scott Crossman Phone: (908) 321-4200

No: 05345

SHEET NO. 1 OF 2

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOA			
	E10486	A1-1	Sd	6-18-97	1	4oz sample 14°C	X			
	E10487	A1-2								
	E10488	A1-3								
	E10489	A1-4								
	E10490	A1-5								
	E10491	A1-6								
	E10492	A2-1		6-19-97						
	E10493	A2-2		6-19-97						
	E10264	A3-1		6-20-97						
	E10267	A3-2		6-20-97	3*					
	E10494	A4-1		6-19-97	1					
	E10495	A4-2								
	E10496	A5-1								
	E10497	A5-2								
	E10498	A6-1								
	E10262	A6-2								
	E10263	A7-1								
	E10265	A9-1		6-20-97	3*					
	E10266	A9-2		6-20-97	3*					

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

*MS/MSD

cooler #9335

FOR SUBCONTRACTING USE ONLY
FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	[illegible]	6/20/97									

FORM #4

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 23347-142-221 2274-21
RFW Contact: Scott Crossman Phone (908) 321 4200

No: 05347

SHEET NO 2 OF 2

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOA	Pest/PCB	BNA	TAL
	A10212	Field Blank	Sol	6-18-97	1	40ml / 4°C	X			
	A10211	↓	↓	6-18-97	1	↓	X			
	A10213	↓	↓	6-20-97	1	↓	X			
	A10214	Trip Blank	Sol	6-20-97	1	40ml / 4°C	X			
	ABC10215	Trip Blank	W	6-20-97	3	↓	X			
	A10216*	A1	SW	6-18-97	1	1L amber / 4°C		X		
	B10216*	A1	↓	↓	1	↓			X	
	C10216*	A1	↓	↓	1	1L Poly / 4°C				X
	DEF10216*	A1	↓	↓	3	40ml / 4°C	X			

Matrix:
SD - Sediment; DS - Drum Solids; DL - Drum Liquids; X - Other
PW - Potable Water; GW - Groundwater; SW - Surface Water; SL - Sludge
S - Soil; W - Water; O - Oil; A - Air

Special Instructions:
* MS/MSD

FOR SUBCONTRACTING USE ONLY
FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	Jennifer Reid	6/20/97									

FORM #4

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilear
Project Number: 2-274
RFW Contact: Scott Grossman Phone:

No: 07299

SHEET NO. 1 OF 1

61897

Sample Identification							Analyses Requested			
REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Pest/PCB	TAL	% Lipid	% Moist
349	A5-PS-1	Area 5	x	6/17/97	1	foil/0°C	x	x	x	x
350	A5-PS-2	Area 5	x							
351	A5-PS-3	Area 5	x							
352	A5-LB-1	Area 5								
353	A5-LB-2	Area 5								
354	A5-LB-3	Area 5								
355	A5-WS-1	Area 5								
356	A5-WS-2	Area 5								
357	A5-WS-3	Area 5								

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

x = fish filler

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	Mike Horne	6/18/97	[signature]	6/18/97	24						

FORM #4 8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell - Dubilear
Project Number: 2-274
RFW Contact: Scott Grossman Phone: 908 321 4200

No: 07726

SHEET NO. 1 OF 1

Sample Identification / **Analyses Requested**

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Pest/PCB	TAL	% Lipid	% Solid
	A6-LB-1	Area 6	x	6/17/97	1	foil/°C	x	x	x	x
	A6-LB-2	Area 6								
	A6-LB-3	Area 6								
	A6-PS-1	Area 6								
	A6-PS-2	Area 6								
	A6-PS-3	Area 6								
	A6-CC-1	Area 6								
	A6-CC-2	Area 6								
	A6-CC-3	Area 6								
	A5-CC-1	Area 5	x	6/17/97	1	foil/0°C	x	x	x	x

OK MT

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

x = fish tissue

Special Instructions:

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	M Herr	6/18/97	[signature]	6/18/97	1620						

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 7-274
RFW Contact: Scott Grossman Phone: 908-321-4200

No: 07727

SHEET NO 1 OF 1

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Pest/PCB	TCL	% Liquid	% Solid
	A1-CC-1	Area 1	X	6-17-97	1	foil/0°C	X	X	X	X
	A1-CC-2	Area 1	X	6-17-97	1	foil/0°C	X	X	X	X
	A1-CC-3	Area 1	X	6-17-97	1	foil/0°C	X	X	X	X
	A1-WS-1	Area 1	X	6-17-97	1	foil/0°C	X	X	X	X
	A1-WS-2	Area 1	X	6-17-97	1	foil/0°C	X	X	X	X
	A1-WS-3	Area 1	X	6-17-97	1	foil/0°C	X	X	X	X
	A1-PS-1	Area 1	X	6-17-97	1	foil/0°C	X	X	X	X
	A1-PS-2	Area 1	X	6-17-97	1	foil/0°C	X	X	X	X
	A1-PS-3	Area 1	X	6-17-97	1	foil/0°C	X	X	X	X
	A2-WS-1	Area 2	X	6-17-97	1	foil/0°C	X	X	X	X
	A2-WS-2	Area 2	X	6-17-97	1	foil/0°C	X	X	X	X
	A2-WS-3	Area 2	X	6-17-97	1	foil/0°C	X	X	X	X
	A2-PS-1	Area 2	X	6-17-97	1	foil/0°C	X	X	X	X
	A2-PS-2	Area 2	X	6-17-97	1	foil/0°C	X	X	X	X
DUP	~~A2-PS-3~~	~~Area 2~~								

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

X = Fish Tissue

Special Instructions:

DUP: Home

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analyses	[signature]	6-18-97									

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell-Dubilier
Project Number: 2274
RFW Contact: Scott Fussman Phone: 908-321-4200

No: 07728

SHEET NO. 1 OF ___

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Pest/PCB	TAL	% lipid	% Solid
	A3-WS-1	Area 3	X	6-18-97	1	foil/°C	X	X	X	X
	A3-WS-2	Area 3	X	6-18-97	1	foil/°C	X	X	X	X
	A3-WS-3	Area 3	X	6-18-97	1	foil/°C	X	X	X	X
	A3-PS-1	Area 3	X	6-18-97	1	foil/°C	X	X	X	X
	A3-PS-2	Area 3	X	6-18-97	1	foil/°C	X	X	X	X
	A3-PS-3	Area 3	X	6-18-97	1	foil/°C	X	X	X	X
	R-WS-1	Area 3	X	6-18-97	1	foil/°C	X	X	X	X
	R-WS-2	Ref ~~Area 3~~	X	6-18-97	1	foil/°C	X	X	X	X
	R-WS-3	Ref ~~Area 3~~	X	6-18-97	1	foil/°C	X	X	X	X
	R-CC-1	Ref ~~Area 3~~	X	6-18-97	1	foil/0°C	X	X	X	X
	R-CC-2	Ref ~~Area 3~~	X	6-18-97	1	foil/0°C	X	X	X	X
	R-CC-3	Ref Area 3	X	6-18-97	X	foil/0°C	X	X	X	X
	A4PS-1	Area 4	X	6-18-97	1	foil/0°C	X	X	X	X
	A4-PS-2	Area 4	X	6-18-97	1	foil/0°C	X	X	X	X
	A4-PS-3	Area 4	X	6-18-97	1	foil/0°C	X	X	X	X

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

X = Tissue

QC: Have

Special Instructions:

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	[illegible]	6/19/97									

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 0337-044-3. - 142-001 - 2274-01
RFW Contact: John Johnson Phone: (908) 321-4200

No: 07729

SHEET NO 1 OF 3

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	PCB/PEST	% Lipid	% Moist	X BNA
	B10219	A3-1	T	13 June 1997	1	Foil / 0°C	✓	✓	✓	
	B10220	A3-2								
	B10221	A3-3								
	B10222	A3-12								✓
	B10223	A3-13								✓
	B10224	A3-14								✓
	B10225	A3-15								
	B10226	A3-16								
	B10227	A3-17								
	B10228	A3-18								
	B10229	A3-19								
	B10230	A3-COMP *								
	B10231	A2-10								
	B10232	A2-2								
	B10233	A2-3								✓
	B10234	A2-4								
	B10235	A2-5								
	B10236	~~A2-6~~ A2-11								
	B10237	A2-COMP *								
	B10238	A2-12	↓	↓	↓	↓	↓	↓	↓	

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

T - Crayfish

Special Instructions:

* MS/MSD (COMPOSITE SAMPLE)

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ALL/ANALYSIS	[signature]	6/21/97									

FORM #4 8/94

★ U.S. GPO: 1994-383-015

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2274-01
RFW Contact: JOHN JOHNSON Phone: (908) 321-4200

No: 07730

SHEET NO. 2 OF 3

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	PCB/PEST	% Lipid	% Moist	BNA
	B10239	A 2-13	T	18 June 1997	1	Foil / 0°C	✓	✓	✓	
	B10240	A9-1								
	B10241	A9-2								✓
	B10242	A9-3								✓
	B10243	A9-4								
	B10244	A9-5								
	B10245	A9-6								
	B10246	A9-7								
	B10247	A9-9								
	B10248	A9-13		20 June 1997						✓
	B10249	A9-14								✓
	B10250	A9-COMP *		18 June 1997						
	B10268	A4-1								✓
	B10269	A4-2								
	B08628	A4-3								✓
	B08629	A4-4								
	B08630	A4-COMP *								
	B08631	A1-1		20 June 1997						✓
	B08632	A1-2								✓
	B08633	A5-1								✓

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

* MS/MSD

T- Crayfish

COOLER 9045

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ACC/ANALYSIS	[signature]	6/21/97									

FORM #4 8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03372.142-001-2274-01
RFW Contact: JOHN JOHNSON Phone: (908) 321-4200

No: 07731

SHEET NO 3 OF 3

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	PCB/PEST	%LIPID	%MOIST	BNA
	B08634	AS-2	T	20 June 1997	1	Foil / 0°C	✓	✓	✓	✓
	B08635	AS-3	↓	↓	↓	↓	↓	↓	↓	✓

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

T. CRAYFISH

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ALL ANA. VOA		6/21/97									

FORM #4 8/94

* U.S. GPO: 1994-383-015

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell
Project Number: 03347-142-001-2021-01
RFW Contact: GROSSMAN Phone: 4230

No: 08272

SHEET NO. 1 OF 1

Sample Identification **Analyses Requested**

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	PCB/Pest			
	20435	10435 A4-PS-2	T	18 June 1997	1	4oz glass / Frozen	✓			
	20436	10436 A4-PS-3		18 June 1997						
	20456	10456 A1-PS-1		18 June 1997						
	20457	10457 A1-PS-2		18 June 1997						
	20458	10458 A1-PS-3		18 June 1997						
	20462	10462 A3-PS-1		18 June 1997						
	20463	10463 A3-PS-2		18 June 1997						
	20464	10464 A3-PS-3		18 June 1997						
	20470	10470 A2-PS-1		7 June 1997						
	20471	10471 A2-PS-2	↓	17 June 1997	↓	↓	↓			

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

T- Tissue Homogenate (Pumpkin Seeds)

Special Instructions:

ALT

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ALT/ANALYSIS	[signature]	1/28/98	[signature]								

FORM #4 8/94

USEPA ERT

CHAIN OF CUSTODY RECORD

COC # 000-001

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier
Location: South Plainfield, NJ
Site Phone:

Page No.: 1 of 1
Cooler #:009042
Lab: GPE Environmental
Contact:

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
	A	2000-1001	A1	Surface water	6/27/97	1 L Amber/4 C	Pesticides/PCB		
	B	2000-1001	A1	Surface water	6/27/97	1 L Amber/4 C	Base neutral/acid extractables		
	C	2000-1001	A1	Surface water	6/27/97	1 L poly/4 C	Base neutral/acid extractables		
	G	2000-1001	A1	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (unfiltered)		
	H	2000-1001	A1	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (filtered)		
	A	2000-1002	A2	Surface water	6/27/97	1 L Amber/4 C	Pesticides/PCB		
	B	2000-1002	A2	Surface water	6/27/97	1 L Amber/4 C	Base neutral/acid extractables		
	C	2000-1002	A2	Surface water	6/27/97	1 L poly/4 C	Base neutral/acid extractables		
	G	2000-1002	A2	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (unfiltered)		
	H	2000-1002	A2	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (filtered)		
	A	2000-1003	A3	Surface water	6/27/97	1 L Amber/4 C	Pesticides/PCB		
	B	2000-1003	A3	Surface water	6/27/97	1 L Amber/4 C	Base neutral/acid extractables		
	C	2000-1003	A3	Surface water	6/27/97	1 L poly/4 C	Base neutral/acid extractables		
	G	2000-1003	A3	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (unfiltered)		
	H	2000-1003	A3	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (filtered)		

Special Instructions:

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
all analyses	Mark Huston	6/27/97									

USEPA ERT

CHAIN OF CUSTODY RECORD

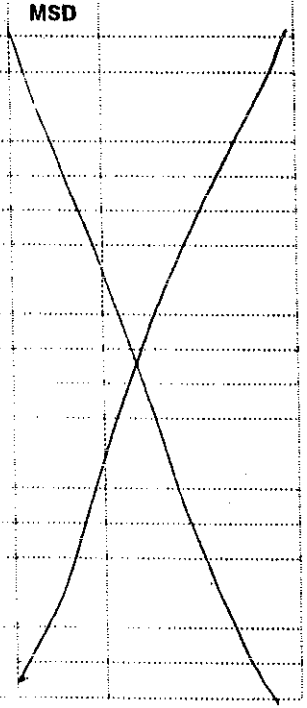
COC # 000-002

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier
Location: South Plainfield, NJ
Site Phone:

Page No.: 1 of 1
Cooler #:009383
Lab:
Contact: Scott Grossman
(908) 321-4230

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
	A	2000-1004	A4	Surface water	6/27/97	1 L Amber/4 C	Pesticides/PCB		
	B	2000-1004	A4	Surface water	6/27/97	1 L Amber/4 C	Base neutral/acid extractables		
	C	2000-1004	A4	Surface water	6/27/97	1 L poly/4 C	Base neutral/acid extractables		
	G	2000-1004	A4	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (unfiltered)		
	H	2000-1004	A4	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (filtered)		
	A	2000-1005	A5	Surface water	6/27/97	1 L Amber/4 C	Pesticides/PCB		
	B	2000-1005	A5	Surface water	6/27/97	1 L Amber/4 C	Base neutral/acid extractables		
	C	2000-1005	A5	Surface water	6/27/97	1 L poly/4 C	Base neutral/acid extractables		
	G	2000-1005	A5	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (unfiltered)		
	H	2000-1005	A5	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (filtered)		
	A	2000-1006	A6	Surface water	6/27/97	1 L Amber/4 C	Pesticides/PCB		
	B	2000-1006	A6	Surface water	6/27/97	1 L Amber/4 C	Base neutral/acid extractables		
	C	2000-1006	A6	Surface water	6/27/97	1 L poly/4 C	Base neutral/acid extractables		
	G	2000-1006	A6	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (unfiltered)		
	H	2000-1006	A6	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (filtered)		
	B	2000-1010	Laboratory Blank	Water	6/27/97	1 L Amber/4 C	Base neutral/acid extractables		
	C	2000-1010	Laboratory Blank	Water	6/27/97	1 L poly/4 C	Base neutral/acid extractables		
	G	2000-1010	Laboratory Blank	Water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (unfiltered)		



Special Instructions:

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
all analyses	Mark Huston	6/27/97									

USEPA ERT

CHAIN OF CUSTODY RECORD

COC # 000-003

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier
Location: South Plainfield, NJ
Site Phone:

Page No.: 1 of 1
Cooler #:009338
Lab:
Contact: Scott Grossman
(908) 321-4230

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
	A	2000-1007	A7	Surface water	6/27/97	1 L Amber/4 C	Pesticides/PCB		
	B	2000-1007	A7	Surface water	6/27/97	1 L Amber/4 C	Base neutral/acid extractables		
	C	2000-1007	A7	Surface water	6/27/97	1 L poly/4 C	Base neutral/acid extractables		
	G	2000-1007	A7	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (unfiltered)		
	H	2000-1007	A7	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (filtered)		
	A	2000-1008	A9	Surface water	6/27/97	1 L Amber/4 C	Pesticides/PCB	Y	
	B	2000-1008	A9	Surface water	6/27/97	1 L Amber/4 C	Base neutral/acid extractables	Y	
	C	2000-1008	A9	Surface water	6/27/97	1 L poly/4 C	Base neutral/acid extractables	Y	
	G	2000-1008	A9	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (unfiltered)	Y	
	H	2000-1008	A9	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (filtered)		
	A	2000-1010	Laboratory Blank	Water	6/27/97	1 L Amber/4 C	Pesticides/PCB		
	H	2000-1010	Laboratory Blank	Water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (filtered)		

Special Instructions:

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
all analyses	Mark Huston	6/27/97									

USEPA ERT

CHAIN OF CUSTODY RECORD

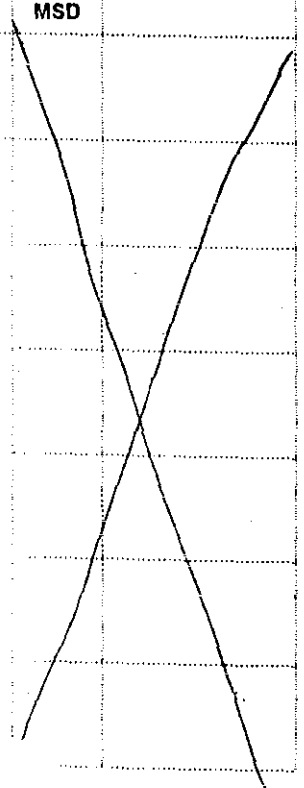
COC # 000-004

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier
Location: South Plainfield, NJ
Site Phone:

Page No.: 1 of 2
Cooler #:NA
Lab:
Contact: Scott Grossman
(908) 321-4230

LAB #	Tag	Sample #		Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
	D	2000-1001	A1		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	E	2000-1001	A1		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	F	2000-1001	A1		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	D	2000-1002	A2		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	E	2000-1002	A2		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	F	2000-1002	A2		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	D	2000-1003	A3		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	E	2000-1003	A3		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	F	2000-1003	A3		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	D	2000-1004	A4		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	E	2000-1004	A4		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	F	2000-1004	A4		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	D	2000-1005	A5		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	E	2000-1005	A5		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	F	2000-1005	A5		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	D	2000-1006	A6		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	E	2000-1006	A6		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	F	2000-1006	A6		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	D	2000-1007	A7		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	E	2000-1007	A7		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	F	2000-1007	A7		Surface water	6/27/97	40 ml VOA/4 C	Volatiles		



Special Instructions:

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
all analyses	Mark Hamilton	6/27/97									

USEPA ERT

CHAIN OF CUSTODY RECORD

COC # 000-005

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier
Location: South Plainfield, NJ
Site Phone:

Page No.: 2 of 2
Cooler #:NA
Lab:
Contact: Scott Grossman
(908) 321-4230

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
	D	2000-1008	A9	Surface water	6/27/97	40 ml VOA/4 C	Volatiles	Y	
	E	2000-1008	A9	Surface water	6/27/97	40 ml VOA/4 C	Volatiles	Y	
	F	2000-1008	A9	Surface water	6/27/97	40 ml VOA/4 C	Volatiles	Y	
	D	2000-1009	Trip Blank	Water	6/27/97	40 ml VOA/4 C	Volatiles		
	E	2000-1009	Trip Blank	Water	6/27/97	40 ml VOA/4 C	Volatiles		
	F	2000-1009	Trip Blank	Water	6/27/97	40 ml VOA/4 C	Volatiles		
	D	2000-1010	Laboratory Blank	Water	6/27/97	40 ml VOA/4 C	Volatiles		
	E	2000-1010	Laboratory Blank	Water	6/27/97	40 ml VOA/4 C	Volatiles		
	F	2000-1010	Laboratory Blank	Water	6/27/97	40 ml VOA/4 C	Volatiles		

Special Instructions:

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
all analyses	Mark Huston	6/27/97									

USEPA ERT

CHAIN OF CUSTODY RECORD

COC # 274-9001

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274-01
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier Site
Location: South Plainfield, NJ
Site Phone: (908) 321-4230

Page No.: 1 of 1
Cooler #:
Lab:
Contact: Scott Grossman
(908) 321-4230

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
	D	2274-1001	A12-1	Sediment	8/7/97	8 oz glass/None	Base neutral/acid extractables		
	D	2274-1002	A12-2	Sediment	8/7/97	8 oz glass/None	Base neutral/acid extractables		
	D	2274-1003	A13-1	Sediment	8/7/97	8 oz glass/None	Base neutral/acid extractables		
	D	2274-1004	A13-2	Sediment	8/7/97	8 oz glass/None	Base neutral/acid extractables		
	D	2274-1005	A14-1	Sediment	8/7/97	8 oz glass/None	Base neutral/acid extractables	Y	
	D	2274-1006	A14-2	Sediment	8/7/97	8 oz glass/None	Base neutral/acid extractables		
	D	2274-1007	A11-1	Sediment	8/7/97	8 oz glass/None	Base neutral/acid extractables		
	D	2274-1008	A11-2	Sediment	8/7/97	8 oz glass/None	Base neutral/acid extractables		
	D	2274-1009	A10-1	Sediment	8/8/97	8 oz glass/None	Base neutral/acid extractables		
	D	2274-1010	A10-2	Sediment	8/8/97	8 oz glass/None	Base neutral/acid extractables		
	D	2274-1012	Field Blank		8/8/97	8 oz glass/None	Base neutral/acid extractables		

Special Instructions:

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
1-11 / Analysis	[signature]	8/8/97									

USEPA ERT

CHAIN OF CUSTODY RECORD

COC # 274-9002

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274-01
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier Site
Location: South Plainfield, NJ
Site Phone: (908) 321-4230

Page No.: 1 of 1
Cooler #:
Lab:
Contact: Scott Grossman
(908) 321-4230

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
	C	2274-1001	A12-1	Sediment	8/7/97	8 oz glass/None	metals, TAL		
	C	2274-1002	A12-2	Sediment	8/7/97	8 oz glass/None	metals, TAL		
	C	2274-1003	A13-1	Sediment	8/7/97	8 oz glass/None	metals, TAL		
	C	2274-1004	A13-2	Sediment	8/7/97	8 oz glass/None	metals, TAL		
	C	2274-1005	A14-1	Sediment	8/7/97	8 oz glass/None	metals, TAL	Y	
	C	2274-1006	A14-2	Sediment	8/7/97	8 oz glass/None	metals, TAL	Y	
	C	2274-1007	A11-1	Sediment	8/7/97	8 oz glass/None	metals, TAL		
	C	2274-1008	A11-2	Sediment	8/7/97	8 oz glass/None	metals, TAL		
	C	2274-1009	A10-1	Sediment	8/8/97	8 oz glass/None	metals, TAL		
	C	2274-1010	A10-2	Sediment	8/8/97	8 oz glass/None	metals, TAL		
	C	2274-1012	Field Blank		8/8/97	8 oz glass/None	metals, TAL		

Special Instructions:

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
1-11 / Analysis	D. Griffin	8/8/97									

USEPA ERT

CHAIN OF CUSTODY RECORD

COC # 274-9003

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274-01
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier Site
Location: South Plainfield, NJ
Site Phone: (908) 321-4230

Page No.: 1 of 1
Cooler #:
Lab:
Contact: Scott Grossman
(908) 321-4230

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
	A	2274-1000	A10		8/7/97	Foil	Pesticides/PCB (TF)		
	B	2274-1001	A12-1	Sediment	8/7/97	8 oz glass/None	Pesticides/PCB		
	B	2274-1002	A12-2	Sediment	8/7/97	8 oz glass/None	Pesticides/PCB		
	B	2274-1003	A13-1	Sediment	8/7/97	8 oz glass/None	Pesticides/PCB		
	B	2274-1004	A13-2	Sediment	8/7/97	8 oz glass/None	Pesticides/PCB		
	B	2274-1005	A14-1	Sediment	8/7/97	8 oz glass/None	Pesticides/PCB	Y	
	B	2274-1006	A14-2	Sediment	8/7/97	8 oz glass/None	Pesticides/PCB	Y	
	B	2274-1007	A11-1	Sediment	8/7/97	8 oz glass/None	Pesticides/PCB		
	B	2274-1008	A11-2	Sediment	8/7/97	8 oz glass/None	Pesticides/PCB		
	B	2274-1009	A10-1	Sediment	8/8/97	8 oz glass/None	Pesticides/PCB		
	B	2274-1010	A10-2	Sediment	8/8/97	8 oz glass/None	Pesticides/PCB		
	B	2274-1012	Field Blank		8/8/97	8 oz glass/None	Pesticides/PCB		

Special Instructions:

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
1-11/Analysis	[signature]	8/8/97									

USEPA ERT

CHAIN OF CUSTODY RECORD

COC # 274-9004

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274-01
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier Site
Location: South Plainfield, NJ
Site Phone: (908) 321-4230

Page No.: 1 of 1
Cooler #:
Lab:
Contact: Scott Grossman
(908) 321-4230

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
	A	2274-1001	A12-1	Sediment	8/7/97	4 oz. sept/None	Volatiles		
	A	2274-1002	A12-2	Sediment	8/7/97	4 oz. sept/None	Volatiles		
	A	2274-1003	A13-1	Sediment	8/7/97	4 oz. sept/None	Volatiles		
	A	2274-1004	A13-2	Sediment	8/7/97	4 oz. sept/None	Volatiles		
	A	2274-1005	A14-1	Sediment	8/7/97	4 oz. sept/None	Volatiles	Y	
	A	2274-1006	A14-2	Sediment	8/7/97	4 oz. sept/None	Volatiles	Y	
	A	2274-1007	A11-1	Sediment	8/7/97	4 oz. sept/None	Volatiles		
	A	2274-1008	A11-2	Sediment	8/7/97	4 oz. sept/None	Volatiles		
	A	2274-1009	A10-1	Sediment	8/8/97	4 oz. sept/None	Volatiles		
	A	2274-1010	A10-2	Sediment	8/8/97	4 oz. sept/None	Volatiles		
	A	2274-1011	Trip Blank		8/8/97	4 oz. sept/None	Volatiles		

Special Instructions:

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
1-11 / Analysis	[signature]	8/8/97									

USEPA ERT

CHAIN OF CUSTODY RECORD

COC # 274-9005

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274-01
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier Site
Location: South Plainfield, NJ
Site Phone: (908) 321-4230

Page No.: 1 of 1
Cooler #:
Lab:
Contact: Scott Grossman
(908) 321-4230

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
	F	2274-1001	A12-1	Sediment	8/7/97	32 oz glass/None	Grain Size		
	F	2274-1002	A12-2	Sediment	8/7/97	32 oz glass/None	Grain Size		
	F	2274-1003	A13-1	Sediment	8/7/97	32 oz glass/None	Grain Size		
	F	2274-1004	A13-2	Sediment	8/7/97	32 oz glass/None	Grain Size		
	F	2274-1005	A14-1	Sediment	8/7/97	32 oz glass/None	Grain Size		
	F	2274-1006	A14-2	Sediment	8/7/97	32 oz glass/None	Grain Size		
	F	2274-1007	A11-1	Sediment	8/7/97	32 oz glass/None	Grain Size		
	F	2274-1008	A11-2	Sediment	8/7/97	32 oz glass/None	Grain Size		
	F	2274-1009	A10-1	Sediment	8/8/97	32 oz glass/None	Grain Size		
	F	2274-1010	A10-2	Sediment	8/8/97	32 oz glass/None	Grain Size		

Special Instructions:

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
1-10 Analysis	Philip Kim	8/8/97									

USEPA ERT | **CHAIN OF CUSTODY RECORD** | **COC # 274-9006**

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274-01
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier Site
Location: South Plainfield, NJ
Site Phone: (908) 321-4230

Page No.: 1 of 1
Cooler #:
Lab:
Contact: Scott Grossman
(908) 321-4230

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
	E	2274-1001	A12-1	Sediment	8/7/97	8 oz glass/None	TOC		
	E	2274-1002	A12-2	Sediment	8/7/97	8 oz glass/None	TOC		
	E	2274-1003	A13-1	Sediment	8/7/97	8 oz glass/None	TOC		
	E	2274-1004	A13-2	Sediment	8/7/97	8 oz glass/None	TOC		
	E	2274-1005	A14-1	Sediment	8/7/97	8 oz glass/None	TOC		
	E	2274-1006	A14-2	Sediment	8/7/97	8 oz glass/None	TOC		
	E	2274-1007	A11-1	Sediment	8/7/97	8 oz glass/None	TOC		
	E	2274-1008	A11-2	Sediment	8/7/97	8 oz glass/None	TOC		
	E	2274-1009	A10-1	Sediment	8/8/97	8 oz glass/None	TOC		
	E	2274-1010	A10-2	Sediment	8/8/97	8 oz glass/None	TOC		

Special Instructions:

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
1-10 Analysis	[signature]	8/8/97									

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2274-01
RFW Contact: [illegible] Phone: [illegible]

No: 05350

SHEET NO. 1 OF 3

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TAL	Pest/PCB	% Moist	% Lipids
	CC-A12-1	A-12	Tissue	8/6/97	—	4°C	x	x	x	x
	CC-A12-2	A-12	T*	8/6/97	—	4°C				
	CC-A12-3	A-12	T	8/6/97	—	4°C				
	WS-A12-1	A-12	T	8/6/97	—	4°C				
	WS-A12-2	A-12	T	8/6/97	—	4°C				
	WS-A12-3	A-12	T	8/6/97	—	4°C				
	PS-A12-1	A-12	T	8/6/97	—	4°C				
	PS-A12-2	A-12	T	8/6/97	—	4°C				
	PS-A12-3	A-12	T	8/6/97	—	4°C				
	BS-A12-1	A-12	T	8/6/97	—	4°C				
	BS-A12-2	A-12	T	8/6/97	—	4°C				
	BH-A12-1	A-12	T	8/6/97	—	4°C				
	CC-A11-1	A-11	T	8/6/97	—	4°C				
	CC-A11-2	A-11	T	8/6/97	—	4°C				
	CC-A11-3	A-11	T	8/6/97	—	4°C				
	WS-A11-1	A-11	T	8/6/97	—	4°C				
	WS-A11-2	A-11	T	8/6/97	—	4°C				
	WS-A11-3	A-11	T	8/6/97	—	4°C				
	PS-A11-1	A-11	T	8/6/97	—	4°C				
	PS-A11-2	A-11	T	8/6/97	—	4°C				

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:
* T Tissue

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ALL/Analysis	[illegible] Buckley	8/7/97	[illegible]	8/7/97	1:30						

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2274-01
RFW Contact: Scott Grossman Phone: 321-4200

No: 05369

SHEET NO. 2 OF 3

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TAL	Pest/PCB	VOA	BNA
	PS-A11-3	A-11	T*	8/6/97		4°C	X	X	X	X
	BS-A11-1	A-11	T	8/6/97		4°C				
	BS-A11-2	A-11	T	8/6/97		4°C				
	BS-A11-3	A-11	T	8/6/97		4°C				
	BH-A11-1	A-11	T	8/6/97		4°C				
	BH-A11-2	A-11	T	8/6/97		4°C				
	BH-A11-3	A-11	T	8/6/97		4°C				
	CC-A10-1	A-10	T	8/6/97		4°C				
	CC-A10-2	A-10	T	8/6/97		4°C				
	CC-A10-3	A-10	T	8/6/97		4°C				
	PS-A10-1	A-10	T	8/6/97		4°C				
	PS-A10-2	A-10	T	8/6/97		4°C				
	PS-A10-3	A-10	T	8/6/97		4°C				
	BS-A10-1	A-10	T	8/6/97		4°C				
	BS-A10-2	A-10	T	8/6/97		4°C				
	BS-A10-3	A-10	T	8/6/97		4°C				
	BH-A10-1	A-10	T	8/6/97		4°C				
	BH-A10-2	A-10	T	8/6/97		4°C				
	CC-A13-1	A-13	T	8/6/97		4°C				
	PS-A13-1	A-13	T	8/6/97		4°C	↓	↓	↓	↓

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:
* T = Tissue

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ALL/Analysis	[illegible]	8/7/97	[illegible]	8/8/97	[illegible]						

FORM #4 8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dublier
Project Number: 03347-142-001-2274-01
RFW Contact: Scott Grossman Phone: 321-4200

No: 05351

SHEET NO. 3 OF 3

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TAL	Pest/PCB	% Moist	% Liquid
	PS-A13-2	A-13	T *	8/6/97	—	4°C	x	x	x	x
	WS-A13-1	A-13	T	8/6/97	—	4°C				
	WS-A13-2	A-13	T	8/6/97	—	4°C				
	WS-A13-3	A-13	T	8/6/97	—	4°C				
	BS-A13-1	A-13	T	8/6/97	—	4°C				
	BS-A13-2	A-13	T	8/6/97	—	4°C				
	BH-A5-1	A-5	T	~~8~~ NB 6/17/97	—	4°C				
	WS-A14-1	A-14	T	8/6/97	—	4°C				
	WS-A14-2	A-14	T	8/6/97	—	4°C				
	WS-A14-3	A-14	T	8/6/97	—	4°C				
	BS-A14-1	A-14	T	8/6/97	—	4°C				
	BH-A14-1	A-14	T	8/6/97	—	4°C				
	PS-A14-1	A-14	T	8/6/97	—	4°C				
	PS-A14-2	A-14	T	8/6/97	—	4°C				

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

* T = Tissue

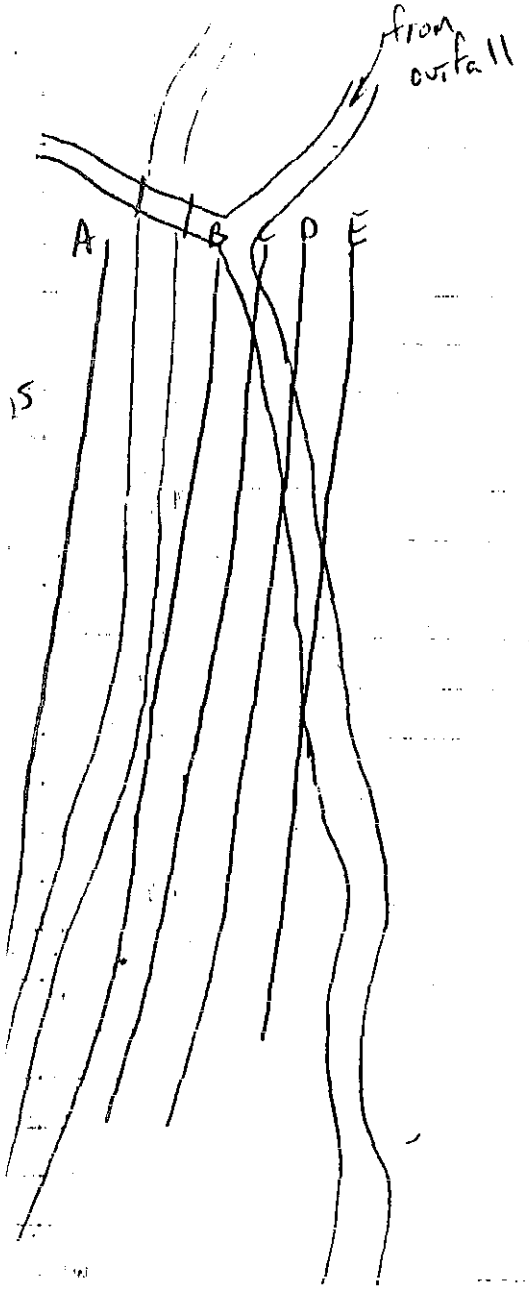
FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ALL/Analysis	[illegible]	8/7/97	[illegible]	8/7/97	4:30PM						

FORM #4 8/94

AREA I Trap lines



6/16/97
Cornell - Dubilear
Scoping Meeting

Dale's Area A5

Largemouth bass
Total Length - 36.5 cm

Fork Length - 35 cm
Standard Length - 31 cm
Total wt - 625.5 g
Edible filet - ~~87.5 g~~ 163.9 g

White Sucker #1

Total Length - 39 cm
Fork Length - 36.5 cm
Standard Length - 32.5
Total wt - 608.0 g
Edible filet wt - 152.5 g

White Sucker #2

Total Length - 40 cm
Fork Length - 37 cm
Standard Length - 34 cm
Total wt - 667.9 g
Edible filet wt: ~~152.5 g~~ 159.8 g

A5 cont

White Sucker #3 (WS-3)

total length	36 cm
Fork length	34 cm
Standard length	32 cm
total wt	536.4 g
edible fillet wt	174.2 g

Pumpkinseed #1 (PS1)

Total length	14.2 cm
fork length	13.8 cm
standard length	11.5 cm
total wt	59.9 g
edible fillet wt	22.2 g

Pumpkin seed #2 (PS-2)

total length	13.8 cm
fork length	13.2 cm
standard length	11.3 cm
total wt	68.8 g
edible fillet wt	23.1 g

Pumpkinseed #3 (PS-3)

TOTAL 14
FORK 13.5
STAND 11.5
TW 70.5

A5 cont largemouth bass #2 (LB-2)

total length	26.5 cm
fork length	25.3 cm
Standard length	23.0 cm
total wt	242.9 g
edible fillet wt	82.0 g

A5 largemouth bass #3 (LB-3)

total length	24.2 cm
Fork length	23.5 cm
Standard length	20.5 cm
total wt	209.0 g
edible fillet wt	69.0 g

A6 largemouth bass #1 (LB-1

Total In	30.0
Fork	31.5
Standard	25
Total wt	431.1
Filler wt	98.1

A6 largemouth bass #2 (LB-2)

Total In	41
Fork	36
Std	34
Total wt	1007.6
Fillet wt	245.2

A6 Largemouth bass #3
Total In 29
fork In 26
Std In 24
Tot wt 381.8
filler wt 100.8

A6 Pumpkin seed #1
Total In 16.5
fork In 15.5
Stand In 13.5
Total wt 102.3
filler wt 25.0

A6 Pumpkin seed #2
Total In 16.5
fork In 15.5
Stand In 13.0
Total wt 96.9
filler wt

A6 Pumpkin seed #3
Total In 13.0
fork In 12.5
Stand In 11.0
Total wt 47.0
filler wt 15.6

A6 Carp #1
Total 65
fork 61
Std 53
Tot wt NA
filler wt 380 - right side fillet

A6 Carp #2
Total 57
fork 52½
Std 48½
Total wt NA
filler wt 174.8 - right side fillet

A6 Carp #3
Total ~~57~~ 54
fork ~~52½~~ 49
Std ~~48½~~ 45
Total wt ~~2886~~ 2666.2 right si
filler wt

A5 Carp #1
Total 51
~~Fork~~ 46
SD 42
Total wt NA
filler wt 261.1 right side

(6.2)

Crayfish

LOCATION A2

6.3g	#2?	~~#5~~ Comp		231
11.7g	#1	#2	~~232~~	232
21.1g	#1	#1	~~234~~	233
9.5g	#1	#3	233	234
9.3g	#1	#4		235
6.2g	#2?	~~#6~~ COMP		~~236~~
2.4g	#1	Comp		237
5.3g	#1	Comp		
4.0g	#2?	Comp		

Archive fish

A5

Brown bullhead	#1	429.2g
Brown bullhead	#2	199.2g
White Sucker		653.3g
Longear Sunfish		86.1g
Pumpkin seed	4	92.3 *
"	5	55.4 *
"	6	38.1 *
"	7	46.5 *
"	8	94.5 *
"	9	64.8 *
"	10	46.4 *

* wt without gut

Archive

A6

Pumpkin seed #1 - 20.2g
" #2 - 35.5g
" #3 - 30.6g
Longear sunfish - 43.5g
White Perch #1 - 199.3g
White Perch #2 - 275.8g

Pumpkin seed	#	4	36.6 *
"		5	24.7 *
		6	33.0 *
		7	37.3 *
		8	45.2 *
		9	37.3 *
		10	31.7 *
		11	39.3 *

Small Mammals

		T1	T4	T3	T
HHT I	P. maniculatus				
III	Microtus				1
I	Sorex				
~~HHT~~ HHT	P. leucopus		NHII	HHT III	
I	Blarina		~~III~~		

Carp

Areas Upstream of Culvert

Area A1

Carp 1 A1-CC-1

TL - 58
FL - 54
SL - 46 → 482g

Area A1 - A1-CC-2

Carp 2

TL - 57
FL - 51 → 539g
SL - 48

Carp 3

TL - 55
FL - 50 → 542
SL - 45

WS1

Total wt = 160g
TL = 24
FL = 23
SL = 20
Filet wt = 63.1

WS3

Tot. wt = 108.4g
TL = 21
FL = 20
SL = 18
Filet wt =

WS2

Tot. Wt = 176.9g
TL = 25
FL = 23
SL = 21
Filet Weight 66.7g

← these were small Carp

Are these filet weights or total weights

A1-PS-1

Total wt - 60.4
Filet wt - 21.1
TL - 13
FL - 12.5
SL - 11

A1-PS-2

Total wt - 46.1
TL - 12
FL - 11.7
SL - 10
Filet wt - 16.5

A1-PS-3

Total wt = 41.1
Filet wt = 15.3
TL = 9
FL = 9
SL = 9
no tail.

A-1	PS	4		22.4g
A-1	PS	5		32.6g
A-1	PS	6		22.5g
A-1	PS	1	carcass	37.0g & 9g
A-1	PS	2	carcass	24.2g
A-1	PS	3	carcass (missing tail)	21.1g

Area 2 - WS #1
Total length 38
Fork length 36
Std length 33
Total weight 654
Fillet weight 214.7

Area 2 - WS #2
Total length 33
Fork length 31
Stand length 28
Total weight 392
Fillet weight 148.2

Area 2 - WS #3
Total length 31
Fork length 29
Stnd length 26
Total weight 331
Fillet weight 130.8

Area 2 PS#1
TL = 13
FL = 12.5
SL = 11.5
Tot. Wt = 67.1
Filet wt = 17.7g Carcass 36.3g

Area 2 PS#2
TL = 12
FL = 11.5
SL = 10
Tot. Wt = 39.2
Filet wt = 15.0 Carcass = 21g

Area 2 PS#3 used as forage fish
TL = 10.5
FL = 10.0
SL = 8.5
Tot. Wt = 22.0 (20.6 Tot. wt, no gut)
Filet wt =

Area 2 PS#4 (forage fish)
Wt = 16.5 (w/out gut)

Area 2 PS#5 (composite of 4 fish)
Wt = ~~15.3~~ (w/out gut)
25.0g

Area 3 - WS#1
TL = 38
FL = 35
SL = 32
Tot wt = 603g
Filet wt = 155.7

A3-WS#2
TL = 35
FL = 32
SL = 29
Tot wt = 459.5g
Filet wt = 111.4g

Area 3 - WS#3
TL = 34
FL = 32
SL = 29
Tot wt = 397.8g
Filet wt = 85.3g

A3 - PS #6 Whole Body, no gut 20.5
A3 - PS #7 " " 18.3

A3 PS#1
TL = 16
FL = 15.5
SL 13.5
Tot wt = 110.1 Filet wt. = 20.8

A3 PS#2
TL = 15
FL = 14
SL = 12.5
Tot wt = 80.7 Filet wt. = 17.1

A3 PS#3
TL = 11
FL = 10.5
SL = 10
Tot wt = ~~36.2~~ 46.2
Filet wt = 15.2

A3-PS#1-Carcass = 81.5g
A3-PS#2-Carcass = 50.1g
A3-PS#3-Carcass = 25.5g
A3-PS#4-Whole body, no gut = 35.1
A3-PS#5-Whole body, no gut 20.6

25.5
15.2
40.7

-PS#8 - Whole body, no gut = 15.0g

-PS#9 = 12 fish 123.2g
Whole body
Archive

Reference

R-WS-1
TL - 36
FL - 33
SL - 30
Tot. wt = 505.8g
Filet wt = 146.4g

R-WS-2
TL - 36
FL - 34
SL - 30
Tot wt - 517.0g
Filet wt - 162.4g

R-WS-3
TL - 30
FL - 29
SL - 25
Tot wt = 326.1g (963)

Reference

R-CC-1
TL - 15
FL - 13.5
SL - 12
Tot wt - 67.6
Filet wt - 17.2gm

R-CC-2
TL - 14.5
FL - 13.5
SL - 11.5
Tot wt - 49.0
Filet wt - 15.1gm

R-CC-3
TL - 13
FL - 12
SL - 10.5
Tot wt - 37.5
Filet WT - 15.0

4 Fish. 121g (WS) White
Archive

Archive 40.0g 1 comp

Reference Forage Fish (Pumpkinseed)
Total Whole Body (no gut) (g)

1) 24.1
2) 14.5g
3) 18.6g
4) 23.7g
5) 23.7g

A4

A4-PS-1

TL - 14
FL - 13.5
SL - 12.0
Tot wt. - 54.8
Filet Wt - 15.5 Carcass = 36.5

A4-PS-2

TL - 13
FL - 12.5
SL 11.5
56.6
- 16.1 Carcass 32.0

Filet Wt - 16.3 g
Carcass - 24.5 g

A4-Forage fish - PS-4

TW-gut - 34.6g

A4-PS-5

Tw - 16.5g

A4-PS-6

Tw - 18.4g

A4-PS-7

Tw - 29.7g

A4-PS-Archive

Tw - 9.0g

Crayfish 6-18-97

location A1 (Ref) upstream

1.) 10.1 g #1 — 1
2.) 33.7 g #2 — 3
3.) 40.0 g #2 — 4
4.) 12.9 g #1 — 2
5.) 9.6 g #1 — 3
6.) 8.6 g #1 — 4
7.) 13.5 g #1 — 5
8.) 4.0 g #1 — Comp
9.) 11.3 g #1 — 6
10.) 7.6 g #1 — comp
11.) 6.4 g #1 — Comp #1
12.) 5.8 g #1 — Comp #2

13.) 29.8 g #2 — 1
14.) 27.6 g #2 — 2

A3

11.9 g #1 #8B
9.8 g #1 #6B
10.0 g #1 #7B
3.6 g #1
6.9 g #1
4.2 g #1
3.8 g #1
3.9 g #1
0.9 g #1
2.3 g #1

21.1 g #1 #2B
27.0 g #2 #3A
35.8 g #2 #2A
15.3 g #1 #3B
13.7 g #1 #4B
12.6 g #2 #1A
18.7 g #1 #1B
8.9 g #1 #8B
6.5 g #1

Dry Run Creek Memo

email [TAL in Tissue
BNAs - in feces samples] Justification additional

Pest / PCB
TAL
Lipid
Toxaphene

Dioxin

Leave 9:25 Sunday - Newark Ai

Crayfish
A4

1.) 30.8g #2 1
2.) 19.5g #2 2
3.) 34.2g #2 3
4.) 9.5g #1 4
5.) 6.5g #1 Comp
6.) 6.2g #1 Comp
7.) 3.8g #1 Comp
8.) 1.0g #1 Comp

LOCATION # A5

1) 24.6 #2
2) 43.7g #2
3) 21.5g #1?

LOCATION A1

1) 37.0g #1?
2) 26.5g #1?

6/20/97
Crayfish
heap
processed
6/22/97

Rep 6 of 6 Sample #
Area T2 Line 12 Trap 5 - 10371
A-6

Grain Size A
TAL B
BNA C
Pest/PCB D
VOA E
TOC F
Archive G

Area T2-7-1 Rep 5 of 6 - 10372

Area T2-6-7 Rep 2 of 6 - 10373

Area T2-2-1 Rep 3 of 6 - 10374

Area T2-5-6 Rep 4 of 6 - 10375

Area T2-1-3 Rep 1 of 6 - 10380

Area T1-1-4 Rep 1 of 8 - 10381
Area T1-4-5 Rep 2 of 8 - 10382
Area T1-7-2 Rep 3 of 8 - 10383
Area T1-3-7 Rep 4 of 8 - 10384
Area T1-5-6 Rep 5 of 8 - 10385
Area T1-10-2 Rep 6 of 8 - 10386
Area T1-11-9 Rep 7 of 8 - 10387
Area T1-14-3 Rep 8 of 8 - 10388

Area T3 - 1 - 7 Rep 1 of 6 - 10389
Area T3 - 1 - 13 Rep 2 of 6 - 10390
Area T3 - 2 - 11 Rep 3 of 6 - 10391
Area T3 - 3 - 10 Rep 4 of 6 - 10392
Area T3 - 3 - 16 Rep 5 of 6 - 10393
Area T3 - 4 - 6 Rep 6 of 6 - 10394

Area T4 - 1 - 4 Rep 1 of 6 - 10395
Area T4 - 1 - 10 Rep 2 of 6 - 10396
Area T4 - 2 - 19 Rep 3 of 6 - 10397
Area T4 - 3 - 3 Rep 4 of 6 - 10398
Area T4 - 4 - 1 Rep 5 of 6 - 10399
Area T4 - 5 - 6 Rep 6 of 6 - 10400

MAMMALS NOT PROCESSED - COLLECTED 6/18/97

- ✓ T1-14-10 Chipmunk
- ✓ T1-8-9 P. leucopus Sub Adult
- ~~T2-4-5~~
- ✓ T1-2-9 Vole
- ✓ T3-1-8 P.l. SA
- ✓ T2-7-10 Vole
- ✓ T2-2-7 Vole
- ✓ T2-9-7 Vole
- ✓ T3-2-13 P.l SA
- ✓ T2-2-8 Vole
- ✓ T4-5-4 P.l. SA
- ✓ T1-1-9 Short-tailed shrew
- ✓ T3-3-18 P.l. - (Swudell)
- ~~Interrobang 2s Start 2s P. leucopus~~
- ✓ T3-4-12 ~~P. leucopus~~ P.l. S.A
- ✓ T1-12-9 P.l SA
- ~~T4-4 3-11-2~~
- ~~T5 T4-5-4 P.l. Sub Adult~~

MAMMALS TO BE ANALYZED

†	10401	T1-14-2	P.l	Adult	1
†	10402	T1-14-9	P.l	"	2
†	10403	T1-8-3	P.l	"	3
†	404	T1-10-6	P.l.	"	4
†	405	T1-3-4	P.l.	"	5
†	406	T1-14-10	P.l.	"	6
†	407	T1-5-5	"	"	7
†	408	T1-13-10	P.l.	"	8
†	409	T1-9-7	P.l.	"	9
†	410	T1-14-6	P.l.	"	10
†	411	T2-12-8	P.l.	SA	1
†	412	T2-4-5	P.l.	SA	2
†	413	T2-2-7	P.l. (?)	SA?	3 ←
†	414	T2-3-6	P.l.	A	4
†	415	T2-12-3	P.l.	A	5
†	416	T2-12-10	P.l.	A	6
†	417	T2-2-1	P.l.	A	7
✓	418	T3-4-5	P.l.	SA	1
✓	419	T3-4-2	P.l.	A	2
✓	420	T3-1-8	P.l.	A	3
✓	421	T3-1-11	P.l.	A	4
✓	422	T3-4-20	P.l	A	5
✓	423	T3-4-1	P.l	A	6
✓	424	T3-3-15	"	"	7
✓	425	T3-1-5	"	"	8
✓	426	T4-2-23	"	SA	1

1	T4-2-2	P.1	Adult	6
32	T4-3-5	P.1.	"	7
33	T4-2-7	P.1.	"	8

-97 Crayfish AZ (cont'd)

10	8.8g	#1	8	
11	9.0g	#1	6	236
12	10.1g	#1	5	~~286~~
13	8.9g	#1	7	
A	6.5g	#1	Comp	

Sediment

Grain Size A · 32oz
TAL B · } 8oz
BNA C · }
Pest/PCB D · }
VOA E · 4oz
TOC F · 8oz
Archive G · 8oz
Ammonia ~~TOX TEST~~ H ~~8oz~~ 8oz
TPH I 8oz
Tox Test J 2-32oz
Mike's K 32oz

H+I Tox Area 1-1-10486
Area 1-2-10487
Area 1-3-10488
Area 1-4-10489
Area 1-5-10490
Area 1-6-10491
} 6-18-97

Area 2-1-10492
H+I Tox Area 2-2-10493
H+I Tox Area 4-1-10494
Area 4-2-10495

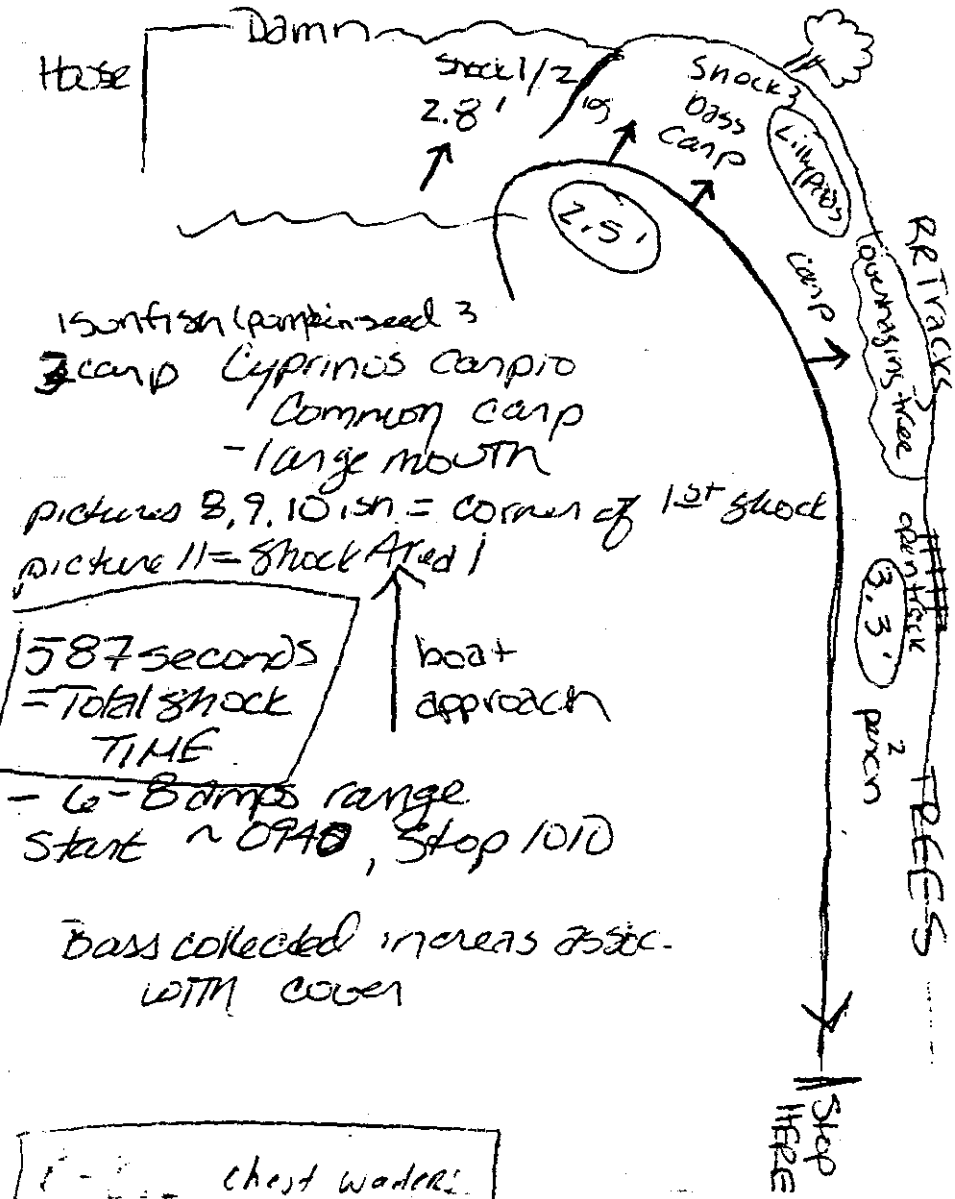
Area 5-1-10496
H+I Tox Area 5-2-10497
Area 6-1-10498
H+I Tox Area 6-2-10262
Area 7-1-10263
} 6-19-97

TOX HNI	A3-1 - 10264	6-20-97
TOX HNI *	A9-1 - 10265	
*	A9-2 - 10266	
*	A3-2 10267	

* = MS/MSD

picture 7 or 8 = view f/corner of shocking 6-17-97

Bass & carp all f/ this corner



1 sunfish (pumpkinseed 3
3 carp Cyprinus carpio
Common carp
- large mouth

pictures 8, 9, 10 ish = corner of 1st shock
picture 11 = Shock Area 1

boat approach

587 seconds
= Total shock
TIME

- 6-8 amps range
Start ~ 0940, Stop 1010

Bass collected increas assoc.
with cover

[illegible] chest waders

1040
START

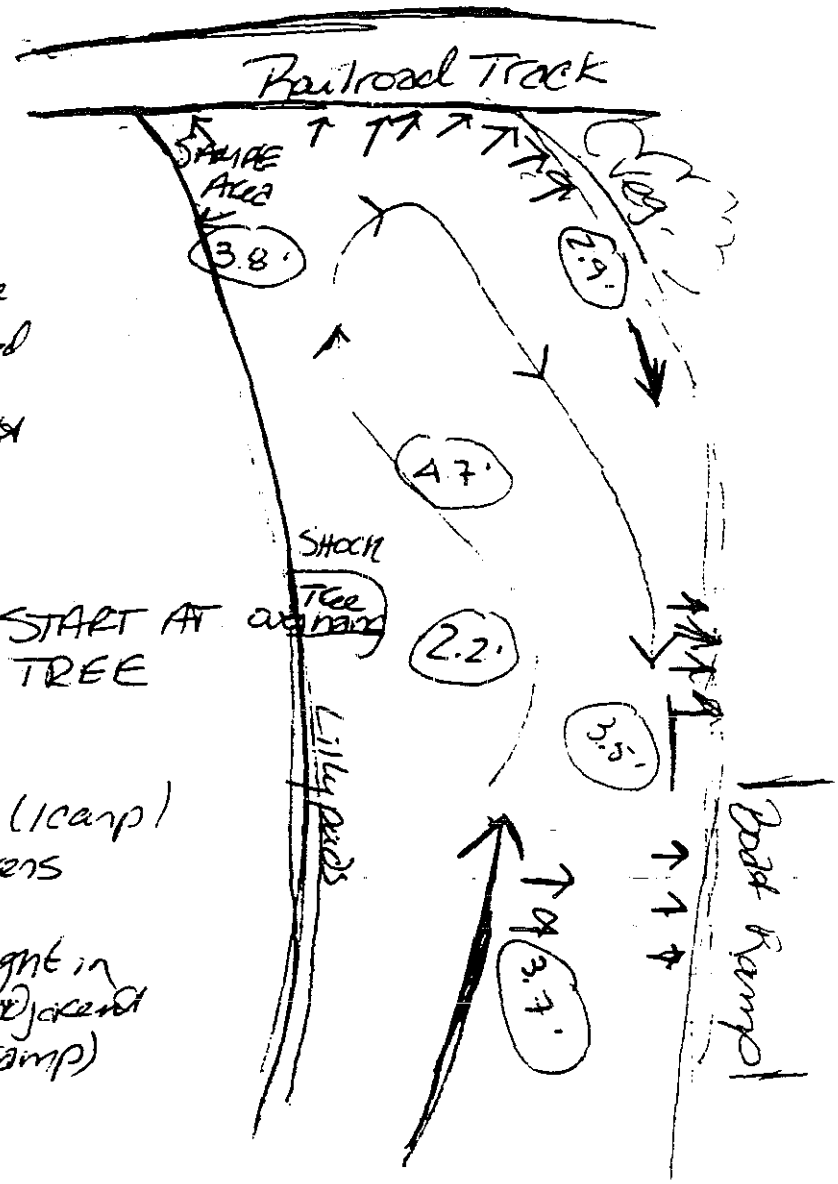
Picture
13?=
overhang tree
where 12"
shock started

Kept to left
bank on
approach

START AT overhang
TREE

No carp (1 carp)
used suckers

(Carp caught in
lillypads adjacent
to boat ramp)



1 pumpkin seed = 1st fish

Didn't samples past boat ramp
did along edges of whole thing &
middle of creek from
boat ramp back in to RR

8-4-97
Operations Meeting

8-5-97
1. Paragraph on what we did in terms of pulling out information from Koopers tests control mortality
2. How interpret sublethal endpoints for Koopers + Chironomids
3. Summary Report vs Raw Data inconsistencies
4. Quick look at the aqua survey Report Reference vs Control
5. How is Mark doing with LCP?

8-7-97
Cornell - Dubilear
Fish Filleting

LOCATION A-12

Carp #1 (CC-A12-1)

TL	41 cm
FL	40 cm
SL	37 cm
TW	1473.4g
FW	226.6 g

Carp #2 (CC-A12-2)

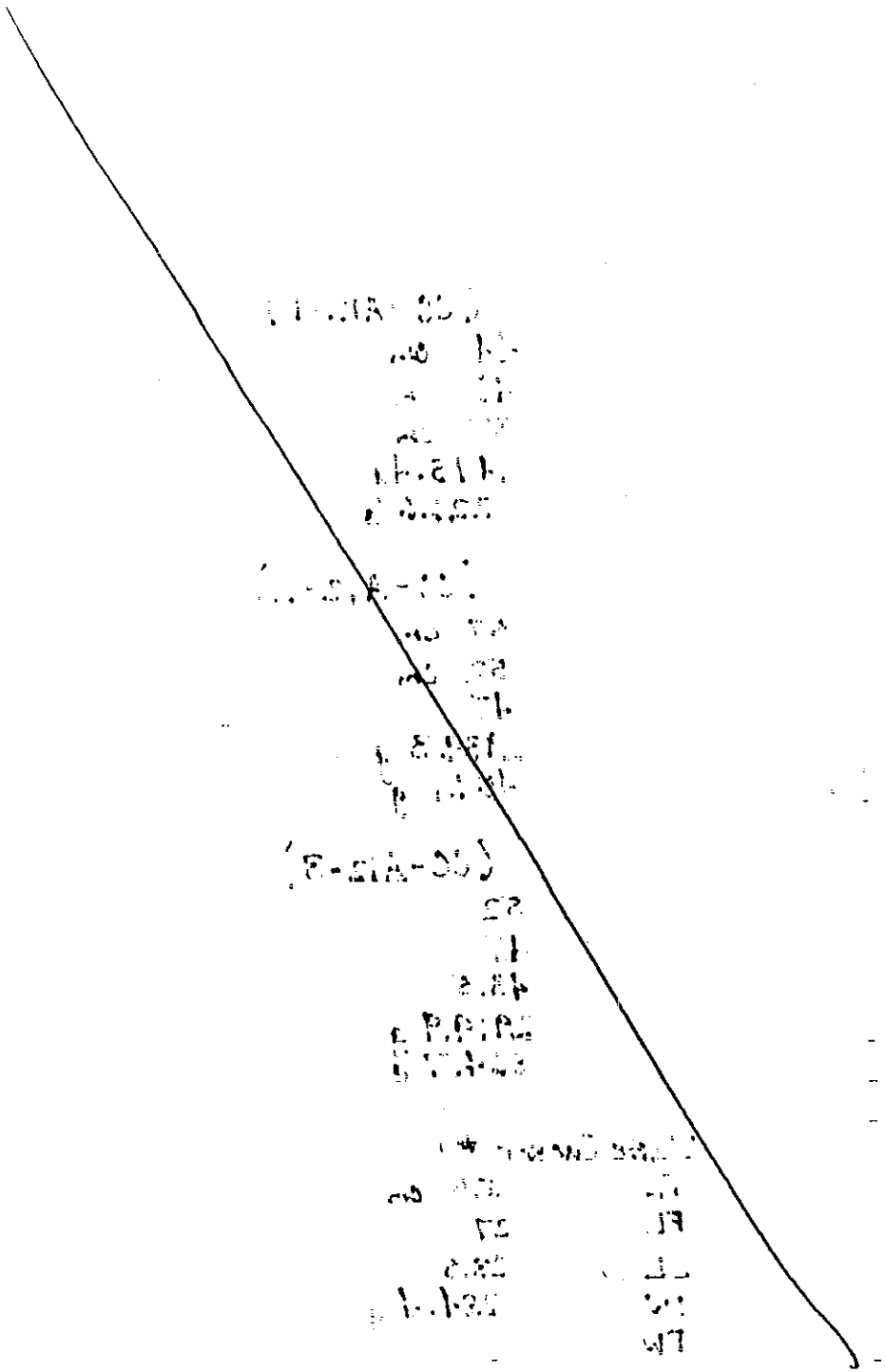
TL	57 cm
FL	52 cm
SL	47 cm
TW	2939.3 g
FW	459.1 g

Carp #2 (CC-A12-3) NOTE: Pregnant

TL	52 cm
FL	47 cm
SL	43.5 cm
TW	2919.9 g
FW	364.7 g

White Sucker #1 (WS-A12-1)

TL	28.5 cm
FL	27 cm
SL	23.5 cm
TW	284.1 g
FW	



6-6-97 - Notes from Convo w/M Spranger and

P19

Len Welman - ~~B~~ETAG Rg 4 Coord.
└ get ph. # from M. Huston
Update of status of Ross Metals

Cornell LOCATION A-12 (continued from p. 117)

White Sucker #2 (WS-A12-2)

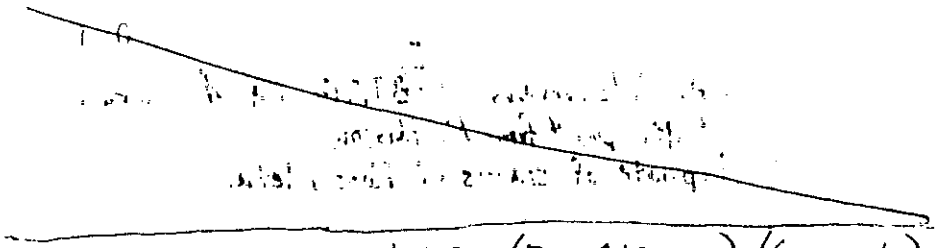
TL	25 cm
FL	23.5 cm
SL	21 cm
TW	192.1 g
FW	51.4 g

White Sucker #3 (WS-A12-3)

TL	23 cm
FL	21 cm
SL	18.5 cm
TW	135.6 g
FW	~~50~~ NB 47.6 g

Pumpkin Seed #1 (PS-A12-1) (Composite

	A	B
TL	13 cm	11.5 cm
FL	12 cm	10 cm
SL	10.5 cm	9.5
TW	48.4 g	32.4 g
FW	Composite = 21.5 g	
	PS-A12-1-A	PS-A12-1-B



Pumpkin Seed #2 (PS-A12-2) (Composite)

	A	B
TL	13 cm	13 cm
FL	12.5 cm	12.5 cm
SL	11 cm	11.5 cm
TW	47.0 g	37.6 g
FW	Composite = 20.6 g	

PS-A12-2-A PS-A12-2-B

Pumpkin Seed #3 (PS-A12-3)

TL	12.5 cm
FL	Tail Missing
SL	Tail Missing
TW	84.1 g
FW	21.8 g

Bass #1 (BS-A12-1)

TL	23.5 cm
FL	22.5 cm
SL	20.5 cm
TW	193.9 g
FW	52.0 g

Bass #2 (BS-A12-2)

TL	19.5 cm
FL	18.5 cm
SL	16.5 cm
TW	106.9 g
FW	32.6 g

Bullhead #1 (BH-A12-1)

TL	22 cm
FL	21 cm
SL	20 cm
TW	150.5 g
FW	20.4 g

LOCATION A-11

Carp #1 (CC-A11-1)

TL	50.3 cm
FL	46.5 cm
SL	42.5 cm
TW	1917.7 g
FW	228.1 g

Carp #2 (CC-A11-2) Pregnant

TL	59 cm
FL	54 cm
SL	50.6 cm
TW	3520.1 g
FW	393.4 g

Carp #3 (CC-A11-3) Pregnant

TL	63 cm
FL	58 cm
SL	56 cm
TW	> 4100 g
FW	450.5 g

White Sucker #1 (WS-A11-1)

TL	27.5 cm
FL	26 cm
SL	23 cm
TW	252.6 g
FW	81.7 g

White Sucker #2 (WS-A11-2)

TL	30.5 cm
FL	25.5 cm
SL	24.5 cm
TW	237.4 g
FW	70.6 g

White Sucker #3 (WS-A11-3)

TL	28 cm
FL	26 cm
SL	23 cm
TW	224.3 g
FW	71.4 g

Pumpkin Seed #1 (PS-A11-1)

	A	B
TL	13 cm	12.5 cm
FL	12.5 cm	11.5 cm
SL	10.5 cm	10.5 cm
TW	49.5 g	38.4 g
FW	Composite = 27.9 g	
	PS-A11-1-A	PS-A11-1-B

Pumpkin Seed #2 (PS-A11-2)

	PS-A11-2-A	PS-A11-2-B	PS-A11-2-C
TL	11.5 cm	12.5 cm	11.5 cm
FL	11 cm	12 cm	11 cm
SL	9.5 cm	11.5 cm	10.5 cm
TW	30.6 g	38.0 g	32.5 g
FW	Composite = 29.8 g		

Pumpkin Seed #3 (PS-A11-3)

	PS-A11-3-A	PS-A11-3-B	PS-A11-3-C
TL	11.5 cm	11.5 cm	12.5 cm
FL	11 cm	11 cm	12 cm
SL	10 cm	10 cm	10.5 cm
TW	31.4 g	29.6 g	36.6 g
FW	Composite = 26.8 g		

Large/Small Bass #1 (BS-A11-1)

TL	31 cm
FL	30 cm
SL	27.3 cm
TW	382.5 g
FW	86.6 g

Large/Small Bass #2 (BS-A11-2)

TL	25.5 cm
FL	24 cm
SL	21 cm
TW	268.4 g
FW	72.0 g

Large/Small Mouth Bass #3 (BS-A11-3)

TL	20.6	cm
FL	20	cm
SL	17.5	cm
TW	148.4	g
FW	44.5	g

Bullhead #1 (BH-A11-1)

TL	31	cm
FL	29	cm
SL	27	cm
TW	421.8	g
FW	62.9	g

Bullhead #2 (BH-A11-2)

TL	27	cm
FL	26.5	cm
SL	23.4	cm
TW	322.8	g
FW	49.9	g

Bullhead #3 (BH-A11-3) Pregnant ♀

TL	23.5	cm
FL	22.5	cm
SL	20	cm
TW	189.3	g
FW	35.5	g

Archived Fish for Location A-12:

White Sucker #1 :	190.1 g
White Sucker #2 :	109.2 g
White Sucker #3 :	93.8 g
White Sucker #4 :	108.0 g
White Sucker #5 :	112.1 g
Carp #1 :	285.0 g
Eel #1 :	108.5 g
Eel #2 :	38.8 g
Eel #3 :	38.9 g
Eel #4 :	21.8 g
Eel #5 :	13.9 g
	~~193.4~~ NB
Pumpkin Seeds (10) :	300 g total
Longear Sunfish (7) :	232 g total
White Crappie (2) :	106.9 g total
Golden Shiner (1) :	43.1 g

Archived Fish for Location A-11:

Carp #1 :	2037.4 g
White Suckers (5) :	1089.2 g
White Suckers (9) :	739.1 g
Largemouth bass :	108.3 g
Misc Panfish (including 1 lg. Wh. Crappie; no Pump. Seed) :	119.8 g
Pumpkin Seeds (6) :	137.6 g
Bullhead (1) :	99.0 g

Location A10

Carp # 1 (CC - A10 - 1) pregnant ♀

TL 44 cm
FL 40 cm
SL 35 cm
TW 1415.0 g
FW 179.6 g

Carp # 2 (CC - A10 - 2) pregnant ♀

TL 47 cm
FL 41½ cm
SL 37.3 cm
TW 1405.7 g
FW 214.5 g

Carp # 3 (CC-A10-3)

TL 45 cm
FL 40 cm
SL 37 cm
TW 1336.8 g
FW 171.1 g

White sucker #1 (WS-A10-1)

TL 35.5 cm
FL 34 cm * 1 side filet
SL 31 cm
TW 549.6 g
FW 87.5 g

White sucker #2 (WS-A10-2)

TL 37 cm
FL 34 cm * 1 Side filet
SL 31 cm
TW 525.0 g
FW 95.6 g

White sucker #3 (WS-A10-3)

TL 32.5 cm
FL 30.5 cm * 1 side filet
SL 27.5 cm
TW 348.6 g
FW 63.8 g

Largemouth Bass #1 (BS-A10-1)

TL 41.5 cm * 1 side filet
FL 40.5 cm
SL 37.3 cm
TW 1260.2 g
FW 203.5 g

Largemouth Bass #2 (BS-A10-2)

TL 33 cm
FL 32 cm * 1 side filet
SL 29.2 cm
TW 572.3 g
FW 86.8 g

Largemouth Bass #3 (BS-A10-3)

TL 18 cm
FL 17.5 cm
SL 15 cm
TW 843.3 g
FW 29.5 g

(PS-A10-1)

pumpkin seed #1 ~~(PS-A10-1)~~

	PS-A10-1A	PS-A10-1B	PS-A10-1C
TL	12.5 cm	10.5 cm	9 cm
FL	11.5 cm	9.5 cm	8.5 cm
SL	10.5 cm	8.5 cm	7.5 cm
TW	38.9g	22.9g	17.0g
FW			

	PS-A10-1D	PS-A10-1E
TL	10 cm	9 cm
FL	9.5 cm	8.5 cm
SL	8 cm	7.5 cm
TW	22.0g	14.3g
FW	composite 33.3g	

pumpkin seed #2 (PS-A10-2)

PS-A10-2A	PS-A10-2B	PS-A10-2C	PS-A10-2D	PS-A10-2E
11 cm	10 cm	10.5 cm	10 cm	9.5 cm
10.5 cm	9.5 cm	10 cm	9.5 cm	9 cm
9 cm	8 cm	8.5 cm	8 cm	8 cm
29.3g	18.8g	22.6g	20.2g	16.9g
composite : ~~33.8~~ 34.1g				

Location A13

Carp #1 (CC-A13-1)

TL 56.5 cm
FL 54 cm
SL 47.5 cm
TW 2560.6 g
FW 272.5 g

Pumpkin seed #1 (PS-A13-1)

	PS-A13-1A	PS-A13-1B	PS-A13-1C
TL	12.2 cm	11.5 cm	10.5 cm
FL	11.5 cm	11 cm	10 cm
SL	10.4 cm	9 cm	8.5 cm
TW	41.5g	30.3g	26.5g
FW	composite :	28.9g	

pumpkin seed #2 (PS-A13-2)

	PS-A13-2A	PS-A13-2B	PS-A13-2C
TL	12.3 cm	10.5 cm	11.6 cm
FL	11.5 cm	10 cm	11.3 cm
SL	10.2 cm	9 cm	9.6 cm
TW	38.1g	28.3g	33.2g
FW	composite :	30.5 g	

White Sucker #1 (WS-A13-1)

TL 32 cm * 1 side filet
FL 30 cm
SL 27 cm
TW 355.1 g
FW 54.9 g

White Sucker #2 (WS-A13-2)
TL 29.3 cm
FL 28 cm * 1 side filet
SL 25 cm
TW 277.2 g
FW 49.9 g

White Sucker #3 (WS-A13-3)
TL 27
FL 25.5 * 1 side filet
SL 23
TW 260.2 g
FW 37.8 g

Smallmouth Bass #1 (BS-A13-1)
TL 19.5 cm
FL 19 cm
SL 16.1 cm
TW 102.1 g
FW 22.2 g Two sided fillet

Smallmouth Bass #2 (BS-A13-2)
TL 30 cm
FL 28 cm * 1 side fillet
SL 25.5 cm
TW 295.3 g
FW 43.0 g

LOCATION A5 (From p. 72 - Archive (Sampling date: 6/17/97

Bullhead #1 (BH-A5-1)
TL 30 cm.
FL N/A * 1-sided fillet
SL 25.2 cm
TW 401.5 g
FW 24.5 g

LOCATION A14

White Sucker #1 (WS-A14-1)
TL 40 cm
FL 37.5 cm * 1-sided fillet
SL 33.5 cm
TW 746 g
FW 85.8 g

White Sucker #2 (WS-A14-2)
TL 34.5 cm
FL 32.5 cm * 1-sided fillet
SL 29.5 cm
TW 457.4 g
FW 56.4 g

White Sucker #3 (WS-A14-3)
TL 36 cm
FL 33.5 cm * 1-sided fillet
SL 29.5 cm
TW 456.8 g
FW 51.9 g

Archive For Location A10

carp #1 - 695.2g
white sucker #1 - 72.8g
white sucker #2 - 64.0g
white sucker #3 - 62.0g
white sucker #4 - 33.9g
largemouth bass #1 - 37.2g
assorted panfish - 968.6g

Archive Location A13

(10) American Eel = 501.2g
(16) Assorted panfish - 731.7g

Archive Location A14

(4) White Suckers - 1148 g
Asst. Panfish - 107.5 g
Smallmouth Bass #1 (BS-A14:1)
↳ See p. 133 for info
↳ Archived for scale pattern irregularity (no wt. necessary)

Smallmouth Bass #1 (BS-A14-1)
TL 27 cm * 1-sided fillet
FL 26 cm
SL 23.5 cm
TW 264.0 g
FW 45.4 g

Bullhead #1 (BH-A14-1)
TL 20 cm * 2-sided fillet
FL 19.5 cm
SL 18 cm
TW 119.4 g
FW 27.0 g

Pumpkin Seeds #1 (PS-A14-1)

	PS-A14-1-A	PS-A14-1-B	PS-A14-1-C
TL	13.5 cm	10 cm	10.5 cm
FL	13 cm	9.75 cm	10 cm
SL	11 cm	8.25 cm	8.5 cm
TW	46.6g	20.7g	23.8g
FW	9.0g	5.0g	6

} Composited: 20.0g

Pumpkin Seeds #2 (PS-A14-2)

	PS-A14-2-A	PS-A14-2-B
TL	10.75	12.5 cm
FL	10.5	12 cm
SL	8.5	10 cm
TW NB ~~TB~~	25.2 g	46.2 g
FW	7.0g	15.5g

Composited: 22.5g

APPENDIX B

Calculation of Whole Body Concentrations from Fillet and Carcass Data
Cornell-Dubilier Site
South Plainfield, NJ
April 1998

APPENDIX B: Calculation of Whole Body Concentrations from Fillet and Carcass Data

Location	Sample Number	PCB-1254 Conc. (ug/kg, ww) Carc. (sub)	Fillet (REAC)	Weight Ratios Carcass	Fillet	Fillet&Carcass	Total Weight	Fill & Carc. % of Total	Carc.+Fillet	% Carc W	% Fillet W	Carc Conc	Fillet Conc	Total Conc (fillet &carc)	Rounded Total Conc
A1	A1-PS-1	3,000	530	37	21.1	58.1	60.4	96%	58.1	64%	36%	1,910	192	2,103	2,100
A1	A1-PS-2	22,000	4,800	24.2	16.5	40.7	46.1	88%	40.7	59%	41%	13,081	1,946	15,027	15,000
A1	A1-PS-3	2,200	500	21.1	15.3	36.4	41.1	89%	36.4	58%	42%	1,275	210	1,485	1,500
A2	A2-PS-1	28,000	2,700	36.3	17.7	54	67.1	80%	54	67%	33%	18,822	885	19,707	20,000
A2	A2-PS-2	23,000	5,000	21	15	36	39.2	92%	36	58%	42%	13,417	2,083	15,500	16,000
A3	A3-PS-1	17,000	1,600	81.5	20.8	102.3	110.1	93%	102.3	80%	20%	13,543	325	13,869	14,000
A3	A3-PS-2	13,000	1,400	50.1	17.1	67.2	80.7	83%	67.2	75%	25%	9,692	356	10,048	10,000
A3	A3-PS-3	23,000	2,200	25.5	15.2	40.7	46.2	88%	40.7	63%	37%	14,410	822	15,232	15,000
A4	A4-PS-1	1,800	220	36.5	15.5	52	54.8	95%	52	70%	30%	1,263	66	1,329	1,300
A4	A4-PS-2	5,800	2,000	32	16.1	48.1	56.6	85%	48.1	67%	33%	3,859	669	4,528	4,500
A4	A4-PS-3	24,000	2,100	29.5	16.3	45.8	50.4	91%	45.8	64%	36%	15,459	747	16,206	16,000

Location	Sample Number	Heptachlor Conc. (ug/kg, ww) Carc. (sub)	Fillet (REAC)	Weight Ratios Carcass	Fillet	Fillet&Carcass	Total Weight	Fill & Carc. % of Total	Carc.+Fillet	% Carc W	% Fillet W	Carc Conc	Fillet Conc	Total Conc (fillet &carc)	Rounded Total Conc
A1	A1-PS-1	2.5	0.38	37	21.1	58.1	60.4	96%	58.1	64%	36%	1.6	0.14	1.7	1.7
A1	A1-PS-2	25.0	0.38	24.2	16.5	40.7	46.1	88%	40.7	59%	41%	14.9	0.15	15.0	15
A1	A1-PS-3	5.0	0.40	21.1	15.3	36.4	41.1	89%	36.4	58%	42%	2.9	0.17	3.1	3.1
A2	A2-PS-1	2.5	0.38	36.3	17.7	54	67.1	80%	54	67%	33%	1.7	0.12	1.8	1.8
A2	A2-PS-2	4.9	0.45	21	15	36	39.2	92%	36	58%	42%	2.9	0.19	3.0	3.0
A3	A3-PS-1	2.5	0.40	81.5	20.8	102.3	110.1	93%	102.3	80%	20%	2.0	0.08	2.1	2.1
A3	A3-PS-2	2.5	0.38	50.1	17.1	67.2	80.7	83%	67.2	75%	25%	1.9	0.10	2.0	2.0
A3	A3-PS-3	4.9	0.38	25.5	15.2	40.7	46.2	88%	40.7	63%	37%	3.1	0.14	3.2	3.2
A4	A4-PS-1	2.5	0.39	36.5	15.5	52	54.8	95%	52	70%	30%	1.8	0.12	1.9	1.9
A4	A4-PS-2	5.0	0.40	32	16.1	48.1	56.6	85%	48.1	67%	33%	3.3	0.13	3.5	3.5
A4	A4-PS-3	9.8	0.40	29.5	16.3	45.8	50.4	91%	45.8	64%	36%	6.3	0.14	6.5	6.5

Location	Sample Number	Heptachlor Epoxide Conc. Carc. (sub)	Fillet (REAC)	Weight Ratios Carcass	Fillet	Fillet&Carcass	Total Weight	Fill & Carc. % of Total	Carc.+Fillet	% Carc W	% Fillet W	Carc Conc	Fillet Conc	Total Conc (fillet &carc)	Rounded Total Conc
A1	A1-PS-1	2.5	4.83	37	21.1	58.1	60.4	96%	58.1	64%	36%	1.6	1.8	3.3	3.3
A1	A1-PS-2	25.0	44.00	24.2	16.5	40.7	46.1	88%	40.7	59%	41%	14.9	17.8	32.7	33
A1	A1-PS-3	5.0	3.57	21.1	15.3	36.4	41.1	89%	36.4	58%	42%	2.9	1.5	4.4	4.4
A2	A2-PS-1	2.5	19.30	36.3	17.7	54	67.1	80%	54	67%	33%	1.7	6.3	8.0	8.0
A2	A2-PS-2	4.9	32.50	21	15	36	39.2	92%	36	58%	42%	2.9	13.5	16.4	16
A3	A3-PS-1	2.5	12.24	81.5	20.8	102.3	110.1	93%	102.3	80%	20%	2.0	2.5	4.5	4.5
A3	A3-PS-2	2.5	11.34	50.1	17.1	67.2	80.7	83%	67.2	75%	25%	1.9	2.9	4.7	4.7
A3	A3-PS-3	4.9	19.40	25.5	15.2	40.7	46.2	88%	40.7	63%	37%	3.1	7.2	10.3	10
A4	A4-PS-1	2.5	3.22	36.5	15.5	52	54.8	95%	52	70%	30%	1.8	1.0	2.7	2.7
A4	A4-PS-2	5.0	15.40	32	16.1	48.1	56.6	85%	48.1	67%	33%	3.3	5.2	8.5	8.5
A4	A4-PS-3	9.8	22.80	29.5	16.3	45.8	50.4	91%	45.8	64%	36%	6.3	8.1	14.4	14

APPENDIX B: Calculation of Whole Body Concentrations from Fillet and Carcass Data (Cont'd)

Location	Sample Number	Chlordane Conc. (ug/kg, ww) Carc. (sub)	Fillet (REAC)	Weight Ratios Carcass	Fillet	Fillet&Carcass	Total Weight	Fill & Carc. % of Total	Carc.+Fillet	% Carc W	% Fillet W	Carc Conc	Fillet Conc	Total Conc (fillet &carc)	Rounded Total Conc
A1	A1-PS-1	25.0	0.76	37	21.1	58.1	60.4	96%	58.1	64%	36%	16	0.28	16	16
A1	A1-PS-2	250.0	0.79	24.2	16.5	40.7	46.1	88%	40.7	59%	41%	149	0.32	149	150
A1	A1-PS-3	50.0	0.80	21.1	15.3	36.4	41.1	89%	36.4	58%	42%	29	0.34	29	29
A2	A2-PS-1	25.0	0.76	36.3	17.7	54	67.1	80%	54	67%	33%	17	0.25	17	17
A2	A2-PS-2	49.0	0.90	21	15	36	39.2	92%	36	58%	42%	29	0.38	29	29
A3	A3-PS-1	25.0	0.79	81.5	20.8	102.3	110.1	93%	102.3	80%	20%	20	0.16	20	20
A3	A3-PS-2	25.0	0.76	50.1	17.1	67.2	80.7	83%	67.2	75%	25%	19	0.19	19	19
A3	A3-PS-3	49.0	0.76	25.5	15.2	40.7	46.2	88%	40.7	63%	37%	31	0.28	31	31
A4	A4-PS-1	25.0	0.78	36.5	15.5	52	54.8	95%	52	70%	30%	18	0.23	18	18
A4	A4-PS-2	50.0	0.80	32	16.1	48.1	56.6	85%	48.1	67%	33%	33	0.27	34	34
A4	A4-PS-3	98.0	0.80	29.5	16.3	45.8	50.4	91%	45.8	64%	36%	63	0.28	63	63

Location	Sample Number	DDD Concentration (ug/kg, ww) Carc. (sub)	Fillet (REAC)	Weight Ratios Carcass	Fillet	Fillet&Carcass	Total Weight	Fill & Carc. % of Total	Carc.+Fillet	% Carc W	% Fillet W	Carc Conc	Fillet Conc	Total Conc (fillet &carc)	Rounded Total Conc
A1	A1-PS-1	5.0	3.57	37	21.1	58.1	60.4	96%	58.1	64%	36%	3.2	1.30	4.5	4.5
A1	A1-PS-2	50.0	0.40	24.2	16.5	40.7	46.1	88%	40.7	59%	41%	29.7	0.16	29.9	30
A1	A1-PS-3	10.0	0.40	21.1	15.3	36.4	41.1	89%	36.4	58%	42%	5.8	0.17	6.0	6.0
A2	A2-PS-1	5.0	0.38	36.3	17.7	54	67.1	80%	54	67%	33%	3.4	0.12	3.5	3.5
A2	A2-PS-2	9.8	0.45	21	15	36	39.2	92%	36	58%	42%	5.7	0.19	5.9	5.9
A3	A3-PS-1	5.0	0.40	81.5	20.8	102.3	110.1	93%	102.3	80%	20%	4.0	0.08	4.1	4.1
A3	A3-PS-2	5.0	0.38	50.1	17.1	67.2	80.7	83%	67.2	75%	25%	3.7	0.10	3.8	3.8
A3	A3-PS-3	9.8	0.38	25.5	15.2	40.7	46.2	88%	40.7	63%	37%	6.1	0.14	6.3	6.3
A4	A4-PS-1	5.0	10.35	36.5	15.5	52	54.8	95%	52	70%	30%	3.5	3.09	6.6	6.6
A4	A4-PS-2	9.9	0.40	32	16.1	48.1	56.6	85%	48.1	67%	33%	6.6	0.13	6.7	6.7
A4	A4-PS-3	20.0	0.40	29.5	16.3	45.8	50.4	91%	45.8	64%	36%	12.9	0.14	13.0	13

Location	Sample Number	DDE Concentration (ug/kg, ww) Carc. (sub)	Fillet (REAC)	Weight Ratios Carcass	Fillet	Fillet&Carcass	Total Weight	Fill & Carc. % of Total	Carc.+Fillet	% Carc W	% Fillet W	Carc Conc	Fillet Conc	Total Conc (fillet &carc)	Rounded Total Conc
A1	A1-PS-1	5.0	7.98	37	21.1	58.1	60.4	96%	58.1	64%	36%	3.2	2.9	6.1	6.1
A1	A1-PS-2	50.0	55.00	24.2	16.5	40.7	46.1	88%	40.7	59%	41%	29.7	22.3	52.0	52
A1	A1-PS-3	10.0	10.70	21.1	15.3	36.4	41.1	89%	36.4	58%	42%	5.8	4.5	10.3	10
A2	A2-PS-1	5.0	27.30	36.3	17.7	54	67.1	80%	54	67%	33%	3.4	8.9	12.3	12
A2	A2-PS-2	9.8	50.00	21	15	36	39.2	92%	36	58%	42%	5.7	20.8	26.6	27
A3	A3-PS-1	5.0	16.20	81.5	20.8	102.3	110.1	93%	102.3	80%	20%	4.0	3.3	7.3	7.3
A3	A3-PS-2	5.0	14.91	50.1	17.1	67.2	80.7	83%	67.2	75%	25%	3.7	3.8	7.5	7.5
A3	A3-PS-3	9.8	26.00	25.5	15.2	40.7	46.2	88%	40.7	63%	37%	6.1	9.7	15.9	16
A4	A4-PS-1	5.0	11.50	36.5	15.5	52	54.8	95%	52	70%	30%	3.5	3.4	6.9	6.9
A4	A4-PS-2	9.9	22.00	32	16.1	48.1	56.6	85%	48.1	67%	33%	6.6	7.4	14.0	14
A4	A4-PS-3	20.0	32.30	29.5	16.3	45.8	50.4	91%	45.8	64%	36%	12.9	11.5	24.4	24

APPENDIX B: Calculation of Whole Body Concentrations from Fillet and Carcass Data (Cont'd)

Location	Sample Number	DDT Concentration (ug/kg, ww)		Weight Ratios		Fillet&Carcass	Total Weight	Fill & Carc. % of Total	Carc.+Fillet	% Carc W	% Fillet W	Carc Conc	Fillet Conc	Total Conc (fillet &carc)	Rounded Total Conc
		Carc. (sub)	Fillet (REAC)	Carcass	Fillet										
A1	A1-PS-1	5.0	0.38	37	21.1	58.1	60.4	96%	58.1	64%	36%	3.2	0.14	3.3	3.3
A1	A1-PS-2	50.0	0.40	24.2	16.5	40.7	46.1	88%	40.7	59%	41%	29.7	0.16	29.9	30
A1	A1-PS-3	10.0	0.40	21.1	15.3	36.4	41.1	89%	36.4	58%	42%	5.8	0.17	6.0	6.0
A2	A2-PS-1	5.0	0.38	36.3	17.7	54	67.1	80%	54	67%	33%	3.4	0.12	3.5	3.5
A2	A2-PS-2	9.8	0.45	21	15	36	39.2	92%	36	58%	42%	5.7	0.19	5.9	5.9
A3	A3-PS-1	5.0	0.40	81.5	20.8	102.3	110.1	93%	102.3	80%	20%	4.0	0.08	4.1	4.1
A3	A3-PS-2	5.0	0.38	50.1	17.1	67.2	80.7	83%	67.2	75%	25%	3.7	0.10	3.8	3.8
A3	A3-PS-3	9.8	0.38	25.5	15.2	40.7	46.2	88%	40.7	63%	37%	6.1	0.14	6.3	6.3
A4	A4-PS-1	5.0	0.39	36.5	15.5	52	54.8	95%	52	70%	30%	3.5	0.12	3.6	3.6
A4	A4-PS-2	9.9	0.40	32	16.1	48.1	56.6	85%	48.1	67%	33%	6.6	0.13	6.7	6.7
A4	A4-PS-3	20.0	0.40	29.5	16.3	45.8	50.4	91%	45.8	64%	36%	12.9	0.14	13.0	13

Location	Sample Number	Endrin Aldehyde Conc.		Weight Ratios		Fillet&Carcass	Total Weight	Fill & Carc. % of Total	Carc.+Fillet	% Carc W	% Fillet W	Carc Conc	Fillet Conc	Total Conc (fillet &carc)	Rounded Total Conc
		Carc. (sub)	Fillet (REAC)	Carcass	Fillet										
A1	A1-PS-1	5.0	0.38	37	21.1	58.1	60.4	96%	58.1	64%	36%	3.2	0.14	3.3	3.3
A1	A1-PS-2	50.0	0.40	24.2	16.5	40.7	46.1	88%	40.7	59%	41%	29.7	0.16	29.9	30
A1	A1-PS-3	10.0	0.40	21.1	15.3	36.4	41.1	89%	36.4	58%	42%	5.8	0.17	6.0	6.0
A2	A2-PS-1	5.0	0.38	36.3	17.7	54	67.1	80%	54	67%	33%	3.4	0.12	3.5	3.5
A2	A2-PS-2	9.8	0.45	21	15	36	39.2	92%	36	58%	42%	5.7	0.19	5.9	5.9
A3	A3-PS-1	5.0	0.40	81.5	20.8	102.3	110.1	93%	102.3	80%	20%	4.0	0.08	4.1	4.1
A3	A3-PS-2	5.0	0.38	50.1	17.1	67.2	80.7	83%	67.2	75%	25%	3.7	0.10	3.8	3.8
A3	A3-PS-3	9.8	0.38	25.5	15.2	40.7	46.2	88%	40.7	63%	37%	6.1	0.14	6.3	6.3
A4	A4-PS-1	5.0	0.39	36.5	15.5	52	54.8	95%	52	70%	30%	3.5	0.12	3.6	3.6
A4	A4-PS-2	9.9	0.40	32	16.1	48.1	56.6	85%	48.1	67%	33%	6.6	0.13	6.7	6.7
A4	A4-PS-3	20.0	0.40	29.5	16.3	45.8	50.4	91%	45.8	64%	36%	12.9	0.14	13.0	13

Location	Sample Number	Endrin Ketone Conc.		Weight Ratios		Fillet&Carcass	Total Weight	Fill & Carc. % of Total	Carc.+Fillet	% Carc W	% Fillet W	Carc Conc	Fillet Conc	Total Conc (fillet &carc)	Rounded Total Conc
		Carc. (sub)	Fillet (REAC)	Carcass	Fillet										
A1	A1-PS-1	5.0	0.38	37	21.1	58.1	60.4	96%	58.1	64%	36%	3.2	0.14	3.3	3.3
A1	A1-PS-2	50.0	0.40	24.2	16.5	40.7	46.1	88%	40.7	59%	41%	29.7	0.16	29.9	30
A1	A1-PS-3	10.0	0.40	21.1	15.3	36.4	41.1	89%	36.4	58%	42%	5.8	0.17	6.0	6.0
A2	A2-PS-1	5.0	0.38	36.3	17.7	54	67.1	80%	54	67%	33%	3.4	0.12	3.5	3.5
A2	A2-PS-2	9.8	0.45	21	15	36	39.2	92%	36	58%	42%	5.7	0.19	5.9	5.9
A3	A3-PS-1	5.0	0.40	81.5	20.8	102.3	110.1	93%	102.3	80%	20%	4.0	0.08	4.1	4.1
A3	A3-PS-2	5.0	0.38	50.1	17.1	67.2	80.7	83%	67.2	75%	25%	3.7	0.10	3.8	3.8
A3	A3-PS-3	9.8	0.38	25.5	15.2	40.7	46.2	88%	40.7	63%	37%	6.1	0.14	6.3	6.3
A4	A4-PS-1	5.0	0.39	36.5	15.5	52	54.8	95%	52	70%	30%	3.5	0.12	3.6	3.6
A4	A4-PS-2	9.9	0.40	32	16.1	48.1	56.6	85%	48.1	67%	33%	6.6	0.13	6.7	6.7
A4	A4-PS-3	20.0	0.40	29.5	16.3	45.8	50.4	91%	45.8	64%	36%	12.9	0.14	13.0	13

APPENDIX B: Calculation of Whole Body Concentrations from Fillet and Carcass Data (Cont'd)

Location	Sample Number	Endrin Conc. (ug/kg, ww) Carc. (sub)	Fillet (REAC)	Weight Ratios Carcass	Fillet	Fillet&Carcass	Total Weight	Fill & Carc. % of Total	Carc.+Fillet	% Carc W	% Fillet W	Carc Conc	Fillet Conc	Total Conc (fillet &carc)	Rounded Total Conc
A1	A1-PS-1	5.0	0.38	37	21.1	58.1	60.4	96%	58.1	64%	36%	3.2	0.14	3.3	3.3
A1	A1-PS-2	50.0	0.40	24.2	16.5	40.7	46.1	88%	40.7	59%	41%	29.7	0.16	29.9	30
A1	A1-PS-3	10.0	0.40	21.1	15.3	36.4	41.1	89%	36.4	58%	42%	5.8	0.17	6.0	6.0
A2	A2-PS-1	5.0	0.38	36.3	17.7	54	67.1	80%	54	67%	33%	3.4	0.12	3.5	3.5
A2	A2-PS-2	9.8	0.45	21	15	36	39.2	92%	36	58%	42%	5.7	0.19	5.9	5.9
A3	A3-PS-1	5.0	0.40	81.5	20.8	102.3	110.1	93%	102.3	80%	20%	4.0	0.08	4.1	4.1
A3	A3-PS-2	5.0	0.38	50.1	17.1	67.2	80.7	83%	67.2	75%	25%	3.7	0.10	3.8	3.8
A3	A3-PS-3	9.8	0.38	25.5	15.2	40.7	46.2	88%	40.7	63%	37%	6.1	0.14	6.3	6.3
A4	A4-PS-1	5.0	0.39	36.5	15.5	52	54.8	95%	52	70%	30%	3.5	0.12	3.6	3.6
A4	A4-PS-2	9.9	0.40	32	16.1	48.1	56.6	85%	48.1	67%	33%	6.6	0.13	6.7	6.7
A4	A4-PS-3	20.0	0.40	29.5	16.3	45.8	50.4	91%	45.8	64%	36%	12.9	0.14	13.0	13

Location	Sample Number	Dieldrin Conc. (ug/kg, ww) Carc. (sub)	Fillet (REAC)	Weight Ratios Carcass	Fillet	Fillet&Carcass	Total Weight	Fill & Carc. % of Total	Carc.+Fillet	% Carc W	% Fillet W	Carc Conc	Fillet Conc	Total Conc (fillet &carc)	Rounded Total Conc
A1	A1-PS-1	5.0	0.38	37	21.1	58.1	60.4	96%	58.1	64%	36%	3.2	0.14	3.3	3.30
A1	A1-PS-2	50.0	0.40	24.2	16.5	40.7	46.1	88%	40.7	59%	41%	29.7	0.16	29.9	30
A1	A1-PS-3	10.0	0.40	21.1	15.3	36.4	41.1	89%	36.4	58%	42%	5.8	0.17	6.0	6.0
A2	A2-PS-1	5.0	0.38	36.3	17.7	54	67.1	80%	54	67%	33%	3.4	0.12	3.5	3.5
A2	A2-PS-2	9.8	0.45	21	15	36	39.2	92%	36	58%	42%	5.7	0.19	5.9	5.9
A3	A3-PS-1	5.0	0.40	81.5	20.8	102.3	110.1	93%	102.3	80%	20%	4.0	0.08	4.1	4.1
A3	A3-PS-2	5.0	0.38	50.1	17.1	67.2	80.7	83%	67.2	75%	25%	3.7	0.10	3.8	3.8
A3	A3-PS-3	9.8	0.38	25.5	15.2	40.7	46.2	88%	40.7	63%	37%	6.1	0.14	6.3	6.3
A4	A4-PS-1	5.0	0.39	36.5	15.5	52	54.8	95%	52	70%	30%	3.5	0.12	3.6	3.6
A4	A4-PS-2	9.9	0.40	32	16.1	48.1	56.6	85%	48.1	67%	33%	6.6	0.13	6.7	6.7
A4	A4-PS-3	20.0	0.40	29.5	16.3	45.8	50.4	91%	45.8	64%	36%	12.9	0.14	13.0	13

Location	Sample Number	Methoxychlor Conc. Carc. (sub)	Fillet (REAC)	Weight Ratios Carcass	Fillet	Fillet&Carcass	Total Weight	Fill & Carc. % of Total	Carc.+Fillet	% Carc W	% Fillet W	Carc Conc	Fillet Conc	Total Conc (fillet &carc)	Rounded Total Conc
A1	A1-PS-1	25.0	0.38	37	21.1	58.1	60.4	96%	58.1	64%	36%	16	0.14	16	16
A1	A1-PS-2	250.0	0.40	24.2	16.5	40.7	46.1	88%	40.7	59%	41%	149	0.16	149	150
A1	A1-PS-3	50.0	0.40	21.1	15.3	36.4	41.1	89%	36.4	58%	42%	29	0.17	29	29
A2	A2-PS-1	25.0	0.38	36.3	17.7	54	67.1	80%	54	67%	33%	17	0.12	17	17
A2	A2-PS-2	49.0	0.45	21	15	36	39.2	92%	36	58%	42%	29	0.19	29	29
A3	A3-PS-1	25.0	0.40	81.5	20.8	102.3	110.1	93%	102.3	80%	20%	20	0.08	20	20
A3	A3-PS-2	25.0	0.38	50.1	17.1	67.2	80.7	83%	67.2	75%	25%	19	0.10	19	19
A3	A3-PS-3	49.0	0.38	25.5	15.2	40.7	46.2	88%	40.7	63%	37%	31	0.14	31	31
A4	A4-PS-1	25.0	0.39	36.5	15.5	52	54.8	95%	52	70%	30%	18	0.12	18	18
A4	A4-PS-2	50.0	0.40	32	16.1	48.1	56.6	85%	48.1	67%	33%	33	0.13	33	33
A4	A4-PS-3	98.0	0.40	29.5	16.3	45.8	50.4	91%	45.8	64%	36%	63	0.14	63	63

APPENDIX B: Calculation of Whole Body Concentrations from Fillet and Carcass Data (Cont'd)

Location	Sample Number	PCB-1248 Conc. (ug/kg, ww) Carc. (sub)	Fillet (REAC)	Weight Ratios Carcass	Fillet	Fillet&Carcass	Total Weight	Fill & Carc. % of Total	Carc.+Fillet	% Carc W	% Fillet W	Carc Conc	Fillet Conc	Total Conc (fillet &carc)	Rounded Total Conc
A1	A1-PS-1	50.0	193.00	37	21.1	58.1	60.4	96%	58.1	64%	36%	32	70	102	100
A1	A1-PS-2	500.0	1,650.00	24.2	16.5	40.7	46.1	88%	40.7	59%	41%	297	669	966	1,000
A1	A1-PS-3	100.0	113.00	21.1	15.3	36.4	41.1	89%	36.4	58%	42%	58	47	105	110
A2	A2-PS-1	50.0	1,344.00	36.3	17.7	54	67.1	80%	54	67%	33%	34	441	474	470
A2	A2-PS-2	98.0	2,025.00	21	15	36	39.2	92%	36	58%	42%	57	844	901	900
A3	A3-PS-1	50.0	720.00	81.5	20.8	102.3	110.1	93%	102.3	80%	20%	40	146	186	190
A3	A3-PS-2	50.0	693.00	50.1	17.1	67.2	80.7	83%	67.2	75%	25%	37	176	214	210
A3	A3-PS-3	98.0	1,160.00	25.5	15.2	40.7	46.2	88%	40.7	63%	37%	61	433	495	490
A4	A4-PS-1	50.0	204.70	36.5	15.5	52	54.8	95%	52	70%	30%	35	61	96	96
A4	A4-PS-2	99.0	500.00	32	16.1	48.1	56.6	85%	48.1	67%	33%	66	167	233	230
A4	A4-PS-3	200.0	1,520.00	29.5	16.3	45.8	50.4	91%	45.8	64%	36%	129	541	670	670

Location	Sample Number	Arsenic Conc. (mg/kg, ww) Carc. (sub)	Fillet (REAC)	Weight Ratios Carcass	Fillet	Fillet&Carcass	Total Weight	Fill & Carc. % of Total	Carc.+Fillet	% Carc W	% Fillet W	Carc Conc	Fillet Conc	Total Conc (fillet &carc)	Rounded Total Conc
A1	A1-PS-1	0.190	0.126	37	21.1	58.1	60.4	96%	58.1	64%	36%	0.12	0.05	0.17	0.17
A1	A1-PS-2	0.185	0.052	24.2	16.5	40.7	46.1	88%	40.7	59%	41%	0.11	0.02	0.13	0.13
A1	A1-PS-3	0.190	0.074	21.1	15.3	36.4	41.1	89%	36.4	58%	42%	0.11	0.03	0.14	0.14
A2	A2-PS-1	0.175	0.048	36.3	17.7	54	67.1	80%	54	67%	33%	0.12	0.02	0.13	0.13
A2	A2-PS-2	0.185	0.069	21	15	36	39.2	92%	36	58%	42%	0.11	0.03	0.14	0.14
A3	A3-PS-1	0.185	0.042	81.5	20.8	102.3	110.1	93%	102.3	80%	20%	0.15	0.01	0.16	0.16
A3	A3-PS-2	0.185	0.048	50.1	17.1	67.2	80.7	83%	67.2	75%	25%	0.14	0.01	0.15	0.15
A3	A3-PS-3	0.175	0.055	25.5	15.2	40.7	46.2	88%	40.7	63%	37%	0.11	0.02	0.13	0.13
A4	A4-PS-1	0.090	0.070	36.5	15.5	52	54.8	95%	52	70%	30%	0.06	0.02	0.08	0.08
A4	A4-PS-2	0.145	0.062	32	16.1	48.1	56.6	85%	48.1	67%	33%	0.10	0.02	0.12	0.12
A4	A4-PS-3	0.240	0.065	29.5	16.3	45.8	50.4	91%	45.8	64%	36%	0.15	0.02	0.18	0.18

Location	Sample Number	Cadmium Conc. (mg/kg, ww) Carc. (sub)	Fillet (REAC)	Weight Ratios Carcass	Fillet	Fillet&Carcass	Total Weight	Fill & Carc. % of Total	Carc.+Fillet	% Carc W	% Fillet W	Carc Conc	Fillet Conc	Total Conc (fillet &carc)	Rounded Total Conc
A1	A1-PS-1	0.270	0.084	37	21.1	58.1	60.4	96%	58.1	64%	36%	0.17	0.03	0.20	0.20
A1	A1-PS-2	0.380	0.078	24.2	16.5	40.7	46.1	88%	40.7	59%	41%	0.23	0.03	0.26	0.26
A1	A1-PS-3	0.270	0.105	21.1	15.3	36.4	41.1	89%	36.4	58%	42%	0.16	0.04	0.20	0.20
A2	A2-PS-1	0.125	0.071	36.3	17.7	54	67.1	80%	54	67%	33%	0.08	0.02	0.11	0.11
A2	A2-PS-2	0.420	0.103	21	15	36	39.2	92%	36	58%	42%	0.25	0.04	0.29	0.29
A3	A3-PS-1	0.450	0.063	81.5	20.8	102.3	110.1	93%	102.3	80%	20%	0.36	0.01	0.37	0.37
A3	A3-PS-2	0.130	0.074	50.1	17.1	67.2	80.7	83%	67.2	75%	25%	0.10	0.02	0.12	0.12
A3	A3-PS-3	0.270	0.083	25.5	15.2	40.7	46.2	88%	40.7	63%	37%	0.17	0.03	0.20	0.20
A4	A4-PS-1	0.060	0.106	36.5	15.5	52	54.8	95%	52	70%	30%	0.04	0.03	0.07	0.07
A4	A4-PS-2	0.100	0.093	32	16.1	48.1	56.6	85%	48.1	67%	33%	0.07	0.03	0.10	0.10
A4	A4-PS-3	0.165	0.095	29.5	16.3	45.8	50.4	91%	45.8	64%	36%	0.11	0.03	0.14	0.14

APPENDIX B: Calculation of Whole Body Concentrations from Fillet and Carcass Data (Cont'd)

Location	Sample Number	Lead Conc. (mg/kg, ww) Carc. (sub)	Fillet (REAC)	Weight Ratios Carcass	Fillet	Fillet&Carcass	Total Weight	Fill & Carc. % of Total	Carc.+Fillet	% Carc W	% Fillet W	Carc Conc	Fillet Conc	Total Conc (fillet &carc)	Rounded Total Conc
A1	A1-PS-1	0.760	0.056	37	21.1	58.1	60.4	96%	58.1	64%	36%	0.48	0.02	0.50	0.50
A1	A1-PS-2	0.670	0.052	24.2	16.5	40.7	46.1	88%	40.7	59%	41%	0.40	0.02	0.42	0.42
A1	A1-PS-3	0.590	0.074	21.1	15.3	36.4	41.1	89%	36.4	58%	42%	0.34	0.03	0.37	0.37
A2	A2-PS-1	0.650	0.048	36.3	17.7	54	67.1	80%	54	67%	33%	0.44	0.02	0.45	0.45
A2	A2-PS-2	0.740	0.069	21	15	36	39.2	92%	36	58%	42%	0.43	0.03	0.46	0.46
A3	A3-PS-1	1.200	0.042	81.5	20.8	102.3	110.1	93%	102.3	80%	20%	0.96	0.01	0.96	0.96
A3	A3-PS-2	0.490	0.048	50.1	17.1	67.2	80.7	83%	67.2	75%	25%	0.37	0.01	0.38	0.38
A3	A3-PS-3	0.490	0.055	25.5	15.2	40.7	46.2	88%	40.7	63%	37%	0.31	0.02	0.33	0.33
A4	A4-PS-1	0.400	0.070	36.5	15.5	52	54.8	95%	52	70%	30%	0.28	0.02	0.30	0.30
A4	A4-PS-2	0.800	0.062	32	16.1	48.1	56.6	85%	48.1	67%	33%	0.53	0.02	0.55	0.55
A4	A4-PS-3	0.700	0.065	29.5	16.3	45.8	50.4	91%	45.8	64%	36%	0.45	0.02	0.47	0.47

Location	Sample Number	Mercury Conc. (mg/kg, ww) Carc. (sub)	Fillet (REAC)	Weight Ratios Carcass	Fillet	Fillet&Carcass	Total Weight	Fill & Carc. % of Total	Carc.+Fillet	% Carc W	% Fillet W	Carc Conc	Fillet Conc	Total Conc (fillet &carc)	Rounded Total Conc
A1	A1-PS-1	0.018	0.053	37	21.1	58.1	60.4	96%	58.1	64%	36%	0.01	0.02	0.03	0.03
A1	A1-PS-2	0.008	0.051	24.2	16.5	40.7	46.1	88%	40.7	59%	41%	0.00	0.02	0.03	0.03
A1	A1-PS-3	0.036	0.095	21.1	15.3	36.4	41.1	89%	36.4	58%	42%	0.02	0.04	0.06	0.06
A2	A2-PS-1	0.028	0.057	36.3	17.7	54	67.1	80%	54	67%	33%	0.02	0.02	0.04	0.04
A2	A2-PS-2	0.035	0.053	21	15	36	39.2	92%	36	58%	42%	0.02	0.02	0.04	0.04
A3	A3-PS-1	0.075	0.110	81.5	20.8	102.3	110.1	93%	102.3	80%	20%	0.06	0.02	0.08	0.08
A3	A3-PS-2	0.034	0.082	50.1	17.1	67.2	80.7	83%	67.2	75%	25%	0.03	0.02	0.05	0.05
A3	A3-PS-3	0.025	0.040	25.5	15.2	40.7	46.2	88%	40.7	63%	37%	0.02	0.01	0.03	0.03
A4	A4-PS-1	0.010	0.025	36.5	15.5	52	54.8	95%	52	70%	30%	0.01	0.01	0.01	0.01
A4	A4-PS-2	0.080	0.128	32	16.1	48.1	56.6	85%	48.1	67%	33%	0.05	0.04	0.10	0.10
A4	A4-PS-3	0.040	0.028	29.5	16.3	45.8	50.4	91%	45.8	64%	36%	0.03	0.01	0.04	0.04

Location	Sample Number	Selenium Conc. (mg/kg, ww) Carc. (sub)	Fillet (REAC)	Weight Ratios Carcass	Fillet	Fillet&Carcass	Total Weight	Fill & Carc. % of Total	Carc.+Fillet	% Carc W	% Fillet W	Carc Conc	Fillet Conc	Total Conc (fillet &carc)	Rounded Total Conc
A1	A1-PS-1	1.900	1.092	37	21.1	58.1	60.4	96%	58.1	64%	36%	1.21	0.40	1.61	1.6
A1	A1-PS-2	1.400	0.572	24.2	16.5	40.7	46.1	88%	40.7	59%	41%	0.83	0.23	1.06	1.1
A1	A1-PS-3	1.400	0.609	21.1	15.3	36.4	41.1	89%	36.4	58%	42%	0.81	0.26	1.07	1.1
A2	A2-PS-1	1.600	0.525	36.3	17.7	54	67.1	80%	54	67%	33%	1.08	0.17	1.25	1.2
A2	A2-PS-2	1.500	0.550	21	15	36	39.2	92%	36	58%	42%	0.88	0.23	1.10	1.1
A3	A3-PS-1	1.400	0.504	81.5	20.8	102.3	110.1	93%	102.3	80%	20%	1.12	0.10	1.22	1.2
A3	A3-PS-2	1.500	0.567	50.1	17.1	67.2	80.7	83%	67.2	75%	25%	1.12	0.14	1.26	1.3
A3	A3-PS-3	1.000	0.360	25.5	15.2	40.7	46.2	88%	40.7	63%	37%	0.63	0.13	0.76	0.76
A4	A4-PS-1	0.800	0.138	36.5	15.5	52	54.8	95%	52	70%	30%	0.56	0.04	0.60	0.60
A4	A4-PS-2	0.900	0.340	32	16.1	48.1	56.6	85%	48.1	67%	33%	0.60	0.11	0.71	0.71
A4	A4-PS-3	1.300	0.532	29.5	16.3	45.8	50.4	91%	45.8	64%	36%	0.84	0.19	1.03	1.0

APPENDIX C

Final Analytical Reports
Cornell-Dubilier Site
South Plainfield, NJ
April 1998

ANALYTICAL REPORT

Prepared by
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Appendices will be furnished on request.

Introduction

REAC, in response to ERTC WA # 2-274, provided analytical support for environmental samples collected at the Cornell Dubilier Electronics Site in S. Plainfield, NJ as described in the following table. The support also included QA/QC, data review and the preparation of a report summarizing the analytical methods, results, and the QA/QC results.

The samples were treated with procedures consistent with those described in SOP #1008 and are summarized in the following table:

COC #**	Number of Samples	Sampling Date	Date Received	Matrix	Analysis	Laboratory
000-001	3	6/27/97	6/30/97	Water	Pest/PCB, BNA, TAL Metals (filt), TAL Metals (unfilt).	GP***
000-002	3	6/27/97	6/30/97	Water	Pest/PCB, TAL Metals (filt)	GP***
000-002	4	6/27/97	6/30/97	Water	BNA, TAL Metals (unfilt)	GP***
000-003	3	6/27/97	6/30/97	Water	Pest/PCB, TAL Metals (filt)	GP***
000-003	2	6/27/97	6/30/97	Water	BNA, TAL Metals (unfilt)	GP***
000-004	7	6/27/97	6/30/97	Water	VOC	GP***
000-005	3	6/27/97	6/30/97	Water	VOC	GP***
05308	19	6/18/97	6/23/97	Soil	BNA	GP***
05309	8	6/18/97	6/23/97	Soil	BNA	GP***
05310	20	6/18/97	6/23/97	Soil	TAL Metals	GP***
05311	7	6/18/97	6/23/97	Soil	TAL Metals	GP***
05314	20	6/18/97	6/23/97	Soil	Pest/PCB	GP***
05315	6	6/18/97	6/23/97	Soil	Pest/PCB	GP***
05315	1	6/20/97	6/23/97	Soil	Pest/PCB	GP***

** COC # denotes Chain of Custody number

*** GP denotes GP Environmental

The Sample Table is continued on the next page

Sample Table (Cont)

COC #**	Number of Samples	Sampling Date	Date Received	Matrix	Analysis	Laboratory
05316	20	6/18/97	6/23/97	Soil	VOC	GP***
05317	6	6/18/97	6/23/97	Soil	VOC	GP***
05318	20	6/18/97	6/23/97	Soil	TOC	GP***
05319	6	6/18/97	6/23/97	Soil	TOC	GP***
05321	13	6/17/97	6/23/97	Tissue	Pest/PCB, % Lipids, % Solids, TAL Metals	GP***
05321	7	6/18/97	6/23/97	Tissue	Pest/PCB, % Lipids, % Solids, TAL Metals	GP***
05322	6	6/17/97	6/23/97	Tissue	Pest/PCB, % Lipids, % Solids, TAL Metals	GP***
05322	14	6/18/97	6/23/97	Tissue	Pest/PCB, % Lipids, % Solids, TAL Metals	GP***
05326	16	6/17/97	6/23/97	Tissue	Pest/PCB, % Lipids, % Moisture	GP***
05326	4	6/18/97	6/23/97	Tissue	Pest/PCB, % Lipids, % Moisture	GP***
05330	6	6/17/97	6/23/97	Tissue	Pest/PCB, % Lipids, % Solids, TAL Metals	GP***
05330	7	6/18/97	6/23/97	Tissue	Pest/PCB, % Lipids, % Solids, TAL Metals	GP***

** COC # denotes Chain of Custody number
*** GP denotes GP Environmental

The Sample Table is continued on the next page

Sample Table (Cont)

COC #**	Number of Samples	Sampling Date	Date Received	Matrix	Analysis	Laboratory
05334	1	6/17/97	6/23/97	Tissue	Pest/PCB, % Lipids, % Solids	GP***
05334	5	6/18/97	6/23/97	Tissue	Pest/PCB, % Lipids, % Solids	GP***
05338	6	6/18/97	6/23/97	Sediment	TOC	GP***
05338	9	6/19/97	6/23/97	Sediment	TOC	GP***
05338	4	6/20/97	6/23/97	Sediment	TOC	GP***
05340	6	6/18/97	6/23/97	Sediment	TAL Metals	GP***
05340	9	6/19/97	6/23/97	Sediment	TAL Metals	GP***
05340	4	6/20/97	6/23/97	Sediment	TAL Metals	GP***
05341	6	6/18/97	6/23/97	Sediment	Pest/PCB	GP***
05341	9	6/19/97	6/23/97	Sediment	Pest/PCB	GP***
05341	4	6/20/97	6/23/97	Sediment	Pest/PCB	GP***
05342	6	6/18/97	6/23/97	Sediment	BNA	GP***
05342	9	6/19/97	6/23/97	Sediment	BNA	GP***
05342	4	6/20/97	6/23/97	Sediment	BNA	GP***

** COC # denotes Chain of Custody number
*** GP denotes GP Environmental

The Sample Table is continued on the next page

Sample Table (Cont)

COC #**	Number of Samples	Sampling Date	Date Received	Matrix	Analysis	Laboratory
05344	1	6/18/97	6/23/97	Sediment	Ammonia, TPH	GP***
05344	5	6/19/97	6/23/97	Sediment	Ammonia, TPH	GP***
05344	3	6/20/97	6/23/97	Sediment	Ammonia, TPH	GP***
05345	6	6/18/97	6/23/97	Sediment	VOC	GP***
05345	9	6/19/97	6/23/97	Sediment	VOC	GP***
05345	4	6/20/97	6/23/97	Sediment	VOC	GP***
05347	1	6/18/97	6/23/97	Water	VOC,BNA, Pest/PCB, TAL Metals	GP***
05347	1	6/18/97	6/23/97	Sediment	VOC	GP***
05347	1	6/19/97	6/23/97	Sediment	VOC	GP***
05347	1	6/20/97	6/23/97	Water	VOC	GP***
05347	2	6/20/97	6/23/97	Sediment	VOC	GP***
00615	4	6/18/97	6/24/97	Carbon Dioxide	TAL Metals Hg	GP***

** COC # denotes Chain of Custody number
*** GP denotes GP Environmental

The Sample Table is continued on the next page

COC #**	Number of Samples	Sampling Date	Date Received	Matrix	Analysis	Laboratory
07299	9	6/17/97	6/18/97	Fish fillet	Pest/PCB TAL Metals % Lipids % Solids	REAC
07726	10	6/17/97	6/18/97	Fish Tissue	Pest/PCB TAL Metals % Lipids % Solids	REAC
07727	14	6/17/97	6/18/97	Fish Tissue	Pest/PCB TAL Metals % Lipids % Solids	REAC
07728	15	6/18/97	6/19/97	Tissue	Pest/PCB TAL Metals % Lipids % Solids	REAC
07729	4	6/18/97	6/24/97	Tissue	Pest/PCB, BNA TAL Metals % Lipids % Solids	GP***
07729	16	6/18/97	6/24/97	Tissue	Pest/PCB TAL Metals % Lipids % Solids	GP***
07730	11	6/18/97	6/24/97	Tissue	Pest/PCB, BNA TAL Metals % Lipids % Solids	GP***
07730	4	6/18/97	6/24/97	Tissue	Pest/PCB, BNA TAL Metals % Lipids, % Solids	GP***
07730	5	6/20/97	6/24/97	Tissue	Pest/PCB TAL Metals % Lipids % Solids	GP***
07731	2	6/20/97	6/24/97	Tissue	Pest/PCB, % Lipids, % Moisture, BNA	GP***

** COC # denotes Chain of Custody number
*** GP denotes GP Environmental

Case Narrative

VOC in Soil Package G 363

Samples E 10371, E 10372, E 10373, E 10374, E 10375, E 10380, E 10381, E 10382, E 10383, E 10384, E 10385, E 10386, E 10387, E 10389, E 10390, E 10391, E 10393 and E 10394 were analyzed after the holding time had expired. The VOC data for these samples should be regarded as estimated.

The method blank analyzed on 6/28/97 contained 1µg/kg methylene chloride. The methylene chloride in sample E 10388 should be regarded as not detected.

The method blank analyzed on 6/29/97 contained 2µg/kg methylene chloride, 17 µg/kg acetone, 3µg/kg toluene and 1 µg/kg xylene. The methylene chloride and acetone in sample E 10392 should be regarded as not detected.

The method blank analyzed on 7/10/97 contained 8µg/kg methylene chloride. The methylene chloride in samples E 10371, E 10372, E 10373, E 10374, E 10375, E 10380, E 10381, E 10382, E 10383, E 10384 and E 10385 should be regarded as not detected.

The method blank analyzed on 7/11/97 contained 3µg/kg methylene chloride. The methylene chloride in samples E 10387, E 10389, E 10390 and E 10391 should be regarded as not detected.

In the initial calibration of 7/8/97, the response factor for 2-butanone was less than 0.05. The value for 2-butanone in samples E 10371, E 10372, E 10373, E 10374, E 10375, E 10380, E 10381, E 10382, E 10383, E 10384, E 10385, E 10386, E 10387, E 10388, E 10389, E 10390, E 10391, E 10392, E 10393 and E 10394 should be regarded as unusable.

In the continuing calibrations of 6/28/97, 6/29/97, 7/1/97, 7/10/97 and 7/11/97 the response factor for 2-butanone was less than 0.05. The value for 2-butanone in samples E 10371, E 10372, E 10373, E 10374, E 10375, E 10380, E 10381, E 10382, E 10383, E 10384, E 10385, E 10386, E 10387, E 10388, E 10389, E 10390, E 10391, E 10392, E 10393 and E 10394 should be regarded as unusable.

In the continuing calibration of 6/29/97 the acceptable QC limits were exceeded by 1,1-dichloroethene (20%), 2,2-dichloropropane (32%), 4-methyl-2-pentanone (29%) and 2-hexanone (25%). The data are not affected because these analytes were not detected in the samples that were quantified by this calibration.

In the continuing calibration of 7/11/97 the acceptable QC limits were exceeded by chloroethane (30%), acetone (29%) and 2-butanone (30%). The values for acetone in samples E 10386, E 10387, E 10389, E 10390, E 10391 and E 10394 should be regarded as estimated. The data for chloroethane and 2-butanone are not affected.

One surrogate percent recovery exceeded the acceptable QC limits for samples E 10372, E 10373, E 10375, E 10380, E 10381, E 10384, E 10390, E 10391, E 10392, E 10393 and E 10394. The VOC data for these samples should be regarded as estimated.

Three surrogate percent recoveries exceeded the acceptable QC limits for sample E 10385. The VOC data for this sample should be regarded as unusable.

Three internal standard areas exceeded the acceptable QC limits for samples E 10374, E 10384, E 10381, and E 10385. The compounds quantified by these internal standards for these samples should be regarded as estimated.

One internal standard area exceeded the acceptable QC limits for samples E 10392, E 10374 MS, E 10374 MSD, and E 10388 MS. The compounds quantified by this internal standard for these samples should be regarded as estimated.

VOC in Water Package G 379

The method blank analyzed on 7/1/97 contained 4μg/L acetone. The data for acetone in sample 2000-1004 should be regarded as not detected.

The method blank analyzed on 7/2/97 contained 3μg/L acetone. The data for acetone in samples 2000-1003 and 2000-1010 should be regarded as not detected.

The laboratory blank contained 15μg/L acetone and 1.5μg/L methylene chloride. The data are not affected.

The trip blank contained 36μg/L acetone and 1.2μg/L methylene chloride. The data for methylene chloride in samples 2000-1003 and 2000-1010 should be regarded as not detected. The data for acetone are not affected.

In the initial calibration check standard of 4/24/97, the average response factors for acetone and 2-butanone were less than 0.05. The data for acetone and 2-butanone should be regarded as unusable for samples 2000-1001, 2000-1002, 2000-1003, 2000-1004, 2000-1005, 2000-1006, 2000-1007, 2000-1008, 2000-1009 and 2000-1010.

In the continuing calibration check standards of 7/1/97 and 7/2/97, the average response factors for acetone, 2-butanone and 4-methyl-2-pentanone were less than 0.05. The data for acetone, 2-butanone and 4-methyl-2-pentanone should be regarded as unusable 2000-1001, 2000-1002, 2000-1003, 2000-1004, 2000-1005, 2000-1006, 2000-1007, 2000-1008, 2000-1009 and 2000-1010.

In the continuing calibration check standards of 7/1/97, the acceptable QC limits were exceeded by dichlorodifluoromethane (47%), MTBE (30%), 2,2'-dichloropropane (51%) and 2-butanaone (41%). The values for MTBE in samples 2000-1001 and 2000-1008 should be regarded as estimated. Non-detected values for 2,2'-dichloropropane in samples 2000-1001, 2000-1002, 2000-1004, 2000-1005, 2000-1006, 2000-1007 and 2000-1008 which should be regarded as estimated.

In the continuing calibration check standards of 7/2/97, the aceptable QC limits were exceeded by dichlorodifluoromethane (48%), acetone (28%), 2,2'-dichloropropane (42%), 2-butanaone (37%), 4-methyl-2-pentanone (26%) and 2-hexanone (28%). The data are not affected.

VOC in Soil Package G 373

Samples E 10487 and E 10488 were analyzed after the holding time had expired. The VOC results of the analysis should be regarded as estimated

The method blank analyzed on 7/2/97 contained 3μg/kg methylene chloride. The data for methylene chloride in sample E 10397 should be regarded as not detected.

The method blank analyzed on 7/10/97 contained 8μg/kg methylene chloride. The data for methylene chloride in sample E 10487, E 10488 and E 10493 should be regarded as not detected.

In the initial calibration check standard of 7/8/97, the average response factors for 2-butanone was less than 0.05. The data for 2-butanone should be regarded as unusable for samples E 10487 and E 10488.

In the continuing calibration check standards of 6/29/97, 6/30/97, 7/2/97 and 7/10/97 the average response factors for 2-butanone was less than 0.05. The data for 2-butanone should be regarded as unusable for samples 10395, 10396, 10397, 10398, 10399, 10400, 10486, 10487, 10488, 10489, 10490, 10491, 10492, 10493, 10494, 10495, 10496, 10497, 10498 and 10262.

In the continuing calibration check standard of 6/29/97, the acceptable QC limits were exceeded by 1,1-dichloroethene (20%), 2,2-dichloropropane (32%), 4-methyl-2-pentanone (29%) and 2-hexanone (25%). The data are not affected as these analytes were not detected in the samples quantified by this calibration.

In the continuing calibration check standard of 6/30/97, the acceptable QC limits were exceeded by 2,2-dichloropropane (45%), 1,2-dichloroethane (39%), dibromomethane (43%), bromodichloromethane (31%), 1,1,2-trichloroethane (45%), 1,3-dichloropropane (29%), dibromochloromethane (30%), 1,2-dibromoethane (35%), bromoform (43%), 1,1,2,2-tetrachloroethane (52%), acetone (45%), MTBE (38%), 2-butanone (66%), cis-1,3-dichloropropene (29%), trans 1,3-dichloropropene (39), 4-methyl-2-pentanone (71%) and 2-hexanone (29%). The data for 1,1,2,2-tetrachloroethane, 4-methyl-2-pentanone, 2-hexanone and acetone for samples 10489, 10490, 10491, 10492, 10493, 10494, 10495, 10496, 10497, 10498 and 10262 should be regarded as estimated. The remainder of the data are not affected as the remaining analytes were not detected in the samples quantified by this calibration.

In the continuing calibration check standard of 7/2/97, the acceptable QC limits were exceeded by 2-butanone (32%), 4-methyl-2-pentanone (38%) and 2-hexanone (36%). The data are not affected as these analytes were not detected in the samples quantified by this calibration.

One surrogate percent recovery exceeded the acceptable QC limits for samples 10395, 10399, 10486, 10493, 10495, 10487, 10488 and 10489. The VOC data for these samples should be regarded as estimated.

Three surrogate percent recoveries exceeded the acceptable QC limits for sample 10396. The VOC data for this sample should be regarded as estimated.

VOC in Water and Soil Package G 371

Water samples ABC 10215 and DEF 10216 were extracted after the holding time had expired. The VOC results of the analysis should be regarded as estimated

The method blank analyzed on 6/30/97 contained 9µg/L acetone. The data for acetone in samples 10215 and 10216 should be regarded as not detected.

The method blank analyzed on 7/1/97 contained 3µg/kg methylene chloride. The data for methylene chloride in samples A 10211, A 10212, A 10213 and A 10214 should be regarded as not detected.

The method blank analyzed on 7/2/97 contained 3µg/kg methylene chloride. The data for methylene chloride in sample E 10263 should be regarded as not detected.

The field blank, sample A 10211, dated 6/19/97, contained 24 µg/kg acetone and 3.7 µg/kg methylene chloride. The data are not affected.

The field blank, sample A 10213, dated 6/20/97, contained 22 µg/kg acetone and 3.4 µg/kg methylene chloride. The data are not affected.

Sample A 10214, dated 6/20/97, contained 29 µg/kg acetone and 4 µg/kg methylene chloride and sample A 10215, also dated 6/20/97, contained 18 µg/L acetone and 1.4 µg/L toluene. Acetone in sample A 10213 should be regarded as not detected.

In the initial calibration check standard of 4/24/97, the average response factor for 2-butanone and acetone was less than 0.05. The data for acetone and 2-butanone should be regarded as unusable for samples A 10215 and A 10216.

In the continuing calibration check standard for the aqueous samples of 6/30/97, the average response factors for 2-butanone and 4-methyl-2-pentanone were less than 0.05. The data for sample A 10215, and A 10216 should be regarded as unusable.

In the continuing calibration check standards of 7/1/97 and 7/2/97 for the soil samples, the average response factor for 2-butanone was less than 0.05. The data should be regarded as unusable for 2-butanone in samples E 10263, E 10264, E 10265, E 10266 E 10267, A 10212, A 10211, A 10213 and A 10214.

In the continuing calibration check standard for the aqueous samples of 6/30/97, the acceptable QC limits were exceeded for dichlorodifluoromethane (42%), bromomethane (28%), acetone (31%), 2,2-dichloropropane (48%) and 2-butanone (37%). The data for samples A 10215 and A 10216 should be regarded as estimated for acetone.

In the continuing calibration check standard for the soil samples of 7/1/97, the acceptable QC limits were exceeded for 2,2-dichloropropane (31%), acetone (30%), 2-butanone (52%), 4-methyl-2-pentanone (37%) and 2-hexanone (31%). The data for samples E 10264, E 10265, E 10266, E 10267, A 10212, A 10211, A 10213 and A 10214 should be regarded as estimated for acetone and 2-butanone.

In the continuing calibration check standard for the soil samples of 7/2/97, the acceptable QC limits were exceeded for 2-butanone (32%), 4-methyl-2-pentanone (38%) and 2-hexanone (36%). The data are not affected since these analytes were not detected in the samples quantified by this calibration.

One surrogate percent recovery exceeded the acceptable QC limits for samples E 10267, E 10267 MS and E 10267 MSD. The data for these samples should be regarded as estimated.

BNA in ~~Water~~ Package G 359

The method blank of 6/29/97 contained 2700 µg/kg di-n-butyl phthalate and 200 µg/kg bis (2-ethylhexyl) phthalate. The data for di-n-butyl phthalate and bis (2-ethylhexyl) phthalate should be regarded as not detected in samples C 10371, C 10372, C 10373, C 10374, C 10375, C 10380, C 10381, C 10382, C 10383, C 10384, C 10385, C 10387, C 10388, C 10389, C 10390, C 10391, C 10392, C 10393 and C 10394.

The method blank of 7/2/97 contained 120 µg/kg isophorone, 360 µg/kg di-n-butyl phthalate and 300 µg/kg bis (2-ethylhexyl) phthalate. The di-n-butyl phthalate and bis (2-ethylhexyl) phthalate values for sample T1-10-2 should be regarded as not detected; the isophorone value is not affected.

In the initial calibration check standards of 7/8/97, 7/9/97 and 7/15/97 the average response factor for benzidine was less than 0.05. The data for benzidine for samples C 10371 through C 10375 and C 10380 through C 10396 should be regarded as unusable.

In the continuing calibration check standards of 7/8/97, 7/9/97, 7/10/97, 7/12/97 and 7/15/97 the average response factor for benzidine was less than 0.05. The data for benzidine for samples C 10371 through C 10375 and C 10380 through C 10396 should be regarded as unusable.

In the continuing calibration check standard of 7/9/97, the acceptable QC limits were exceeded for 2,2-oxybis (1-chloropropane) (34%). The data are not affected since this analyte was not detected in the samples quantified by this calibration.

In the continuing calibration check standard of 7/10/97, the acceptable QC limits were exceeded for 2,4-dinitrophenol (31%), 4-bromophenyl phenyl ether (31%), hexachlorobenzene (29%) and 3,3-dichlorobenzidine (30%). The data are not affected since these analytes were not detected in the samples quantified by this calibration.

In the continuing calibration check standard of 7/12/97, the acceptable QC limits were exceeded for bis (2-ethylhexyl) phthalate (26%) and benzo (ghi) perylene (31%). The data are not affected since this analyte was not detected in the samples quantified by this calibration.

In the continuing calibration check standard of 7/15/97, the acceptable QC limits were exceeded for N-nitrosodimethyl amine (55%), pyridine (53%), methyl methane sulfonate (26%) and ethyl methane sulfonate (29%). The data are not affected since benzidine was the only analyte quantified by this calibration.

BNA in Water Package G 368

In the initial calibration check standard of 7/9/97 the average response factor for benzidine was less than 0.05. The concentration of benzidine in the samples 2000-1001, 2000-1002, 2000-1003, 2000-1004, 2000-1005, 2000-1006, 2000-1007, 2000-1008 and 2000-1010 should be regarded as unusable.

In the continuing calibration check standards of 7/11/97 and 7/12/97 the average response factor for benzidine was less than 0.05. The concentration of benzidine in the samples 2000-1001, 2000-1002, 2000-1003, 2000-1004, 2000-1005, 2000-1006, 2000-1007, 2000-1008 and 2000-1010 should be regarded as unusable.

In the continuing calibration check standard of 7/11/97, the acceptable QC limit was exceeded for indeno (1,2,3-cd) pyrene (28%), dibenzo (a,h) anthracene (27%) and benzo (g,h,i) perylene (33%). The data are not affected because these analytes were not detected in the samples quantified by this calibration.

In the continuing calibration check standard of 7/12/97, the acceptable QC limit was exceeded for bis (2-ethylhexyl) phthalate (26%) and benzo (g,h,i) perylene (31%). The values for bis (2-ethylhexyl) phthalate in sample 2000-1006 should be regarded as estimated. The values for benzo (g,h,i) perylene are not affected.

In the continuing calibration check standard of 7/11/97, the acceptable QC limit was exceeded for N-nitrosodimethyl amine (54%), pyridine (40%), methyl methane sulfonate (29%), ethyl methane sulfonate (30%) and acetophenone (25.9%). The values for N-nitrosodimethyl amine in samples 2000-1001, 2000-1002, 2000-1003, 2000-1004, 2000-1005 and 2000-1007 should be regarded as estimated. The data for the other analytes are not affected as they were not detected in the samples quantified by this calibration.

In the continuing calibration check standard of 7/12/97, the acceptable QC limit was exceeded for a,a'-dimethylphenethyl amine (38%). The data are not affected as this compound was not detected in the samples quantified by this calibration.

BNA in Soil and Water Package G 386

The method blank of 7/2/97 (SBLKB) contained 720 µg/kg di-n-butyl phthalate and 180 µg/kg bis (2-ethylhexyl) phthalate.

The bis (2-ethylhexyl) phthalate and di-n-butyl phthalate content of sample 10265, 10263 and 10266 should be regarded as not detected (U).
The di-n-butyl phthalate content of samples 10264 and 10267 should be regarded as not detected (U).
The bis (2-ethylhexyl) phthalate and content of sample 10264 and 10267 is not affected.

The method blank of 7/1/97 (SBLKC) contained 360 µg/kg di-n-butyl phthalate, 130 µg/kg bis (2-ethylhexyl) phthalate and 120 µg/kg isophorone.
The isophorone content of sample 10485 should be regarded as not detected (U).
The di-n-butyl phthalate content of sample 10485 should be regarded as not detected (U).

In the initial calibration check standard of 7/15/97, the average response factor for benzidine was less than 0.05. The concentration of benzidine in samples 10263, 10264, 10265, 10266 and 10267 should be regarded as estimated. The concentration of benzidine in sample SBLKB should be regarded as unusable.

In the continuing calibration check standard of 7/9/97, the acceptable QC limit was exceeded for 2,2'-oxybis (1-chloropropane) (34%). This compound was not detected in the associated samples; the data are not affected.

In the continuing calibration check standard of 7/10/97, the acceptable QC limit was exceeded for 2,4-dinitrophenol (31%), 4-bromophenyl phenyl ether (32%), hexachlorobenzene (29%) and 3,3'-dichlorobenzidine (30%). These compounds were not detected in the associated samples; the data are not affected.

In the continuing calibration check standard of 7/13/97, the acceptable QC limit was exceeded for 3,3'-dichlorobenzidine (26%), N-nitrosodimethyl amine (60%), pyridine (52%), methyl methane sulfonate (31%), ethyl methane sulfonate (29%) aniline (26%) and acetophenone (25.8%). The data are not affected because this calibration was used to quantify MS and MSD data only.

In the continuing calibration check standard of 7/15/97, the acceptable QC limit was exceeded for N-nitrosodimethyl amine (55%), pyridine (53%), methyl methane sulfonate (26%) and ethyl methane sulfonate (29%). The non detected values for N-nitrosodimethyl amine and pyridine in samples 10264, 10267, 10265 and 10266 should be regarded as estimated.

In the continuing calibration check standard of 7/16/97, the acceptable QC limit was exceeded for benzyl alcohol (27%), 2,2 -oxybis(1-chloropropane (41%), hexachlorocyclopentadiene (29%), N-nitroso-di-n-propyl amine (33%). N-nitrosodimethyl amine (112%), pyridine (92%), 2-picoline (37%), methyl methane sulfonate (72%), ethyl methane sulfonate (68%), aniline (51%), acetophenone (47%), a,a-dimethyl phenethylamine (70%) 1,2,4,5-tetrachlorobenzene (33%) and 1,2-diphenyl hydrazine (59%). These compounds were not detected in the associated samples; the data are not affected except for the following caveats.
In samples SBLKB and 10263 the values for N-nitrosodimethyl amine and pyridine should be regarded as unusable.
In samples SBLKB and 10263 the non-detected values for methyl methane sulfonate, ethyl methane sulfonate aniline a,a-dimethylphenethyl amine and 1,2-diphenyl hydrazine should be regarded as estimated.

The percent recovery for the surrogate 2-fluorophenol exceeded the acceptable QC limits for sample 10216; the data are not affected.

BNA in Tissue Package G 375

The method blank (SBLKA) contained 360 µg/kg di-n-butyl phthalate, 130 µg/kg bis (2-ethylhexyl) phthalate and 120 µg/kg isophorone.

The results for di-n-butyl phthalate in sample 10398 should be regarded as estimated.
The bis (2-ethylhexyl) phthalate and di-n-butyl phthalate content of samples 10395, 10396 and 10397 should be regarded as not detected (U).

The method blank (SBLKB) contained 1100 µg/kg di-n-butyl phthalate, 100 µg/kg bis (2-ethylhexyl) phthalate.

The di-n-butyl phthalate content of samples 10262, 10399, 10400, 10486, 10487, 10488, 10489, 10490, 10491, 10492, 10493, 10494, 10496 and 10498 should be regarded as not detected (U).
The di-n-butyl phthalate and bis (2-ethylhexyl) phthalate content of samples 10497 and 10495 should be regarded as not detected (U).

In the initial calibration check standard of 7/15/97, the average response factor for benzidine was less than 0.05. The concentration of benzidine in sample 10496 DL should be regarded as estimated.

In the continuing calibration check standard of 7/9/97, the acceptable QC limit was exceeded for 2,2'-oxybis (1-chloropropane) (34%). This compound was not detected in the associated samples; the data are not affected.

In the continuing calibration check standard of 7/10/97, the acceptable QC limit was exceeded for 2,4-dinitrophenol (31%), 4-bromophenyl phenyl ether (32%), 3,3'-dichlorobenzidine (30%) and hexachlorobenzene (29%). These compounds were not detected in the associated samples; the data are not affected.

In the continuing calibration check standard of 7/12/97, the acceptable QC limit was exceeded for pentachlorophenol (26%), bis(2-ethylhexyl)phthalate (26%) and benzo (ghi)perylene (31%).

Pentachlorophenol was not detected in the associated samples. The data for pentachlorophenol are not affected.

The detected values for bis(2-ethylhexyl)phthalate SBLKB, 10400, 10487, 10492, 10492 RE and 10490 should be regarded as estimated.

The detected values for benzo (ghi)perylene in samples 10487, 10490, 10491, 10492, 10492 RE, 10489 and 10400 should be regarded as estimated.

In the continuing calibration check standard of 7/13/97, the acceptable QC limit was exceeded for 3,3'-dichlorobenzidine (25.7%), N-nitrosodimethyl amine (60%), pyridine (52%), methyl methane sulfonate (31%), ethyl methane sulfonate (29%) aniline (26.0%) and acetophenone (25.8%). The non detected values for N-nitrosodimethyl amine and pyridine in samples 10486, 10488, 10493, 10494, 10495, 10496, 10262, 10399 and 10497 should be regarded as estimated.

The detected value for 3.3 -dichlorobenzidine in sample 10399 should be regarded as estimated.

The internal standard areas for chrysene-d_{12} exceeded the acceptable QC limit for sample 10492; the analytes associated with this internal standard should be regarded as estimated for sample 10492.

The internal standard areas for chrysene-d_{12} and perylene-d_{12} exceeded the acceptable QC limit for samples 10399, 10496, 10498, 10498 MS and 10498 MSD; the values (both detected and non-detected) for the analytes associated with the above internal standards should be regarded as estimated for these samples.

The internal standard areas for 1,4-dichlorobenzene-d_4, naphthalene-d_8 and acenaphthene-d_{10} exceeded the acceptable QC limit for sample 10492 RE; the values for the analytes associated with the above internal standards should be regarded as estimated for this sample.

The internal standard areas for one or more compounds exceeded the acceptable QC limit for sample 10486, 10399 DL and 10496 DL. The values for the analytes associated with the above internal standard should be regarded as estimated for these samples.

BNA in Tissue Package G 387

The BNA data for samples B 08634 and B 08635 are presented wet weight because there was insufficient sample to run the percent solids analysis.

The samples were extracted after the holding time had expired. The BNA results of the analysis should be regarded as estimated for samples B 08634 and B 08635.

In the initial calibration check standard of 7/15/97, the average response factor for benzidine was less than 0.05. The values for benzidine in samples B 08634 and B 08635 should be regarded as unusable.

In the continuing calibration check standards of 7/16/97 and 7/17/97, the average response factor for benzidine was less than 0.05. The values for benzidine in samples B 08634 and B 08635 should be regarded as unusable.

In the continuing calibration check standard of 7/11/97, the acceptable QC limit was exceeded by N-nitrosodimethylamine (77%) and pyrene (71%). The values for N-nitrosodimethylamine and pyrene in samples B 08634 and B 08635 should be regarded as estimated.

In the continuing calibration check standard of 7/17/97, the acceptable QC limit was exceeded by methyl methane sulfonate (32%), ethyl methane sulfonate (32%), aniline (37%), acetophenone (33%) and α, α-dimethylphenethylamine (36%). The data are not affected as these analytes were not detected in the samples quantified by this calibration.

BNA in Tissue Package G 369

Samples B 10222, B 10223, B 10224 and B 10233 were extracted after the holding time had expired. The results of the BNA analysis for these samples should be regarded as estimated.

In the initial calibration check standard of 7/15/97, the average response factor for benzidine was less than 0.05. The results of the analysis for benzidine for samples B 10222, B 10223, B 10224 and B 10233 should be regarded as unusable.

In the continuing calibration check standards of 7/16/97 and 7/17/97, the average response factor for benzidine was less than 0.05. The results of the analysis for benzidine for samples B 10222, B 10223, B 10224 and B 10233 should be regarded as unusable.

In the continuing calibration check standard of 7/16/97, the acceptable QC limit was exceeded by N-nitrosodimethyl amine (112%), pyridine (92%), methyl methane sulfonate (72%), ethyl methane sulfonate (68%), aniline (51%), α, α-dimethylphenethyl amine (70%) and 1,2-diphenylhydrazine (59%). The results of the analysis for N-nitrosodimethyl amine, pyridine, methyl methane sulfonate, ethyl methane sulfonate, aniline, α, α-dimethylphenethyl amine and 1,2-diphenylhydrazine for samples B 10222, B 10223 and B 10233 should be regarded as estimated.

In the continuing calibration check standard of 7/16/97, the acceptable QC limit was exceeded by 2-picoline (37%), acetophenone (47%) and 1,2,4,5-tetrachlorobenzene (33%). The data are not affected because the analytes were not detected in the samples quantified by this calibration.

In the continuing calibration check standard of 7/16/97, the acceptable QC limit was exceeded by N-nitroso-di-n-propyl amine (33%), benzyl alcohol (27%), hexachlorocyclopentadiene (29%) and 2,2'-oxybis (1-chloropropane) (41%). The data are not affected because the analytes were not detected in the samples quantified by this calibration.

In the continuing calibration check standard of 7/17/97, the acceptable QC limit was exceeded by N-nitrosodimethyl amine (77%), pyridine (71%), methyl methane sulfonate (32%), ethyl methane sulfonate (32%), aniline (37%), acetophenone (33%), α, α-dimethyl phenethyl amine (36%). N-nitroso dimethylamine and pyridine should be regarded as estimated for sample B 10224. The remainder of the data are not affected because the remaining analytes were not detected in the samples quantified by this calibration

BNA in Tissue Package G 385

Samples B 10241, B 10242, B 10248, B 10249, B 10268, B 08628, B 08631, B 08632 and B 08633 were analyzed after the holding time had expired. The results of the BNA anlysis for these samples should be regarded as estimated.

In the initial calibration of 7/15/97 the average response factor for benzidine was less than 0.05. The benzidine values for samples B 10241, B 10242, B 10248, B 10249, B 10268, B 08628, B 08631, B 08632 and B 08633 should be regarded as estimated.

In the continuing calibrations of 7/16/97 and 7/17/97 the average response factor for benzidine was less than 0.05. The benzidine values for samples B 10241, B 10242, B 10248, B 10249, B 10268, B 08628, B 08631, B 08632 and B 08633 should be regarded as estimated.

In the continuing calibration check standard of 7/16/97, the acceptable QC limit was exceeded by N-nitrosodimethyl amine (112%), pyridine (92%), methyl methane sulfonate (72%), ethyl methane sulfonate (68%), aniline (51%), α, α-dimethylphenethyl amine (70%) and 1,2-diphenylhydrazine (59%). The values for N-nitrosodimethyl amine and pyridine should be regarded as unusable for samples B 10298, B 10292 and B 10299. The values of the remaining analytes in samples B 10292, B 10298 and B 10299 should be regarded as estimated.

In the continuing calibration check standard of 7/16/97, the acceptable QC limit was exceeded by picoline (37%), acetophenone (46%) and 1,2,4,5-tetrachlorobenzene (33%). The data are not affected as these analytes were not detected in the samples quantified by this calibration.

In the continuing calibration check standard of 7/17/97, the acceptable QC limit was exceeded by N-nitrosodimethyl amine (77%), pyridine (71%). The values for these analytes should be regarded as estimated for samples B 10241, B 10268, B 08628, B 08631, B 08632 and B 08633.

In the continuing calibration check standard of 7/17/97, the acceptable QC limit was exceeded by methyl methane sulfonate (32%), ethyl methane sulfonate (32%), aniline (37%), acetophenone (33%) and α, α-dimethylphenethyl amine (36%). The data are not affected as these analytes were not detected in the samples quantified by this calibration.

In the continuing calibration check standard of 7/16/97 for the 8270 list, the acceptable QC limit was exceeded by N-nitrosodimethyl amine (33%), benzyl alcohol (27%), 2,2'-oxybis(1-chloropropane) (41%) and hexachlorocyclopentadiene (29%). The data are not affected as these analytes were not detected in the samples quantified by this calibration.

The subcontract laboratory reported the following in their Case Narrative:

> "A matrix spike/matrix spike duplicate (MS/MSD) was shared with work order 97-06-225 and the results are submitted. Pentachlorophenol, added to the MS and MSD, eluted from the GPC into the following sample window (subsequent sample extract). The sequence of samples analyzed on the GPC was the MS, the MSD and sample B 08635. Therefore, the pentachlorophenol added to the MS was detected in the MSD and the pentachlorophenol added to the MSD was detected in sample B 08635. The apparent recovery of pentachlorophenol in the MS, as reported in the MSSD, sample was 76% and the recovery in the MSD, as reported in sample B 08635, was 70%.
>
> The GPC column has subsequently been tested with GC samples and it has been determined that the column needs to be repacked with new separation beads. The biota data is considered to be valid because of the following:
>
> 1. Pentachlorophenol was the only analyte affected by the GPC column as demonstrated by the MS, MSD and LCS. Only the elution profile of pentachlorophenol was affected. The detection limit was not compromised.
>
> 2. None of the biota samples contained detectable levels of pentachlorophenol."

The biota samples referred to in statement 2. above are B 10239 through B 10250, B 10268, B 10269, and B 08629 through B 08633.

Pesticides/PCBs in Water and Soil Package G 372

In the initial calibration check standard of 7/12/97, the acceptable QC limits were exceeded by α-BHC (24%); aldrin (27%), δ-BHC (23%) and endosulfan sulfate (23%) for the primary column. The acceptable QC limits were exceeded by δ-BHC (30%), 4,4'-DDT (22%) and endosulfan sulfate (23%) for the confirmation column. The concentrations of these analytes in samples PBLK 1108 and ABCDEF 10216 should be regarded as estimated.

In the initial calibration check standard of 7/14/97, the acceptable QC limits were exceeded by α-BHC (28%), γ-BHC (25%), aldrin (25%), δ-BHC (36%), γ-chlordane (20.4%), 4,4'-DDE (22%) and dieldrin (22%) for the primary column. The acceptable QC limits were exceeded by δ-BHC (24%) and 4,4'-DDT (22%) for the confirmation column. The concentrations of these analytes in samples PBLK 1120, ABCDEF 10263, ABCDEF 10264, ABCDEF 10265, ABCDEF 10266, ABCDEF 10267 and A 10379 should be regarded as estimated.

In the continuing calibration check standard of 7/13/97, the acceptable QC limits were exceeded by all analytes except decachlorobiphenyl with percent differences ranging from 36 to 312 for the primary column. The acceptable QC limits were exceeded by tetrachloro-m-xylene (27%), α-BHC (46%), γ-BHC (40%), δ-BHC (81%), 4,4'-DDT (52%), endosulfan sulfate (106%), methoxychlor (49%) and endrin ketone (82%) for the confirmation column. The data are not affected because this is an end of sequence calibration. In the continuing calibration check standard of 7/16/97, the acceptable QC limits were exceeded by heptachlor (39%), δ-BHC (40%), 4,4'-DDD (27%), 4,4'-DDT (32%) and methoxychlor (61%) for the primary column. The concentrations of these analytes in samples PBLK 1120, ABCDEF 10263, ABCDEF 10264, ABCDEF 10265 and ABCDEF 10266 should be regarded as estimated.

In the continuing calibration check standard of 7/14/97, the acceptable QC limits were exceeded by α-BHC (38%), γ-BHC (33%), heptachlor (38%), β-BHC (26%), δ-BHC (83%), endrin (33%), 4,4'-DDD (67%), 4,4'-DDT (62%) and methoxychlor (34%) for the primary column. The acceptable QC limits were exceeded by 4,4'-DDT (76%), methoxychlor (73%) and endrin ketone (26%) for the confirmation column. The concentrations of these analytes in samples ABCDEF 10267 and A 10379 should be regarded as estimated.

In the continuing calibration check standard of 7/14/97, the acceptable QC limits were exceeded by all compounds except for endrin ketone for the primary column with %D ranging from 32 to 118. The acceptable QC limits were exceeded by α-BHC (41%), γ-BHC (29%), δ-BHC (59%), 4,4'-DDT (48%), endrin aldehyde (126%), endosulfan sulfate (34%) and methoxychlor (44%) for the confirmation column. The data are not affected because this is an end of sequence calibration.

The acceptable QC limits for the percent recoveries of one surrogate were exceeded in samples D 10263, D 10265 MS, D 10265 MSD, D 10266, D 10267 and A 10379; the data are not affected.

The acceptable QC limits for the percent recoveries for both surrogate were exceeded in samples D 10264 and D 10265; the data for these samples should be regarded as estimated.

Pesticides/PCBs in Tissue Package G 313

The method blank of 6/19/97 contained 1.0 μg/kg methoxychlor; the methoxychlor contained in samples A6-LB-3, A6-PS-3 and A6-PS-2 should be regarded as not detected (U).

In the end of sequence calibration check standard of 6/27/97 the acceptable QC limits were exceeded by several compounds; the data are not affected.

The acceptable QC limits for the percent recoveries of the surrogate tetrachloro-m-xylene were exceeded in samples A5-PS3, A5-LB-2, A6-LB-2, A6-LB-3, A6-PS-3, MBLK 062097 and MBLK 062197; the data are not affected.

The acceptable QC limits for the percent recoveries of the surrogate decachlorobiphenyl were exceeded in samples A1-CC3, A1-WS-1A1-PS-2 and A2-PS-1; the data are not affected.

Heptachlor epoxide was outside the acceptable retention time window in several samples; the professional judgement of the analyst was used to identify the compounds.

Heptachlor epoxide, γ-chlordane, p,p'-DDE and endrin aldehyde were outside the acceptable retention time windows in several samples due to interference by PCBs; the professional judgement of the analyst was used to identify the compounds.

Because of the extreme weathering of the samples, absolute determination of the Aroclor 1254 concentration was impossible. The concentration of Aroclor 1254 in samples A5-PS-1, A5-PS-2, A5-PS-3, A5-LB-1, A5-LB-1, A5-LB-2, A5-LB-3, A5-WS-1, A5-WS-2, A5-WS-3, A6-LB-1, A6-LB-2, A5-LB-3, A6-PS-1, A6-PS-2, A6-PS-3, A6-CC-1, A6-CC-2, A6-CC-3, A5-CC-1, A1-CC-1, A1-CC-2, A1-CC-3, A1-WS-1, A1-WS-2, A1-WS-3, A1-PS-1, A1-PS-2, A1-PS-3, A2-WS-1, A2-WS-2, A2-WS-3, A2-PS-1, A2-PS-2, A3-WS-1, A3-WS-2, A3-WS-3, A3-PS-1, A3-PS-2, A3-PS-3, R-WS-1, R-WS-2, R-WS-3, R-CC-1, R-CC-2, R-CC-3, AA PS-1 and AA-PS-3 should be regarded as estimated.

Pesticides/PCBs in Tissue Package G 364

The samples were extracted after the holding time had expired. The results of the analysis should be regarded as estimated for samples B 10219, B 10220, B 10221, B 10222, B 10223, B 10224, B 10225, B 10226, B 10227, B 10228, B 10229, B 10230, B 10231, B 10232, B 10233, B 10234, B 10235, B 10236, B 10237 and B 10238.

The percent breakdown for 7/17/97 failed. The data are not affected.

In the continuing calibration check standard of 7/16/97, the acceptable QC limits were exceeded by heptachlor (44%), δ-BHC (39%), 4,4'-DDD (34%), 4,4'-DDT (93%), methoxychlor (91%) and endrin ketone (61%) for the primary column. The acceptable QC limits were exceeded by heptachlor (43%), 4,4'-DDT (95%), endrin aldehyde (33%), methoxychlor (91%) and endrin ketone (70%) for the confirmation column. These analytes in samples B 10219, B 10220, B 10221, B 10222 and B 10223 should be regarded as estimated.

In the continuing calibration check standard of 7/16/97, the acceptable QC limits were exceeded by heptachlor (41%), 4,4'-DDD (40%), 4,4'-DDT (91%), methoxychlor (88%) and endrin ketone (61%) for the primary column. The acceptable QC limits were exceeded by heptachlor (42%), 4,4'-DDD (27%), 4,4'-DDT (94%), methoxychlor (82%) and endrin ketone (53%) for the confirmation column. The data are not affected because this is an end of sequence calibration.

In the continuing calibration check standard of 7/17/97, the acceptable QC limits were exceeded by heptachlor (64%), 4,4'-DDD (34%), 4,4'-DDT (100%), endosulfan sulfate (32%), methoxychlor (100%) and endrin ketone (60%) for the primary column. The acceptable QC limits were exceeded by γ-BHC (31%), heptachlor (65%), δ-BHC (30%), endrin (29%), 4,4'-DDT (100%), endrin aldehyde (36%), endosulfan sulfate (34%), methoxychlor (95%) and endrin ketone (60%) for the confirmation column. These analytes in sample B 10238 should be regarded as estimated.

In the continuing calibration check standard of 7/18/97, the acceptable QC limits were exceeded by γ-BHC (39%), heptachlor (76%), 4,4'-DDD (34%), 4,4'-DDT (99%), endrin aldehyde (27%), endosulfan sulfate (36%), methoxychlor (100%) and endrin ketone (67%) for the primary column. The acceptable QC limits were exceeded by γ-BHC (41%), heptachlor (76%), δ-BHC (34%), endrin (38%), 4,4'-DDT (100%), endrin aldehyde (41%), endosulfan sulfate (37%), methoxychlor (37%) and endrin ketone (65%) for the confirmation column. The data are not affected because this is an end of sequence check standard.

Pesticides/PCBs in Tissue Package G 365

The samples were extracted after the holding time had expired. The results of the analysis for all samples in this package should be regarded as estimated for samples B 10239, B 10240, B 10241, B 10242, B 10243, B 10244, B 10245, B 10246, B 10247, B 10248, B 10249, B 10250, B 10268, B 10269, B 08628, B 08629, B 08630, B 08631, B 08632 and B 08633.

The percent breakdown for 7/17/97 and 7/18/97 failed. The data are not affected.

In the continuing calibration check standard of 7/17/97, the acceptable QC limits were exceeded by heptachlor (64%), 4,4'-DDD (34%), 4,4'-DDT (100%), endosulfan sulfate (32%), methoxychlor (100%) and endrin ketone (60%) for the primary column. The acceptable QC limits were exceeded by γ-BHC (31%), heptachlor (65%), δ-BHC (30%), endrin (29%), 4,4'-DDT (100%), endrin aldehyde (36%), endosulfan sulfate (34%), methoxychlor (95%) and endrin ketone (60%) for the confirmation column. These analytes in the sample PBLKA should be regarded as estimated.

In the continuing calibration check standard of 7/18/97, the acceptable QC limits were exceeded by γ-BHC 39%), heptachlor (76%), 4,4'-DDD (34%), 4,4'-DDT (99%), endrin aldehyde (27%), endosulfan sulfate (36%), methoxychlor (100%) and endrin ketone (67%) for the primary column. The acceptable QC limits were exceeded by γ-BHC (41%), heptachlor (76%), δ-BHC (34%), endrin (38%), 4,4'-DDT (100%), endrin aldehyde (41%), endosulfan sulfate (37%), methoxychlor (91%) and endrin ketone (65%) for the confirmation column. These analytes in samples B 10239, B 10240, B 10241, B 10242, B 10243, B 10244, B 10245 and B 10246 should be regarded as estimated.

In the continuing calibration check standard of 7/18/97, the acceptable QC limits were exceeded by aldrin (29%), 4,4'-DDE (27%), dieldrin (25.3%), endrin (29%) and 4,4'-DDD (35%) for the primary column. The acceptable QC limits were exceeded by δ-BHC (29%), 4,4'-DDT (39%), methoxychlor (35%) and endrin ketone (29%) for the confirmation column. These analytes in samples B 10248, B 10249, B 10250 and B 10269 should be regarded as estimated.

In the continuing calibration check standard of 7/18/97, the acceptable QC limits were exceeded by γ-BHC (43%), heptachlor (73%), δ-BHC (48%), 4,4'-DDD (32%), 4,4'-DDT (99%), endosulfan sulfate (48%), methoxychlor (100%) and endrin ketone (61%) for the primary column. The acceptable QC limits were exceeded by γ-BHC (44%), heptachlor (73%), δ-BHC (57%), endrin (34%), 4,4'-DDT (100%), endrin aldehyde (38%), endosulfan sulfate (48%), methoxychlor (98%) and endrin ketone (63%) for the confirmation column. The data are not affected because this is an end of sequence check standard.

In the continuing calibration check standard of 7/19/97, the acceptable QC limits were exceeded by δ-BHC (43%), 4,4'-DDE (31%), endrin (28%), 4,4'-DDD (30%), 4,4'-DDT (40%) and endosulfan sulfate (36%) for the primary column. The acceptable QC limits were exceeded by δ-BHC (58%), 4,4'-DDT (58%), endosulfan sulfate (43%), methoxychlor (43%) and endrin ketone (35%) for the confirmation column. These analytes in samples B 08628, B 08629, B 08630, B 08631, B 08632 and B 08633 should be regarded as estimated

In the continuing calibration check standard of 7/19/97, the acceptable QC limits were exceeded by aldrin (30%), δ-BHC (38%), heptachlor epoxide (28%), 4,4'-DDE (38%), dieldrin (28%), endrin (36%), 4,4'-DDD(32%) and endosulfan sulfate (34%) for the primary column. The acceptable QC limits were exceeded by δ-BHC (56%), 4,4'-DDT (44%), endosulfan sulfate (49%), methoxychlor (30%) and endrin ketone (30%) for the confirmation column. The data are not affected because this is an end of sequence check standard.

In the continuing calibration check standard of 7/23/97, the average % difference was 48 for Aroclor 1221 and 55 for Aroclor 1254 on the primary column. The data for these analytes in sample B 08628 should be regarded as estimated.

In the continuing calibration check standard of 7/23/97, the average percent difference was 45 for Aroclor 1221, and 47 for Aroclor 1254 on the primary column. The data are not affected because this is an end of sequence check standard.

The acceptable percent recoveries of both surrogates were exceeded for samples B 10268, B 08628, B 08630 and B 08632. The data for these samples should be regarded as estimated.

Pesticides/PCBs in Water Package G 380

In the initial calibration check standard of 7/14/97, the acceptable QC limits were exceeded by α-BHC (28%), γ-BHC (25.5%), Aldrin (25.5%) and δ-BHC (36%) on the primary column. The acceptable QC limits were exceeded by δ-BHC (24%) and 4,4'-DDT (22%) on the confirmation column. These analytes in samples 2000-1001, 2000-1002, 2000-1003, 2000-1004, 2000-1005, 2000-1006, 2000-1007, 2000-1008, 2000-1010 and PBLKA should be regarded as estimated.

In the end of sequence calibration check standard of 7/16/97, the acceptable QC limits were exceeded by heptachlor (39%), δ-BHC (40%), 4,4'-DDD (27%), 4,4'-DDT (32%) and methoxychlor (61%) for the primary column. The data are not affected because this is an end of sequence standard.

Pesticides/PCBs in Tissue Package G 389

Sample B 10417 was lost during extraction; insufficient sample existed for re-extraction. This was reported in the subcontract laboratory's case narrative.

In the initial calibration check standard of 7/14/97, the acceptable QC limits were exceeded by α-BHC (28%), γ-BHC (25%), aldrin (25%), δ-BHC (36%), γ-chlordane (20.4%), 4,4'-DDE (22%), and dieldrin (22%) for the primary column. The acceptable QC limits were exceeded by δ-BHC (24%) and 4,4'-DDT (22%) for the confirmation column. These analytes in samples B 10414, B 10415, B 10416, B 10418, B 10419 and B 10420 should be regarded as estimated.

In the continuing calibration check standard of 7/16/97, the acceptable QC limits were exceeded by heptachlor (39%), δ-BHC (40%), 4,4'-DDD (27%), 4,4'-DDT (32%) and methoxychlor (61%) for the primary column. The data are not affected because this is an end of sequence calibration standard.

The acceptable percent recoveries of one surrogate were exceeded for samples B 10401, B 10409, B 10413, B 10418 and B 10419. The data are not affected.

The acceptable percent recoveries of both surrogates were exceeded for sample B 10420. The data should be regarded as estimated.

Because of the extreme weathering of the samples, absolute determination of the Aroclor 1254 concentration was impossible. The concentration of Aroclor 1254 in samples B 10401, B 10402, B 10403, B 10404, B 10405, B 10406, B 10407, B 10408, B 10409, B 10410, B 10411, B 10412, B 10413, B 10414, B 10415 and B 10416 should be regarded as estimated

Pesticides/PCBs in Soil Package G 388

The percent breakdown for 7/14/97 on the confirmation column failed. The data are not affected.

In the continuing calibration check standard of 7/15/97, the acceptable QC limits were exceeded by 4,4'-DDD (36%), 4,4'-DDT (75%), methoxychlor (71%) and endrin ketone (40%) on the primary column and α-BHC (27%), δ-BHC (35%), endrin (32%), 4,4'-DDD (47%), 4,4'-DDT (35%), endrin aldehyde (36%), methoxychlor (63%) and endrin ketone (29%) on the confirmation column. The concentrations of these analytes in samples ABCDEF 10395, ABCDEF 10400, ABCDEF 10489, ABCDEF 10491, ABCDEF 10488, ABCDEF 10398 and ABCDEF 10262 should be regarded as estimated.

In the continuing calibration check standard of 7/15/97, the acceptable QC limits were exceeded by α-BHC (27%), heptachlor (47%), δ-BHC (47%), 4,4'-DDD (41%), 4,4'-DDT (96%), methoxychlor (96%) and endrin ketone (74%) and decachlorobiphenyl (28%) on the primary column, and α-BHC (37%), heptachlor (43%), δ-BHC (60%), 4,4'-DDD (40%), 4,4'-DDT (97%), endrin aldehyde (47%), methoxychlor (89%), endrin ketone (69%) and decachlorobiphenyl (124%) on the confirmation column. The data are not affected because this is an end of sequence calibration.

In the continuing calibration check standard of 7/16/97, the acceptable QC limits were exceeded by heptachlor (44%), δ-BHC (39%), 4,4'-DDD (34%), 4,4'-DDT (93%), methoxychlor (91%) and endrin ketone (61%) on the primary column and heptachlor (43%), 4,4'-DDT (95%), endrin aldehyde (33%), methoxychlor (91%) and endrin ketone (70%) on the confirmation column. The data are not affected because this is an end of sequence calibration.

In the continuing calibration check standard of 7/23/97, the average percent difference for Aroclor 1221 was 39 and for Aroclor 1254 the average percent difference was 49 exceeding the acceptable QC limits. These analytes in samples ABCDEF 10492 and ABCDEF 10493 should be regarded as estimated.

In the continuing calibration check standard of 7/23/97, the average percent difference for Aroclor 1221 was 36 and for Aroclor 1254 the average percent difference was 36 exceeding the acceptable QC limits. The data are not affected because this is an end of sequence calibration.

In the continuing calibration check standard of 7/24/97, the average percent difference for Aroclor 1221 was 48 and for Aroclor 1254 the average percent difference was 55 exceeding the acceptable QC limits. The data for Aroclor 1221 and Aroclor 1254 in samples ABCDEF 10395, ABCDEF 10396, ABCDEF 10398, ABCDEF 10399, ABCDEF 10400, ABCDEF 10486 and ABCDEF 10496 should be regarded as estimated.

In the continuing calibration check standard of 7/24/97, the average percent difference for Aroclor 1221 was 45 and for Aroclor 1254 the average percent difference was 47 exceeding the acceptable QC limits. The data are not affected because this check standard is an end of sequence calibration.

In the continuing calibration check standard of 7/26/97, the acceptable QC limits were exceeded by heptachlor (30%), 4 4 -DDD (33%), 4,4 -DDT (86%), methoxychlor (88%) and endrin ketone (56%) for the primary column and heptachlor (27%), 4 4 -DDD (27%), 4,4'-DDT (88%), methoxychlor (44%) and endrin ketone (35%) for the confirmation column. These analytes in samples ABCDEF 10262, ABCDEF 10491 and ABCDEF 10488 should be regarded as estimated.

In the continuing calibration check standard of 7/26/97, the acceptable QC limits were exceeded by heptachlor (55%), 4,4'-DDD (32%), 4,4 -DDT (94%), methoxychlor (99%) and endrin ketone (72%) on the primary column and heptachlor (55%), endrin (27%), 4,4'-DDD (96%), 4,4'-DDT (39%), methoxychlor (95%) and endrin ketone (77%) on the confirmation column. The data are not affected because this is an end of sequence calibration.

In the continuing calibration check standard of 7/30/97, the acceptable QC limits were exceeded by 4,4'-DDT (68%), methoxychlor (69%), endrin ketone (32%) and decachlorobiphenyl (30%) on the primary column and endosulfan II (30%), 4,4'-DDD (77%), endrin aldehyde (48%), endosulfan sulfate (26%), methoxychlor (64%), endrin ketone (41%) and decachlorobiphenyl (40%) on the confirmation column. The data are not affected because this is an end of sequence calibration.

The acceptable percent recoveries of one surrogate were exceeded for samples D 10398 and D 10399. The data are not affected.

Pesticides/PCB in Tissue Package G 382

The percent breakdown of 7/18/97 failed. The data are not affected.

The samples were extracted after the holding time has expired. The results of the analysis for samples B 08634 and B 08635 should be regarded as estimated.

In the continuing calibration check standard of 7/18/97, the acceptable QC limits were exceeded by aldrin (29%), 4,4'-DDE (27%), Dieldrin (25.3%), Endrin (29%), 4,4'-DDD (35%) for the primary column. The acceptable QC limits were exceeded by delta-BHC (29%), 4,4'-DDT (39%), methoxychlor (35%), endrin ketone (29 %) for the confirmation column. These analytes in sample PBLK 1137 should be considered estimated.

In the continuing calibration check standard of 7/19/97, the acceptable QC limits were exceeded by delta-BHC (43%), 4,4'-DDE (31%), Endrin (28%), 4,4'-DDD (30%), 4,4,'-DDT (40%), endosulfan sulfate (28%) for the primary column. The acceptable QC limits were exceeded by delta-BHC (58%), 4,4'-DDT (58%), endosulfan sulfate (43%), methoxychlor (43%), and endrin ketone (35%) for the confirmation column. These analytes in sample B 08634 should be regarded as estimated.

In the continuing calibration check standard of 7/19/97, the acceptable QC limits were exceeded by aldrin (30%), δ-BHC (38%), heptachlor epoxide (28%), 4,4'-DDE (38%), dieldrin (28%), endrin (36%), 4,4'-DDD (32%), and endosulfan sulfate (34%) for the primary column. The acceptable QC limits were exceeded by delta-BHC (56%), 4,4'-DDT (44%), endosulfan sulfate (49%), methoxychlor (30%), and endrin ketone (30%) for the confirmation column. These analytes in sample B 08635 should be regarded as estimated.

In the continuing calibration check standard of 7/19/97, the acceptable QC limits were exceeded by delta-BHC (41%), 4,4'-DDE (33%), endrin (31%), 4,4'-DDD (28%), and endosulfan sulfate (36%) for the primary column. The acceptable QC limits were exceeded by delta-BHC (57%), 4,4'-DDT (47%), endosulfan sulfate (51%), methoxychlor (35%), and endrin ketone (33%) for the confirmation column. Data are not affected because this is an end of sequence check standard.

Pesticides/PCB in Soil Package G 360

In the continuing calibration check standard of 7/13/97, the acceptable QC limits were exceeded by heptachlor (36%), delta-BHC (38%), 4,4'-DDD (38%), 4,4'-DDT (91%), methoxychlor (90%), endrin ketone (65%), and decachlorobiphenyl (33%) for the primary column. The acceptable QC limits were exceeded by heptachlor (34%), delta-BHC (37%), 4,4'-DDD (27%), 4,4'-DDT (81%), endrin aldehyde (44%), endosulfan sulfate (26%), methoxychlor (84%), endrin ketone (63%), and decachlorobiphenyl (34%) for the confirmation column. These analytes in samples ABCDEF 10386, ABCDEF 10387, ABCDEF 103868 ABCDEF 10381, ABCDEF 10382, ABCDEF 10383, ABCDEF 10384 and ABCDEF 10385 should be regarded as estimated.

In the continuing calibration check standard of 7/13/97, the acceptable QC limits were exceeded by all analytes except heptachlor. These analytes in samples ABCDEF 10389, ABCDEF 10392, ABCDEF 10393 and ABCDEF 10394 should be regarded as estimated.

In the continuing calibration check standard of 7/14/97, the acceptable QC limits were exceeded by heptachlor (53%), delta-BHC (44%), 4,4'-DDD (44%), 4,4'-DDT (96%), methoxychlor (95%), and endrin ketone (75%) for the primary column. The acceptable QC limits were exceeded by alpha-BHC (31%), heptachlor (48%), delta-BHC (54%), 4,4'-DDD (43%), 4,4'-DDT (95%), endrin aldehyde (42%), methoxychlor (82%), and endrin ketone (72%) for the confirmation column. The data are not affected because this is an end of sequence calibration.

In the continuing calibration check standard of 7/15/97, the acceptable QC limits were exceeded by 4,4'-DDD (36%), 4,4'-DDT (75%), methoxychlor (71%), and endrin ketone (40%) for the primary column. The acceptable QC limits were exceeded by alpha-BHC (27%), delta-BHC (55%), endrin (32%), 4,4'-DDD (47%), 4,4'-DDT (35%), endrin aldehyde (36%), methoxychlor (63%), and endrin ketone (29%) for the confirmation column. The data are not affected because this is an end of sequence calibration.

In the continuing calibration check standard of 7/22/97, the acceptable QC limits were exceeded by AR1221 (38%), and AR1254 (52%). These analytes in samples ABCDEF 10371, ABCDEF 10372, ABCDEF 10373 and ABCDEF 10384 should be regarded as estimated.

In the continuing calibration check standard of 7/23/97, the acceptable QC limits were exceeded by AR1221 (39%), and AR1254 (49%). These analytes in sample ABCDEF 10388 should be regarded as estimated.

In the continuing calibration check standard of 7/23/97, the acceptable QC limits were exceeded by AR1221 (36%), and AR1254 (36%). The data are not affected because this is an end of sequence calibration.

In the continuing calibration check standard of 7/23/97, the acceptable QC limits were exceeded by AR1221 (41%) and AR1254 (53%). These analytes in samples ABCDEF 10374, ABCDEF 10375, ABCDEF 10380, ABCDEF 10381, ABCDEF 10382, ABCDEF 10383, ABCDEF 10384, ABCDEF 10385, ABCDEF 10386 and ABCDEF 10387 should be regarded as estimated.

In the continuing calibration check standard of 7/24/97, the acceptable QC limits were exceeded by AR1221 (48%) and AR1254 (55%). The data are not affected because this is an end of sequence calibration.

In the continuing calibration check standard of 7/26/97, the acceptable QC limits were exceeded by heptachlor (30%) 4,4'-DDD (33%), 4,4'-DDT (86%), methoxychlor (88%), and endrin ketone (56%) for the primary column. The acceptable QC limits were exceeded by heptachlor (27%), 4,4'-DDD (27%), 4,4'-DDT (88%) methoxychlor (44%), and endrin ketone (35%) for the confirmation column. The data are not affected because this is an end of sequence calibration.

The acceptable QC limits were exceeded for the percent recoveries of one surrogate for samples D10383, D10386, D10387, D10389, D10390, D10391, D10392, D10393 and D10394. The data are not affected.

Pesticides/PCB in Tissue Package G 367

The acceptable percent recoveries for one surrogate were exceeded for samples 10463, 10464, and 10465. The data are not affected.

Pesticides/PCB in Tissue Package G 378

In the continuing calibration check standard of 7/01/97, the acceptable QC limits were exceeded by endosulfan sulfate (30%) for the primary column. The acceptable QC limits were exceeded by endrin (32%), 4,4'-DDT (32%), endosulfan sulfate (29%), and methoxychlor (30%) for the confirmation column. These analytes in sample 10474 should be regarded as estimated.

In the continuing calibration check standard of 7/02/97, the acceptable QC limits were exceeded by endosulfan sulfate (33%) and methoxychlor (38%) for the primary column. The acceptable QC limits were exceeded by endrin (28%), 4,4'-DDT (28%), and endosulfan sulfate (44%) for the confirmation column. These analytes in samples 10475, 10476, 10477, 10478 and 10479 should be regarded as estimated.

Pesticides/PCB in Tissue Package G 341

In the continuing calibration check standard of 7/24/97, the average percent difference for Aroclor 1221 was 53 and the average percent difference for Aroclor 1254 was 60 for the primary column. On the confirmation column the average percent difference for Aroclor 1221 was 32 and it exceeds the acceptable QC limits. The values for Aroclor 1221 and Aroclor 1254 in samples PBLKB, B 10421, B 10422, B 10423, B 10424, B 10425, B 10426 and B 10427 should be regarded as estimated.

In the continuing calibration check standard of 7/24/97, the average percent difference for Aroclor 1254 was 42 for the primary column and it exceeds the acceptable QC limits. The values for Aroclor 1254 in samples B 10428, B 10429, B 10430, B 10431, B 10432 and B 10433 should be regarded as estimated.

The acceptable percent recoveries for one surrogate were exceeded for samples 10434, B10421MS, B10421 MSD, B10422, B10423, and B10424. The data are not affected.

The acceptable percent recoveries for both surrogates were exceeded for sample B10433. The data should be regarded as estimated.

Due to the extreme weathering of the samples, absolute determination of Aroclor 1254 is virtually impossible. The concentrations of this analyte in samples B 10421, B 10422, B 10424, B 10425, B 10426, B 10427, B 10428, B 10429, B 10430, B 10431, B 10432 and B 10433 should be regarded as estimated.

Metals in Water Package G 384

The method blank contained 4.3μg/L zinc. The zinc concentrations in samples 2000-1002 (both filtered and unfiltered A2), 2000-1003 (both filtered and unfiltered A3), 2000-1004 (filtered A4), 2000-1006 (both filtered and unfiltered A6), 2000-1007 (both filtered and unfiltered A7) and 2000-1010 (unfiltered Laboratory Blank) should be regarded as estimated.

The unfiltered Laboratory Blank contained 31.2 μg/L iron, 1.14 μg/L manganese, 2.65 μg/L lead and 18.2 μg/L zinc. The zinc and lead results for samples 2000-1001, 2000-1002, 2000-1003, 2000-1004, 2000-1005, 2000-1006, 2000-1007 and 2000-1008 should be regarded as estimated.

The filtered Laboratory Blank contained 3.42 µg/L barium, 38.1 µg/L iron, 1.64 µg/L manganese, 53.6 µg/L nickel, 3.25 µg/L lead and 28.5 µg/L zinc. The iron, nickel, lead and zinc results for samples 2000-1001, 2000-1002, 2000-1003, 2000-1004 and 2000-1008 should be regarded as estimated. The iron, nickel and zinc results for samples 2000-1005 and 2000-1006 should be regarded as estimated. The iron, nickel, manganese, lead and zinc results for sample 2000-1007 should be regarded as estimated.

Soil

Metals and Total Organic Carbon in Soil Package G 361

The method blank *contained* 0.194 mg/kg arsenic, 0.294 mg/kg barium, 0.476 mg/kg copper, 3.02 mg/kg iron, 0.061 mg/kg manganese, 0.364 mg/kg potassium and 0.608 mg/kg zinc. All samples in this package contain concentrations of the above metals that are greater than five times the concentration in the method blank. The data are not affected.

Metals in Tissue Package G 381

The method blank contained 10.59 mg/kg aluminum, 0.320 mg/kg antimony, 0.255 mg/kg barium, 60.51 mg/kg calcium, 6.579 mg/kg iron, 0.202 mg/kg lead, 0.177 mg/kg manganese, 0.146 mg/kg silver, 0.11 mg/kg vanadium and 0.937 mg/kg zinc. The following concentrations should be regarded as estimated because their concentrations are less than five times that found in the blank:

Sample	Metal(s)
10454	Al, Fe, Pb, Sb, V
10455	Ag, Al, Fe, Pb, Sb, V
10456	Ag, Al, Ba, Fe, Pb, Sb, V
10457	Ag, Al, Fe, Pb, Sb, V, Zn
10458	Ag, Al, Fe, Pb, V
10459	Ag, Al, Fe, Pb, SB, V
10460	Ag, Al, Fe, Pb, Sb, V
10461	Al, Fe, Pb, V
10462	Al, Fe, Sb, V
10463	Ag, Al, Fe, Pb, Sb, V
10464	Ag, Al, Fe, Pb, Sb, V
10465	Ag, Al, Fe, Pb, V
10466	Al, Fe, Pb, Sb, V
10467	Ag, Al, Fe, Pb, Sb, V
10468	Ag, Al, Fe, Pb, Sb, v
10469	Ag, Al, Fe, Pb, V
10470	Ag, Al, Fe, Pb, Sb, V
10471	Al, Fe, Pb, V
10472	Al, Fe, Pb, V
10473	Ag, Al, Fe, Pb, Sb, V

Metals in Tissue Package G 376

The results are presented wet weight for samples 10474, 10475, 10476, 10477, 10478 and 10479 because there was insufficient sample to perform a solids analysis.

The method blank contained 2.61 mg/kg iron, 50.36 mg/kg calcium, 0.145 mg/kg lead, 0.398 mg/kg zinc. The concentration of lead in samples 10474, 10475, 10476, 10477, 10478 and 10479 should be regarded as estimated because its concentration is less than five times that of the blank.

Metals in Tissue Package G 383

The results of samples B 08634 and B 08635 are presented wet weight because there was insufficient sample to perform a solids analysis.

The method blank contained 2.04 mg/kg iron, 42.1 mg/kg calcium and 0.084 mg/kg silver. The data are not affected as none of the metals were present at less than five times the above concentrations

Metals in Tissue Package G 362

The results are presented on a wet weight basis because there was insufficient sample to perform a solids analysis for samples B 10219, B 10220, B 10221, B 10222, B 10223, B 10224, B 10225, B 10226, B 10227, B 10228, B 10229, B 10230, B 10231, B 10232, B 10233, B 10234, B 10235, B 10236, B 10237 and B 10238.

The method blank contained 0.23 mg/kg antimony, 40.01 mg/kg calcium and 2.774 mg/kg iron.

The concentrations of antimony in samples B 10219, B 10221, B 10223 and B 10226 should be regarded as not detected. The iron concentration in sample B 10220 should be regarded as estimated.

The concentration of iron in sample B 10220 should be regarded as estimated.

Metals in Tissue Package G 366

The results are presented wet weight in samples B 10239, B 10240, B 10241, B 10242, B 10243, B 10244, B 10245, B 10246, B 10247, B 10248, B 10249, B 10250, B 10268, B 10269, B 08628, B 08629, B 08630, B 08631 B 08632 and B 08633 because there was insufficient sample to perform a solids analysis.

The method blank contained 0.14 mg/kg lead. The lead concentrations in samples B 10244, B 10245, B 10246, B 10250, B 10269, B 08630 and B 08631 should be regarded as estimated.

Metals in Tissue Package G 340

The data is reported on a wet weight basis for samples 10435, 10436, 10437, 10438, 10439, 10440, 10441 10442, 10443, 10444, 10445, 10446, 10447, 10448, 10449, 10450, 10451, 10452 and 10453 because there was insufficient sample for a percent solids determination.

The method blank contained 1.845 mg/kg iron and 0.06 mg/kg manganese. The iron concentrations in samples 10438, 10440, 10441, 10443, 10444, 10445, 10446, 10447, 10448, 10449, 10450, 10452 and 10451 should be regarded as estimated.

Metals in Tissue Package G 295

The data were examined and were found to be acceptable.

Metals in Tissue Package G 296

The data were examined and were found to be acceptable.

TOC, Ammonia, TPH and TAL Metals in Soil Package G 377

The method blank for TAL metals contained 2.089 mg/kg iron, 0.077 mg/kg manganese, 6.549 mg/kg potassium, 0.312 mg/kg zinc. No data was qualified because no associated samples contained these analytes at less than five times the noted concentrations.

TOC, Ammonia, TPH and TAL Metals in Soil and Water Package G 370

The method blank for TAL metals in soil contained 0.787 mg/kg chromium, 4.813 mg/kg iron, 0.209 mg/kg lead, 0.212 mg/kg manganese, 0.50 mg/kg nickel and 0.337 mg/kg zinc. The concentration of chromium, lead, manganese and zinc in the field blank, sample 10377, should be regarded as estimated because their concentration are less than five times that of the blank.

The method blank for TAL metals in water contained 0.373 µg/L beryllium, 38.1 µg/l iron, 0.615 µg/L manganese and 3.375 µg/L nickel. The concentration of beryllium and nickel in the sample C 10216 should be regarded as estimated because its concentration is less than five times that of the blank.

Summary of Abbreviations

AA	Atomic Absorption
B	The analyte was found in the blank
BFB	Bromofluorobenzene
BPQL	Below the Practical Quantitation Limit
C	Centigrade
D	(Surrogate Table) this value is from a diluted sample and was not calculated (Result Table) this result was obtained from a diluted sample
Dioxin	denotes Polychlorinated Dibenzo-p-dioxins and Polychlorinated Dibenzofurans and/or PCDD and PCDF
CLP	Contract Laboratory Protocol
COC	Chain of Custody
CONC	Concentration
CRDL	Contract Required Detection Limit
CRQL	Contract Required Quantitation Limit
DFTPP	Decafluorotriphenylphosphine
DL	Detection Limit
E	The value is greater than the highest linear standard and is estimated
EMPC	Estimated maximum possible concentration
ICAP	Inductively Coupled Argon Plasma
ISTD	Internal Standard
J	The value is below the method detection limit and is estimated
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MI	Matrix Interference
MS	Matrix Spike
MSD	Matrix Spike Duplicate
MW	Molecular Weight
NA	either Not Applicable or Not Available
NC	Not Calculated
NR	Not Requested
NS	Not Spiked
% D	Percent Difference
% REC	Percent Recovery
PQL	Practical Quantitation Limit
PPBV	Parts per billion by volume
QL	Quantitation Limit
RPD	Relative Percent Difference
RSD	Relative Standard Deviation
SIM	Selected Ion Mode
TCLP	Toxic Characteristics Leaching Procedure
U	Denotes not detected

m^3	cubic meter	kg	kilogram	μg	microgram
L	liter	g	gram	pg	picogram
mL	milliliter	mg	milligram		
uL	microliter				

*	denotes a value that exceeds the acceptable QC limit
	Abbreviations that are specific to a particular table are explained in footnotes on that table

Revision 3/7/97

Analytical Procedure for VOC

The subcontract laboratory determined the concentration of VOC compounds in the samples using USEPA Method 8260A.

The results of the analyses for the water samples are listed in Table 1.1.

The results of the analyses for the soil samples are listed in Table 1.2.

Analytical Procedure for BNA

The subcontract laboratory determined the concentration of BNA compounds in the samples by extracting them using USEPA Method 3540B and analyzing them according to USEPA Method 8270A.

The results of the analyses for the water samples are listed in Table 1.3.

The results of the analyses for the soil samples are listed in Table 1.4

The results of the analyses for the tissue samples are listed in Table 1.5.

Analytical Procedure for Pesticides/PCBs (GP)

The subcontract laboratory determined the concentration of pesticides/PCBs in the samples by extracting them using USEPA Method 3540B and analyzing them according to modified USEPA Method 8080.

The results of the analyses for the water samples are listed in Table 1.6.

The results of the analyses for the soil samples are listed in Table 1.7.

The results of the analyses for the tissue samples are listed in Table 1.8.

Analytical Procedure for Pesticides and PCBs in Tissue (REAC)

Extraction Procedure

The entire sample was homogenized with dry ice using a variable speed laboratory blender. After homogenization was completed, the *contents* of the blender, (tissue and dry ice) were quantitatively transferred to clean jars and the dry ice was allowed to sublime overnight in a freezer at -10° C. Homogenization of animal mass greater than 20 grams was carried out in several steps.

Gas Chromatographic Analysis

The extract was analyzed for pesticides and PCBs using simultaneous dual column injections. A surrogate mixture consisting of tetrachloro-m-xylene and decachlorobiphenyl was added. The analysis was done on an HP 5890 GC/ECD system, equipped with an HP 7673A automatic sampler, and controlled with an HP-CHEM STATION. The following conditions were employed:

First Column	DB-608, 30 meter, 0.32 mm fused silica capillary, 0.53 μm film thickness
Injector Temperature	250° C
Detector Temperature	325° C
Temperature Program	150°C for 1 minute 7°C/min to 265°C 18 min at 265°
Second Column	RTx-CLPest, 30 meter, 0.53mm fused silica capillary, 0.50μm film thickness
Injector Temperature	250° C
Detector Temperature	325° C
Temperature Program	150° C for 1 minute 7°C/min to 265°C 18 min at 265°

The gas chromatographs were calibrated using 5 pesticide standards at 20, 50, 100, 200, and 500μg/L. The results from each mixture were used to calculate the response factor (RF) of each analyte and the average Response Factor was used to calculate the concentration of pesticide in the sample. Quantification was based on the DB-608 column (signal 1) and the identity of the analyte was confirmed using the RTx-CLPest column (signal 2). A fingerprint chromatogram was run using each of the seven Aroclor mixtures; calibration curves were run only if a particular Aroclor was found in the sample.

The results, listed in Table 1.9, are calculated by using the following formula:

$$C_{\mu g/Kg} = \frac{A \times V_f \times DF}{RF_{ave} \times V \times W_s \times D}$$

where

A	= Area or Peak Height
V_f	= Volume of Extract (mL)
DF	= Dilution Factor
RF_{ave}	= Average Response Factor
V	= Volume injected (μL)
W	= Weight of Sample (g)
D	= Decimal percent solids

where

$$RF = \frac{A}{\text{total pg injected}}$$

$$RF_{ave} = \frac{RF_1 + \quad + RF_n}{n}$$

and

A = Area of Peak
n = number of samples

Revision of 6/30/94

Analytical Procedure for Metals

The subcontract laboratory determined the concentration of metals in the samples by analyzing them according to SW-846 methods.

The results of the analyses for the water samples are listed in Table 1.10.

The results of the analyses for the unfiltered water samples are listed in Table 1.11.

The results of the analyses for the filtered water samples are listed in Table 1.12.

The results of the analyses for the soil samples are listed in Table 1.13.

Analytical Procedure for Metals in Tissue (REAC)

Sample Preparation

A representative 0.5-1.5 g (wet weight) sample, weighed to 0.01 g accuracy, was thoroughly mixed with 10 ml 1:1 nitric acid, placed in an acid rinsed Teflon container and heated on a hot plate for 60-90 min at 60-65° C. The container was capped with a Teflon lined cap and digested on a CEM MDS-2000 microwave oven which was programmed in different stages. After digestion , the samples were allowed to cool to room temperature, transferred to 50 mL volumetric flasks and diluted to 50 mL with ASTM type II water. The samples were analyzed for all metals, except mercury, by USEPA SW-846, Method 7000 (Atomic absorption) or Method 6010 (Inductively Coupled Argon Plasma-ICAP) procedures.

A representative 0.5-0.6 g (wet weight) sample aliquot, weighed to 0.01 g accuracy, was prepared and analyzed separately for mercury on a Varian SpectrAA-300 Atomic Absorption Spectrophotometer equipped with a Varian VGA-76 vapor gas analyzer according to SW-846, Method 7471.

A separate sample was used to determine total solids. A reagent blank and a blank spike sample were carried through the sample preparation procedure for each batch of samples processed. One matrix spike (MS) and one matrix spike duplicate (MSD) were analyzed for each batch or for every ten samples.

Analysis and Calculations

The AA and ICAP instruments were calibrated and operated according to SW-846, Method 7000/7471/6010 and the manufacturers operating instructions. After calibration, initial calibration verification (ICV), initial calibration blank (ICB) and quality control check standards were run to verify proper calibration. The continuing calibration verification (CCV) and continuing calibration blank (CCB) were run after every ten samples to verify proper operation during sample analysis.

The metal concentrations in solution , in micrograms per liter ($\mu g/L$) were taken from the read-out systems of the Atomic Absorption instuments. AA results in milligrams per kilogram (mg/kg) were obtained by externally correcting the reading for the sample weight and percent solids. The ICAP results (mg/kg) were corrected for sample weight prior to instrument read-out; the instrument read-out was then corrected for percent solids

Final concentrations, based on wet weight are given by:

mg metal/kg sample = [(AxV)/W]xDFxCF

where:

A = Insrument read-out (µg/L, AA; mg/kg, ICAP)
V = final volume of processed sample (mL,AA)
W = weight of sample (g,AA)
V,W = 1.00 (ICAP)
DF = Dilution Factor (1.00 for no dilution)
CF = conversion factor (0.001, AA; 1.00, ICAP)

For samples that required dilution to be within the instrument calibration range, DF is given by:

DF = (C+B)/C

where:

B = acid blank matrix used for dilution (mL)
C = sample blank aliquot (mL)

Final concentrations, based on dry weight, are given by:

mg/kg(dry) =[mg/kg (wet)x100] /S

where

S = percent solids

The results are listed in Table 1.14.

Analytical Procedure for Total Organic Carbon

The subcontract laboratory determined the concentration of total organic carbon in the samples by analyzing them according to AASHTO Method T267-86. The results of the analyses are listed in Table 1.16.

Analytical Procedure for Ammonia Nitrogen

The subcontract laboratory determined the concentration of ammonia nitrogen in the samples by analyzing them according to USEPA Method 350. The results of the analyses are listed in Table 1.16.

Analytical Procedure for Total Petroleum Hydrocarbons

The subcontract laboratory determined the concentration of total petroleum hydrocarbons in the samples by analyzing them according to USEPA Method 418.1. The results of the analyses are listed in Table 1.16.

Table 1.1 Results of the Analysis for VOC in Water
WA # 2-274 Cornell Dubilier Electronics

Sample #	VBLKA	ABC 10215	ABC 10216
Location	-	Trip Blank	A1
Collected	NA	6/20/97	6/18/97
Analyzed	6/30/97	6/30/97	6/30/97
Dil. Factor	1	1	1

Compound	Conc µg/L		MDL µg/L	Conc µg/L		MDL µg/L	Conc µg/L		MDL µg/L
1,1,1,2-Tetrachloroethane	U		5	U		5	U		5
1,1,1,-Trichloroethane	U		5	U		5	U		5
1,1,2,2-Tetrachloroethane	U		5	U		5	U		5
1,1,2-Trichloroethane	U		5	U		5	U		5
1,1-Dichloroethane	U		5	U		5	U		5
1,1-Dichloroethene	U		5	U		5	U		5
1,1-Dichloropropene	U		5	U		5	U		5
1,2,3-Trichloropropane	U		5	U		5	U		5
1,2-Dibromoethane	U		5	U		5	U		5
1,2-Dichloroethane	U		5	U		5	U		5
1,2-Dichloropropane	U		5	U		5	U		5
1,3-Dichloropropane	U		5	U		5	U		5
2,2-Dichloropropane	U		5	U		5	U		5
2-Butanone	U		10	U		10	U		10
2-Hexanone	U		10	U	J	10	U		10
4-Methyl-2-pentanone	U		10	U		10	U		10
Acetone	9	J	10	~~18~~ B U		10	9	JB	10
Benzene	U		5	U		5	U		5
Bromobenzene	U		5	U		5	U		5
Bromodichloromethane	U		5	U		5	U		5
Bromoform	U		5	U		5	U		5
Bromomethane	U		10	U		10	U		10
Carbon Disulfide	U		5	U		5	U		5
Carbon tetrachloride	U		5	U		5	U		5
Chlorobenzene	U		5	U		5	U		5
Chloroethane	U		10	U		10	U		10
Chloroform	U		5	U		5	U		5
Chloromethane	U		10	U		10	U		10
cis-1 2-Dichloroethene	U		5	U		5	U		5
cis-1,3-Dichloropropene	U		5	U		5	U		5
Chlorodibromomethane	U		5	U		5	U		5
Dibromomethane	U		5	U		5	U		5
Dichlorodifluoromethane	U		5	U		5	U		5
Etnyl benzene	U		5	U		5	U		5
Isopropylbenzene	U		5	U		5	U		5
Methyl tert butyl ether	U		5	U		5	3	J	5
Methylene Chloride	U		5	U		5	U		5
o Xylene	U		5	U		5	U		5
m+p Xylene	U		5	U		5	U		5
Styrene	U		5	U		5	U		5
Tetrachloroethene	U		5	U		5	U		5
Toluene	U		5	1	B J	5	3	J	5
trans-1 2-Dichloroethene	U		5	U		5	U		5
trans-1,3-Dichloropropene	U		5	U		5	U		5
Trichloroethene	U		5	U		5	U		5
Trichlorofluoromethane	U		5	U		5	U		5
Vinyl chloride	U		10	U		10	U		10
n-Propyl Benzene	U		5	U		5	U		5
2-Chlorotoluene	U		5	U		5	U		5
4-Chlorotoluene	U		5	U		5	U		5
1,3 5-Trimethylbenzene	U		5	U		5	U		5
tert-Butylbenzene	U		5	U		5	U		5
1,2 4--Trimethylbenzene	U		5	U		5	U		5
sec-Butylbenzene	U		5	U		5	U		5
1 3-Dichlorobenzene	U		5	U		5	U		5
p-Isopropyltoluene	U		5	U		5	U		5
1 4-Dichlorobenzene	U		5	U		5	U		5
1 2-Dichlorobenzene	U		5	U		5	U		5
n-Butylbenzene	U		5	U		5	U		5
1 2,4--Trichlorobenzene	U		5	U		5	U		5
Naphthalene	U		5	U		5	U		5
Hexachlorobutadiene	U		5	U		5	U		5
1,2 3--Trichlorobenzene	U		5	U		5	U		5

Table 1.1(Cont) Results of the Analysis for VOC in Water
WA # 2-274 Cornell Dubilier Electronics

Sample #	VBLKA	2000-1001	2000-1002	2000-1004
Location	-	A1	A2	A4
Collected	NA	6/27/97	6/27/97	6/27/97
Analyzed	7/1/97	7/1/97	7/1/97	7/1/97
Dil. Factor	1	1	1	1

Compound	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L
1,1,1,2-Tetrachloroethane	U	5	U	5	U	5	U	5
1,1,1,-Trichloroethane	U	5	U	5	U	5	U	5
1,1,2,2-Tetrachloroethane	U	5	U	5	U	5	U	5
1,1,2-Trichloroethane	U	5	U	5	U	5	U	5
1,1-Dichloroethane	U	5	U	5	U	5	U	5
1,1-Dichloroethene	U	5	U	5	U	5	U	5
1,1-Dichloropropene	U	5	U	5	U	5	U	5
1,2,3-Trichloropropane	U	5	U	5	U	5	U	5
1,2-Dibromoethane	U	5	U	5	U	5	U	5
1,2-Dichloroethane	U	5	U	5	U	5	U	5
1,2-Dichloropropane	U	5	U	5	U	5	U	5
1,3-Dichloropropane	U	5	U	5	U	5	U	5
2,2-Dichloropropane	U	5	U	5	U	5	U	5
2-Butanone	U	10	U	10	U	10	U	10
2-Hexanone	U	10	U	10	U	10	U	10
4-Methyl-2-pentanone	U	10	U	10	U	10	U	10
Acetone	4 J	10	U	10	U	10	10 JB	10
Benzene	U	5	U	5	U	5	U	5
Bromobenzene	U	5	U	5	U	5	U	5
Bromodichloromethane	U	5	U	5	U	5	U	5
Bromoform	U	5	U	5	U	5	U	5
Bromomethane	U	10	U	10	U	10	U	10
Carbon Disulfide	U	5	U	5	U	5	U	5
Carbon tetrachloride	U	5	U	5	U	5	U	5
Chlorobenzene	U	5	U	5	U	5	U	5
Chloroethane	U	10	U	10	U	10	U	10
Chloroform	U	5	U	5	U	5	U	5
Chloromethane	U	10	U	10	U	10	U	10
cis-1,2-Dichloroethene	U	5	U	5	U	5	U	5
cis-1,3-Dichloropropene	U	5	U	5	U	5	U	5
Chlorodibromomethane	U	5	U	5	U	5	U	5
Dibromomethane	U	5	U	5	U	5	U	5
Dichlorodifluoromethane	U	5	U	5	U	5	U	5
Ethyl benzene	U	5	U	5	U	5	U	5
Isopropylbenzene	U	5	U	5	U	5	U	5
Methyl tert butyl ether	U	5	1.7 J	5	U	5	U	5
Methylene Chloride	U	5	U	5	U	5	U	5
o Xylene	U	5	U	5	U	5	U	5
m+p Xylene	U	5	U	5	U	5	U	5
Styrene	U	5	U	5	U	5	U	5
Tetrachloroethene	U	5	U	5	U	5	U	5
Toluene	U	5	U	5	U	5	U	5
trans-1,2-Dichloroethene	U	5	U	5	U	5	U	5
trans-1,3-Dichloropropene	U	5	U	5	U	5	U	5
Trichloroethene	U	5	U	5	U	5	U	5
Trichlorofluoromethane	U	5	U	5	U	5	U	5
Vinyl chloride	U	10	U	10	U	10	U	10

Table 1.1(Cont) Results of the Analysis for VOC in Water
WA # 2-Z74 Cornell Dubilier Electronics

Sample #	2000-1005		2000-1006		2000-1007		2000-1008	
Location	A5		A6		A7		A9	
Collected	6/27/97		6/27/97		6/27/97		6/27/97	
Analyzed	7/1/97		7/1/97		7/1/97		7/1/97	
Dil. Factor	1		1		1		1	

Compound	Conc µg/L		MDL µg/L	Conc µg/L		MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L		MDL µg/L
1,1,1,2-Tetrachloroethane	U		5	U		5	U	5	U		5
1,1,1,-Trichloroethane	U		5	U		5	U	5	U		5
1,1,2,2-Tetrachloroethane	1.9	J	5	1.1	J	5	U	5	U		5
1,1,2-Trichloroethane	U		5	U		5	U	5	U		5
1,1-Dichloroethane	U		5	U		5	U	5	U		5
1,1-Dichloroethene	U		5	U		5	U	5	U		5
1,1-Dichloropropene	U		5	U		5	U	5	U		5
1,2,3-Trichloropropane	U		5	U		5	U	5	U		5
1,2-Dibromoethane	U		5	U		5	U	5	U		5
1,2-Dichloroethane	U		5	U		5	U	5	U		5
1,2-Dichloropropane	U		5	U		5	U	5	U		5
1,3-Dichloropropane	U		5	U		5	U	5	U		5
2,2-Dichloropropane	U		5	U		5	U	5	U		5
2-Butanone	U		10	U		10	U	10	U		10
2-Hexanone	U		10	U		10	U	10	U		10
4-Methyl-2-pentanone	U		10	U		10	U	10	U		10
Acetone	U		10	U		10	U	10	U		10
Benzene	U		5	U		5	U	5	U		5
Bromobenzene	U		5	U		5	U	5	U		5
Bromodichloromethane	U		5	U		5	U	5	U		5
Bromoform	U		5	U		5	U	5	U		5
Bromomethane	U		10	U		10	U	10	U		10
Carbon Disulfide	U		5	U		5	U	5	U		5
Carbon tetrachloride	U		5	U		5	U	5	U		5
Chlorobenzene	U		5	U		5	U	5	U		5
Chloroethane	U		10	U		10	U	10	U		10
Chloroform	U		5	U		5	U	5	U		5
Chloromethane	U		10	U		10	U	10	U		10
cis-1,2-Dichloroethene	3.4	J	5	1.9	J	5	U	5	U		5
cis-1,3-Dichloropropene	U		5	U		5	U	5	U		5
Chlorodibromomethane	U		5	U		5	U	5	U		5
Dibromomethane	U		5	U		5	U	5	U		5
Dichlorodifluoromethane	U		5	U		5	U	5	U		5
Ethyl benzene	U		5	U		5	U	5	U		5
Isopropylbenzene	U		5	U		5	U	5	U		5
Methyl tert butyl ether	U		5	U		5	U	5	1.0	J	5
Methylene Chloride	U		5	U		5	U	5	U		5
o Xylene	U		5	U		5	U	5	U		5
m+p Xylene	U		5	U		5	U	5	U		5
Styrene	U		5	U		5	U	5	U		5
Tetrachloroethene	U		5	U		5	U	5	U		5
Toluene	U		5	U		5	U	5	U		5
trans-1,2-Dichloroethene	1.1	J	5	1.0	J	5	U	5	U		5
trans-1,3-Dichloropropene	U		5	U		5	U	5	U		5
Trichloroethene	5.2		5	4.0	J	5	U	5	U		5
Trichlorofluoromethane	U		5	U		5	U	5	U		5
Vinyl chloride	U		10	U		10	U	10	U		10

Table 1 1(Cont) Results of the Analysis for VOC in Water
WA # 2-274 Cornell Dubilier Electronics

Sample #	VBLKB	2000-1003	2000-1009	2000-1010
Location	-	A3	Trip Blank	Laboratory Blank
Collected	NA	6/27/97	6/27/97	6/27/97
Analyzed	7/2/97	7/2/97	7/2/97	7/2/97
Dil. Factor	1	1	1	1

Compound	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L
1,1,1 2-Tetrachloroethane	U	5	U	5	U	5	U	5
1 1,1 -Trichloroethane	U	5	U	5	U	5	U	5
1 1 2,2-Tetrachloroethane	U	5	U	5	U	5	U	5
1,1,2-Trichloroethane	U	5	U	5	U	5	U	5
1 1-Dichloroethane	U	5	U	5	U	5	U	5
1,1-Dichloroethene	U	5	U	5	U	5	U	5
1,1-Dichloropropene	U	5	U	5	U	5	U	5
1,2,3-Trichloropropane	U	5	U	5	U	5	U	5
1,2-Dibromoethane	U	5	U	5	U	5	U	5
1,2-Dichloroethane	U	5	U	5	U	5	U	5
1 2-Dichloropropane	U	5	U	5	U	5	U	5
1,3-Dichloropropane	U	5	U	5	U	5	U	5
2,2-Dichloropropane	U	5	U	5	U	5	U	5
2-Butanone	U	10	U	10	U	10	U	10
2-Hexanone	U	10	U	10	U	10	U	10
4-Methyl-2-pentanone	U	10	U	10	U	10	U	10
Acetone	3 J	10	14 B	10	~~36~~ R	10	~~15~~ B R	10
Benzene	U	5	U	5	U	5	U	5
Bromobenzene	U	5	U	5	U	5	U	5
Bromodichloromethane	U	5	U	5	U	5	U	5
Bromoform	U	5	U	5	U	5	U	5
Bromomethane	U	10	U	10	U	10	U	10
Carbon Disulfide	U	5	U	5	U	5	U	5
Carbon tetrachloride	U	5	U	5	U	5	U	5
Chlorobenzene	U	5	U	5	U	5	U	5
Chloroethane	U	10	U	10	U	10	U	10
Chloroform	U	5	U	5	U	5	U	5
Chloromethane	U	10	U	10	U	10	U	10
cis-1 2-Dichloroethene	U	5	U	5	U	5	U	5
cis-1,3-Dichloropropene	U	5	U	5	U	5	U	5
Chlorodibromomethane	U	5	U	5	U	5	U	5
Dibromomethane	U	5	U	5	U	5	U	5
Dichlorodifluoromethane	U	5	U	5	U	5	U	5
Ethyl benzene	U	5	U	5	U	5	U	5
Isopropylbenzene	U	5	U	5	U	5	U	5
Methyl tert butyl ether	U	5	U	5	U	5	U	5
Methylene Chloride	U	5	1.2 J	5	1.2 J	5	~~1.5~~ J U	5
o Xylene	U	5	U	5	U	5	U	5
m+p Xylene	U	5	U	5	U	5	U	5
Styrene	U	5	U	5	U	5	U	5
Tetrachloroethene	U	5	U	5	U	5	U	5
Toluene	U	5	U	5	U	5	U	5
trans-1 2-Dichloroethene	U	5	U	5	U	5	U	5
trans-1 3-Dichloropropene	U	5	U	5	U	5	U	5
Trichloroethene	U	5	U	5	U	5	U	5
Trichlorofluoromethane	U	5	U	5	U	5	U	5
Vinyl chloride	U	10	U	10	U	10	U	10

Table 1.2 Results of the Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample #	VBLKC		E 10263	
Location	-		A7-1	
Collected	NA		6/19/97	
Analyzed	7/2/97		7/02/97	
Dil. Factor	1		5	

Compound	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg
1,1,1,2-Tetrachloroethane	U		5	U		37
1 1,1,-Trichloroethane	U		5	U		37
1,1,2,2-Tetrachloroethane	U		5	U		37
1,1,2-Trichloroethane	U		5	U		37
1 1-Dichloroethane	U		5	U		37
1 1-Dichloroethene	U		5	U		37
1 1-Dichloropropene	U		5	U		37
1,2,3-Trichloropropane	U		5	U		37
1,2-Dibromoethane	U		5	U		37
1,2-Dichloroethane	U		5	U		37
1,2-Dichloropropane	U		5	U		37
1,3-Dichloropropane	U		5	U		37
2,2-Dichloropropane	U		5	U		37
2-Butanone	U		10	U		74
2-Hexanone	U		10	U		74
4-Methyl-2-pentanone	U		10	U		74
Acetone	U		10	440		74
Benzene	U		5	U		37
Bromobenzene	U		5	U		37
Bromodichloromethane	U		5	U		37
Bromoform	U		5	U		37
Bromomethane	U		10	U		74
Carbon Disulfide	U		5	U		37
Carbon tetrachloride	U		5	U		37
Chlorobenzene	U		5	U		37
Chloroethane	U		10	U		74
Chloroform	U		5	U		37
Chloromethane	U		10	U		74
cis-1,2-Dichloroethene	U		5	U		37
cis-1,3-Dichloropropene	U		5	U		37
Chlorodibromomethane	U		5	U		37
Dibromomethane	U		5	U		37
Dichlorodifluoromethane	U		5	U		37
Ethyl benzene	U		5	U		37
Isopropylbenzene	U		5	U		37
Methyl tert butyl ether	U		5	U		37
Methylene Chloride	3	J	5	27	JB	37
o Xylene	U		5	U		37
m+p Xylene	U		5	U		37
Styrene	U		5	U		37
Tetrachloroethene	U		5	U		37
Toluene	U		5	15	J	37
trans-1 2-Dichloroethene	U		5	U		37
trans-1,3-Dichloropropene	U		5	U		37
Trichloroethene	U		5	U		37
Trichlorofluoromethane	U		5	U		37
Vinyl chloride	U		10	U		74
n-Propyl Benzene	U		5	U		37
2-Chlorotoluene	U		5	U		37
4-Chlorotoluene	U		5	U		37
1,3 5-Trimethylbenzene	U		5	U		37
tert-Butylbenzene	U		5	U		37
1,2,4-Trimethylbenzene	U		5	U		37
sec-Butylbenzene	U		5	U		37
1 3-Dichlorobenzene	U		5	U		37
p-Isopropyltoluene	U		5	U		37
1 4-Dichlorobenzene	U		5	U		37
1 2-Dichlorobenzene	U		5	U		37
n-Butylbenzene	U		5	U		37
1,2,4-Trichlorobenzene	U		5	U		37
Naphthalene	U		5	U		37
Hexachlorobutadiene	U		5	U		37
1 2 3-Trichlorobenzene	U		5	U		37

Table 1.2 (Cont) Results of the Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample #	VBLKB	E 10264	E 10265	E 10266
Location	-	A3-1	A9-1	A9-2
Collected	NA	6/20/97	6/20/97	6/20/97
Analyzed	7/1/97	7/01/97	7/01/97	7/01/97
Dil. Factor	1	5	5	5

Compound	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
1 1,1,2-Tetrachloroethane	U	5	U	110	U	55	U	65
1,1,1 -Trichloroethane	U	5	U	110	U	55	U	65
1,1,2,2-Tetrachloroethane	U	5	U	110	U	55	U	65
1,1,2-Trichloroethane	U	5	U	110	U	55	U	65
1 1-Dichloroethane	U	5	U	110	U	55	U	65
1 1-Dichloroethene	U	5	U	110	U	55	U	65
1 1-Dichloropropene	U	5	U	110	U	55	U	65
1 2 3-Trichloropropane	U	5	U	110	U	55	U	65
1 2-Dibromoethane	U	5	U	110	U	55	U	65
1,2-Dichloroethane	U	5	U	110	U	55	U	65
1,2-Dichloropropane	U	5	U	110	U	55	U	65
1 3-Dichloropropane	U	5	U	110	U	55	U	65
2,2-Dichloropropane	U	5	U	110	U	55	U	65
2-Butanone	U	10	560	210	57 J	110	83 J	130
2-Hexanone	U	10	U	210	U	110	U	130
4-Methyl-2-pentanone	U	10	U	210	U	110	U	130
Acetone	U	10	7700 E	210	3100 E	110	1800	130
Benzene	U	5	U	110	U	55	U	65
Bromobenzene	U	5	U	110	U	55	U	65
Bromodichloromethane	U	5	U	110	U	55	U	65
Bromoform	U	5	U	110	U	55	U	65
Bromomethane	U	10	U	210	U	110	U	130
Carbon Disulfide	U	5	30 J	110	U	55	U	65
Carbon tetrachloride	U	5	U	110	U	55	U	65
Chlorobenzene	U	5	U	110	U	55	U	65
Chloroethane	U	10	U	210	U	110	U	130
Chloroform	U	5	U	110	U	55	U	65
Chloromethane	U	10	72 J	210	U	110	U	130
cis-1 2-Dichloroethene	U	5	U	110	U	55	U	65
cis-1,3-Dichloropropene	U	5	U	110	U	55	U	65
Chlorodibromomethane	U	5	U	110	U	55	U	65
Dibromomethane	U	5	U	110	U	55	U	65
Dichlorodifluoromethane	U	5	U	110	U	55	U	65
Ethyl benzene	U	5	U	110	U	55	U	65
Isopropylbenzene	U	5	U	110	U	55	U	65
Methyl tert butyl ether	U	5	U	110	U	55	U	65
Methylene Chloride	3 J	5	82 JB	110	49 JB	55	54 JB	65
o Xylene	U	5	U	110	U	55	U	65
m+p Xylene	U	5	U	110	U	55	U	65
Styrene	U	5	U	110	U	55	U	65
Tetrachloroethene	U	5	U	110	U	55	U	65
Toluene	U	5	21 J	110	U	55	71	65
trans-1 2-Dichloroethene	U	5	U	110	U	55	U	65
trans-1,3-Dichloropropene	U	5	U	110	U	55	U	65
Trichloroethene	U	5	U	110	U	55	U	65
Trichlorofluoromethane	U	5	U	110	U	55	U	65
Vinyl chloride	U	10	U	210	U	110	U	130
n-Propyl Benzene	U	5	U	110	U	55	U	65
2-Chlorotoluene	U	5	U	110	U	55	U	65
4-Chlorotoluene	U	5	U	110	U	55	U	65
1,3 5-Trimethylbenzene	U	5	U	110	U	55	U	65
tert-Butylbenzene	U	5	U	110	U	55	U	65
1,2 4-Trimethylbenzene	U	5	U	110	U	55	U	65
sec-Butylbenzene	U	5	U	110	U	55	U	65
1 3-Dichlorobenzene	U	5	U	110	U	55	U	65
p-Isopropyltoluene	U	5	U	110	U	55	U	65
1 4-Dichlorobenzene	U	5	U	110	U	55	U	65
1,2-Dichlorobenzene	U	5	U	110	U	55	U	65
n-Butylbenzene	U	5	U	110	U	55	U	65
1 2,4-Trichlorobenzene	U	5	U	110	U	55	U	65
Naphthalene	U	5	U	110	U	55	U	65
Hexachlorobutadiene	U	5	U	110	U	55	U	65
1 2 3-Trichlorobenzene	U	5	U	110	U	55	U	65

Table 1.2 (Cont) Results of the Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample #	E 10267	A 10212	A 10211	A 10213	A 10214
Location	A3-2	Field Blank	Field Blank	Field Blank	Trip Blank
Collected	6/20/97	6/18/97	6/19/97	6/20/97	6/20/97
Analyzed	7/01/97	7/01/97	7/01/97	7/01/97	7/01/97
Dil. Factor	5	1	1	1	1

Compound	Conc µg/kg		MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
1,1,1,2-Tetrachloroethane	U		87	U	5	U	5	U	5	U	5
1,1,1-Trichloroethane	U		87	U	5	U	5	U	5	U	5
1,1,2,2-Tetrachloroethane	U		87	U	5	U	5	U	5	U	5
1,1,2-Trichloroethane	U		87	U	5	U	5	U	5	U	5
1,1-Dichloroethane	U		87	U	5	U	5	U	5	U	5
1,1-Dichloroethene	U		87	U	5	U	5	U	5	U	5
1,1-Dichloropropene	U		87	U	5	U	5	U	5	U	5
1,2,3-Trichloropropane	U		87	U	5	U	5	U	5	U	5
1,2-Dibromoethane	U		87	U	5	U	5	U	5	U	5
1,2-Dichloroethane	U		87	U	5	U	5	U	5	U	5
1,2-Dichloropropane	U		87	U	5	U	5	U	5	U	5
1,3-Dichloropropane	U		87	U	5	U	5	U	5	U	5
2,2-Dichloropropane	U		87	U	5	U	5	U	5	U	5
2-Butanone	140	J	180	U	10	U	10	U	10	U	10
2-Hexanone	U		180	U	10	U	10	U	10	U	10
4-Methyl-2-pentanone	U		180	U	10	U	10	U	10	U	10
Acetone	4600	E	180	30	10	24	10	~~42~~ U	10	29	10
Benzene	U		87	U	5	U	5	U	5	U	5
Bromobenzene	U		87	U	5	U	5	U	5	U	5
Bromodichloromethane	U		87	U	5	U	5	U	5	U	5
Bromoform	U		87	U	5	U	5	U	5	U	5
Bromomethane	U		180	U	10	U	10	U	10	U	10
Carbon Disulfide	U		87	U	5	U	5	U	5	U	5
Carbon tetrachloride	U		87	U	5	U	5	U	5	U	5
Chlorobenzene	U		87	U	5	U	5	U	5	U	5
Chloroethane	U		180	U	10	U	10	U	10	U	10
Chloroform	U		87	U	5	U	5	U	5	U	5
Chloromethane	U		180	U	10	U	10	U	10	U	10
cis-1,2-Dichloroethene	U		87	U	5	U	5	U	5	U	5
cis-1,3-Dichloropropene	U		87	U	5	U	5	U	5	U	5
Chlorodibromomethane	U		87	U	5	U	5	U	5	U	5
Dibromomethane	U		87	U	5	U	5	U	5	U	5
Dichlorodifluoromethane	U		87	U	5	U	5	U	5	U	5
Ethyl benzene	U		87	U	5	U	5	U	5	U	5
Isopropylbenzene	U		87	U	5	U	5	U	5	U	5
Methyl tert butyl ether	U		87	U	5	U	5	U	5	U	5
Methylene Chloride	67	JB	87	~~4~~ JB U	5	~~4~~ JB U	5	~~3~~ JB U	5	~~4~~ JB U	5
o Xylene	U		87	U	5	U	5	U	5	U	5
m+p Xylene	U		87	U	5	U	5	U	5	U	5
Styrene	U		87	U	5	U	5	U	5	U	5
Tetrachloroethene	U		87	U	5	U	5	U	5	U	5
Toluene	65	J	87	U	5	U	5	U	5	U	5
trans-1,2-Dichloroethene	U		87	U	5	U	5	U	5	U	5
trans-1,3-Dichloropropene	U		87	U	5	U	5	U	5	U	5
Trichloroethene	U		87	U	5	U	5	U	5	U	5
Trichlorofluoromethane	U		87	U	5	U	5	U	5	U	5
Vinyl chloride	U		180	U	10	U	10	U	10	U	10
n-Propyl Benzene	U		87	U	5	U	5	U	5	U	5
2-Chlorotoluene	U		87	U	5	U	5	U	5	U	5
4-Chlorotoluene	U		87	U	5	U	5	U	5	U	5
1,3,5-Trimethylbenzene	U		87	U	5	U	5	U	5	U	5
tert-Butylbenzene	U		87	U	5	U	5	U	5	U	5
1,2,4-Trimethylbenzene	U		87	U	5	U	5	U	5	U	5
sec-Butylbenzene	U		87	U	5	U	5	U	5	U	5
1,3-Dichlorobenzene	U		87	U	5	U	5	U	5	U	5
p-Isopropyltoluene	U		87	U	5	U	5	U	5	U	5
1,4-Dichlorobenzene	U		87	U	5	U	5	U	5	U	5
1,2-Dichlorobenzene	U		87	U	5	U	5	U	5	U	5
n-Butylbenzene	U		87	U	5	U	5	U	5	U	5
1,2,4-Trichlorobenzene	U		87	U	5	U	5	U	5	U	5
Naphthalene	U		87	U	5	U	5	U	5	U	5
Hexachlorobutadiene	U		87	U	5	U	5	U	5	U	5
1,2,3-Trichlorobenzene	U		87	U	5	U	5	U	5	U	5

Table 1.2 (Cont) Results of the Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample #	VBLKC		E 10395		E 10396		E 10397	
Location	-		T4-1-4		T4-1-10		T4-2-19	
Collected	NA		6/18/97		6/18/97		6/18/97	
Analyzed	7/2/97		7/02/97		7/02/97		7/02/97	
Dil Factor	1		5		5		5	

Compound	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg
1,1,1,2-Tetrachloroethane	U		5	U		39	U		37	U		34
1,1,1 -Trichloroethane	U		5	U		39	U		37	U		34
1,1,2,2-Tetrachloroethane	U		5	U		39	U		37	U		34
1 1,2-Trichloroethane	U		5	U		39	U		37	U		34
1 1-Dichloroethane	U		5	U		39	U		37	U		34
1,1-Dichloroethene	U		5	U		39	U		37	U		34
1 1-Dichloropropene	U		5	U		39	U		37	U		34
1 2,3-Trichloropropane	U		5	U		39	U		37	U		34
1,2-Dibromoethane	U		5	U		39	U		37	U		34
1,2-Dichloroethane	U		5	U		39	U		37	U		34
1,2-Dichloropropane	U		5	U		39	U		37	U		34
1,3-Dichloropropane	U		5	U		39	U		37	U		34
2,2-Dichloropropane	U		5	U		39	U		37	U		34
2-Butanone	U		10	U		79	U		73	U		67
2-Hexanone	U		10	U		79	U		73	U		67
4-Methyl-2-pentanone	U		10	U		79	U		73	U		67
Acetone	U		10	230		79	250		73	170		67
Benzene	U		5	U		39	U		37	U		34
Bromobenzene	U		5	U		39	U		37	U		34
Bromodichloromethane	U		5	U		39	U		37	U		34
Bromoform	U		5	U		39	U		37	U		34
Bromomethane	U		10	U		79	U		73	U		67
Carbon Disulfide	U		5	U		39	U		37	U		34
Carbon tetrachloride	U		5	U		39	U		37	U		34
Chlorobenzene	U		5	U		39	U		37	U		34
Chloroethane	U		10	U		79	U		73	U		67
Chloroform	U		5	U		39	U		37	U		34
Chloromethane	U		10	U		79	U		73	U		67
cis-1 2-Dichloroethene	U		5	U		39	U		37	U		34
cis-1,3-Dichloropropene	U		5	U		39	U		37	U		34
Chlorodibromomethane	U		5	U		39	U		37	U		34
Dibromomethane	U		5	U		39	U		37	U		34
Dichlorodifluoromethane	U		5	U		39	U		37	U		34
Ethyl benzene	U		5	U		39	U		37	U		34
Isopropylbenzene	U		5	U		39	U		37	U		34
Methyl tert butyl ether	U		5	U		39	U		37	U		34
Methylene Chloride	3	J	5	34	JB	39	31	JB	37	28	JB	34
o Xylene	U		5	U		39	U		37	U		34
m+p Xylene	U		5	U		39	U		37	U		34
Styrene	U		5	U		39	U		37	U		34
Tetrachloroethene	U		5	U		39	U		37	U		34
Toluene	U		5	U		39	U		37	U		34
trans-1 2-Dichloroethene	U		5	U		39	U		37	U		34
trans-1,3-Dichloropropene	U		5	U		39	U		37	U		34
Trichloroethene	U		5	U		39	U		37	U		34
Trichlorofluoromethane	U		5	8	J	39	11	J	37	U		34
Vinyl chloride	U		10	U		79	U		73	U		67
n-Propyl Benzene	U		5	U		39	U		37	U		34
2-Chlorotoluene	U		5	U		39	U		37	U		34
4-Chlorotoluene	U		5	U		39	U		37	U		34
1,3 5-Trimethylbenzene	U		5	U		39	U		37	U		34
tert-Butylbenzene	U		5	U		39	U		37	U		34
1,2 4-Trimethylbenzene	U		5	U		39	U		37	U		34
sec-Butylbenzene	U		5	U		39	U		37	U		34
1 3-Dichlorobenzene	U		5	U		39	U		37	U		34
p-Isopropyltoluene	U		5	U		39	U		37	U		34
1 4-Dichlorobenzene	U		5	U		39	U		37	U		34
1 2-Dichlorobenzene	U		5	U		39	U		37	U		34
n-Butylbenzene	U		5	U		39	U		37	U		34
1 2 4-Trichlorobenzene	U		5	U		39	U		37	U		34
Naphthalene	U		5	U		39	U		37	U		34
Hexachlorobutadiene	U		5	U		39	U		37	U		34
1 2 3-Trichlorobenzene	U		5	U		39	U		37	U		34

Table 1.2 (Cont) Results of the Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample #	E 10398			E 10399			E 10400			E 10486		
Location	T4-3-3			T4-4-1			T4-5-6			A1-1		
Collected	6/18/97			6/18/97			6/18/97			6/18/97		
Analyzed	7/02/97			7/02/97			7/02/97			7/02/97		
Dil. Factor	5			5			5			5		

Compound	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg
1,1,1,2-Tetrachloroethane	U		45	U		42	U		37	U		60
1,1,1,-Trichloroethane	U		45	U		42	U		37	U		60
1,1 2,2-Tetrachloroethane	U		45	U		42	U		37	U		60
1,1,2-Trichloroethane	U		45	U		42	U		37	U		60
1,1-Dichloroethane	U		45	U		42	U		37	U		60
1,1-Dichloroethene	U		45	U		42	U		37	U		60
1,1-Dichloropropene	U		45	U		42	U		37	U		60
1,2,3-Trichloropropane	U		45	U		42	U		37	U		60
1,2-Dibromoethane	U		45	U		42	U		37	U		60
1,2-Dichloroethane	U		45	U		42	U		37	U		60
1,2-Dichloropropane	U		45	U		42	U		37	U		60
1,3-Dichloropropane	U		45	U		42	U		37	U		60
2,2-Dichloropropane	U		45	U		42	U		37	U		60
2-Butanone	U		90	U		84	U		73	U		120
2-Hexanone	U		90	U		84	U		73	U		120
4-Methyl-2-pentanone	U		90	U		84	U		73	U		120
Acetone	240		90	210		84	U		73	730		120
Benzene	U		45	U		42	U		37	U		60
Bromobenzene	U		45	U		42	U		37	U		60
Bromodichloromethane	U		45	U		42	U		37	U		60
Bromoform	U		45	U		42	U		37	U		60
Bromomethane	U		90	U		84	U		73	U		120
Carbon Disulfide	U		45	U		42	U		37	U		60
Carbon tetrachloride	U		45	U		42	U		37	U		60
Chlorobenzene	U		45	U		42	U		37	U		60
Chloroethane	U		90	U		84	U		73	U		120
Chloroform	U		45	U		42	U		37	U		60
Chloromethane	U		90	U		84	U		73	U		120
cis-1,2-Dichloroethene	U		45	U		42	U		37	U		60
cis-1,3-Dichloropropene	U		45	U		42	U		37	U		60
Chlorodibromomethane	U		45	U		42	U		37	U		60
Dibromomethane	U		45	U		42	U		37	U		60
Dichlorodifluoromethane	U		45	U		42	U		37	U		60
Ethyl benzene	U		45	U		42	U		37	U		60
Isopropylbenzene	U		45	U		42	U		37	U		60
Methyl tert butyl ether	U		45	U		42	U		37	U		60
Methylene Chloride	43	JB	45	38	JB	42	48	B	37	56	JB	60
o Xylene	U		45	U		42	U		37	U		60
m+p Xylene	U		45	U		42	U		37	U		60
Styrene	U		45	U		42	U		37	U		60
Tetrachloroethene	U		45	U		42	U		37	U		60
Toluene	U		45	U		42	U		37	U		60
trans-1 2-Dichloroethene	U		45	U		42	U		37	U		60
trans-1,3-Dichloropropene	U		45	U		42	U		37	U		60
Trichloroethene	U		45	U		42	U		37	U		60
Trichlorofluoromethane	U		45	U		42	U		37	U		60
Vinyl chloride	U		90	U		84	U		73	U		120
n-Propyl Benzene	U		45	U		42	U		37	U		60
2-Chlorotoluene	U		45	U		42	U		37	U		60
4-Chlorotoluene	U		45	U		42	U		37	U		60
1,3,5-Trimethylbenzene	U		45	U		42	U		37	U		60
tert-Butylbenzene	U		45	U		42	U		37	U		60
1,2,4-Trimethylbenzene	U		45	U		42	U		37	U		60
sec-Butylbenzene	U		45	U		42	U		37	U		60
1 3-Dichlorobenzene	U		45	U		42	U		37	U		60
p-Isopropyltoluene	U		45	U		42	U		37	U		60
1 4-Dichlorobenzene	U		45	U		42	U		37	U		60
1 2-Dichlorobenzene	U		45	U		42	U		37	U		60
n-Butylbenzene	U		45	U		42	U		37	U		60
1,2,4-Trichlorobenzene	U		45	U		42	U		37	U		60
Naphthalene	U		45	U		42	U		37	U		60
Hexachlorobutadiene	U		45	U		42	U		37	U		60
1 2,3-Trichlorobenzene	U		45	U		42	U		37	U		60

Table 1.2 (Cont) Results of the Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample #	VBLKD		E 10487		E 10488	
Location	-		A1-2		A1-3	
Collected	NA		6/18/97		6/18/97	
Analyzed	7/10/97		7/10/97		7/10/97	
Dil. Factor	1		5		5	

Compound	Conc µg/kg	MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg
1,1,1,2-Tetrachloroethane	U	5	U		76	U		93
1,1,1,-Trichloroethane	U	5	U		76	U		93
1,1,2,2-Tetrachloroethane	U	5	U		76	U		93
1,1,2-Trichloroethane	U	5	U		76	U		93
1,1-Dichloroethane	U	5	U		76	U		93
1,1-Dichloroethene	U	5	U		76	U		93
1,1-Dichloropropene	U	5	U		76	U		93
1,2,3-Trichloropropane	U	5	U		76	U		93
1,2-Dibromoethane	U	5	U		76	U		93
1,2-Dichloroethane	U	5	U		76	U		93
1,2-Dichloropropane	U	5	U		76	U		93
1,3-Dichloropropane	U	5	U		76	U		93
2,2-Dichloropropane	U	5	U		76	U		93
2-Butanone	U	10	120	J	150	370		190
2-Hexanone	U	10	U		150	U		190
4-Methyl-2-pentanone	U	10	U		150	U		190
Acetone	U	10	2000		150	3600		190
Benzene	U	5	U		76	U		93
Bromobenzene	U	5	U		76	U		93
Bromodichloromethane	U	5	U		76	U		93
Bromoform	U	5	U		76	U		93
Bromomethane	U	10	U		150	U		190
Carbon Disulfide	U	5	U		76	U		93
Carbon tetrachloride	U	5	U		76	U		93
Chlorobenzene	U	5	U		76	U		93
Chloroethane	U	10	U		150	U		190
Chloroform	U	5	U		76	U		93
Chloromethane	U	10	U		150	U		190
cis-1,2-Dichloroethene	U	5	U		76	U		93
cis-1,3-Dichloropropene	U	5	U		76	U		93
Chlorodibromomethane	U	5	U		76	U		93
Dibromomethane	U	5	U		76	U		93
Dichlorodifluoromethane	U	5	U		76	U		93
Ethyl benzene	U	5	U		76	U		93
Isopropylbenzene	U	5	U		76	U		93
Methyl tert butyl ether	U	5	U		76	U		93
Methylene Chloride	8	5	55	JB	76	41	JB	93
o Xylene	U	5	U		76	U		93
m+p Xylene	U	5	U		76	U		93
Styrene	U	5	U		76	U		93
Tetrachloroethene	U	5	U		76	U		93
Toluene	U	5	37	J	76	1900		93
trans-1,2-Dichloroethene	U	5	U		76	U		93
trans-1,3-Dichloropropene	U	5	U		76	U		93
Trichloroethene	U	5	U		76	U		93
Trichlorofluoromethane	U	5	U		76	U		93
Vinyl chloride	U	10	U		150	U		190
n-Propyl Benzene	U	5	U		76	U		93
2-Chlorotoluene	U	5	U		76	U		93
4-Chlorotoluene	U	5	U		76	U		93
1,3,5-Trimethylbenzene	U	5	U		76	U		93
tert-Butylbenzene	U	5	U		76	U		93
1,2,4-Trimethylbenzene	U	5	U		76	U		93
sec-Butylbenzene	U	5	U		76	U		93
1,3-Dichlorobenzene	U	5	U		76	U		93
p-Isopropyltoluene	U	5	U		76	U		93
1,4-Dichlorobenzene	U	5	U		76	U		93
1,2-Dichlorobenzene	U	5	U		76	U		93
n-Butylbenzene	U	5	U		76	30	J	93
1,2,4-Trichlorobenzene	U	5	U		76	U		93
Naphthalene	U	5	17	J	76	U		93
Hexachlorobutadiene	U	5	U		76	U		93
1,2,3-Trichlorobenzene	U	5	19	J	76	U		93

Table 1.2 (Cont) Results of the Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample #	VBLKB	E 10489	E 10490	E 10491
Location	-	A1-4	A1-5	A1-6
Collected	NA	6/18/97	6/18/97	6/18/97
Analyzed	6/30/97	6/30/97	6/30/97	6/30/97
Dil. Factor	1	5	5	5

Compound	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
1,1,1,2-Tetrachloroethane	U	5	U	63	U	65	U	55
1,1,1 -Trichloroethane	U	5	U	63	U	65	U	55
1,1,2,2-Tetrachloroethane	U	5	U	63	U	65	U	55
1,1,2-Trichloroethane	U	5	U	63	U	65	U	55
1,1-Dichloroethane	U	5	U	63	U	65	U	55
1,1-Dichloroethene	U	5	U	63	U	65	U	55
1,1-Dichloropropene	U	5	U	63	U	65	U	55
1,2,3-Trichloropropane	U	5	U	63	U	65	U	55
1,2-Dibromoethane	U	5	U	63	U	65	U	55
1,2-Dichloroethane	U	5	U	63	U	65	U	55
1,2-Dichloropropane	U	5	U	63	U	65	U	55
1,3-Dichloropropane	U	5	U	63	U	65	U	55
2,2-Dichloropropane	U	5	U	63	U	65	U	55
2-Butanone	U	10	U	130	U	130	U	110
2-Hexanone	U	10	U	130	U	130	U	110
4-Methyl-2-pentanone	U	10	U	130	U	130	U	110
Acetone	U	10	870	130	350	130	680	110
Benzene	U	5	U	63	U	65	U	55
Bromobenzene	U	5	U	63	U	65	U	55
Bromodichloromethane	U	5	U	63	U	65	U	55
Bromoform	U	5	U	63	U	65	U	55
Bromomethane	U	10	U	130	U	130	U	110
Carbon Disulfide	U	5	U	63	U	65	U	55
Carbon tetrachloride	U	5	U	63	U	65	U	55
Chlorobenzene	U	5	U	63	U	65	U	55
Chloroethane	U	10	U	130	U	130	U	110
Chloroform	U	5	U	63	U	65	U	55
Chloromethane	U	10	U	130	U	130	U	110
cis-1,2-Dichloroethene	U	5	U	63	U	65	U	55
cis-1,3-Dichloropropene	U	5	U	63	U	65	U	55
Chlorodibromomethane	U	5	U	63	U	65	U	55
Dibromomethane	U	5	U	63	U	65	U	55
Dichlorodifluoromethane	U	5	U	63	U	65	U	55
Ethyl benzene	U	5	U	63	U	65	U	55
Isopropylbenzene	U	5	U	63	U	65	U	55
Methyl tert butyl ether	U	5	U	63	U	65	U	55
Methylene Chloride	U	5	U	63	14 J	65	33 J	55
o Xylene	U	5	U	63	U	65	U	55
m+p Xylene	U	5	U	63	U	65	U	55
Styrene	U	5	U	63	U	65	U	55
Tetrachloroethene	U	5	U	63	U	65	U	55
Toluene	U	5	U	63	U	65	U	55
trans-1,2-Dichloroethene	U	5	U	63	U	65	U	55
trans-1,3-Dichloropropene	U	5	U	63	U	65	U	55
Trichloroethene	U	5	U	63	U	65	U	55
Trichlorofluoromethane	U	5	U	63	U	65	U	55
Vinyl chloride	U	10	U	130	U	130	U	110
n-Propyl Benzene	U	5	U	63	U	65	U	55
2-Chlorotoluene	U	5	U	63	U	65	U	55
4-Chlorotoluene	U	5	U	63	U	65	U	55
1,3,5-Trimethylbenzene	U	5	U	63	U	65	U	55
tert-Butylbenzene	U	5	U	63	U	65	U	55
1,2,4-Trimethylbenzene	U	5	U	63	U	65	U	55
sec-Butylbenzene	U	5	U	63	U	65	U	55
1,3-Dichlorobenzene	U	5	U	63	U	65	U	55
p-Isopropyltoluene	U	5	U	63	U	65	U	55
1,4-Dichlorobenzene	U	5	U	63	U	65	U	55
1,2-Dichlorobenzene	U	5	U	63	U	65	U	55
n-Butylbenzene	U	5	U	63	U	65	U	55
1,2,4-Trichlorobenzene	U	5	U	63	U	65	U	55
Naphthalene	U	5	U	63	U	65	U	55
Hexachlorobutadiene	U	5	U	63	U	65	U	55
1,2,3-Trichlorobenzene	U	5	U	63	U	65	U	55

Table 1.2 (Cont) Results of the Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample #	DE 10492	E 10493	E 10494	E 10495
Location	A2-1	A2-2	A4-1	A4-2
Collected	6/19/97	6/19/97	6/19/97	6/19/97
Analyzed	6/30/97	6/30/97	6/30/97	6/30/97
Dil. Factor	5	5	5	5

Compound	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
1,1,1,2-Tetrachloroethane	U	54	U	79	U	59	U	37
1,1,1,-Trichloroethane	U	54	U	79	17 J	59	U	37
1,1,2,2-Tetrachloroethane	U	54	U	79	U	59	U	37
1,1,2-Trichloroethane	U	54	U	79	U	59	U	37
1,1-Dichloroethane	U	54	U	79	U	59	U	37
1,1-Dichloroethene	U	54	U	79	U	59	U	37
1,1-Dichloropropene	U	54	U	79	U	59	U	37
1,2,3-Trichloropropane	U	54	U	79	U	59	U	37
1,2-Dibromoethane	U	54	U	79	U	59	U	37
1,2-Dichloroethane	U	54	U	79	U	59	U	37
1,2-Dichloropropane	U	54	U	79	U	59	U	37
1,3-Dichloropropane	U	54	U	79	U	59	U	37
2,2-Dichloropropane	U	54	U	79	U	59	U	37
2-Butanone	U	110	U	160	U	120	U	73
2-Hexanone	U	110	U	160	54 J	120	U	73
4-Methyl-2-pentanone	U	110	U	160	U	120	U	73
Acetone	690	110	1100	160	1900	120	830	73
Benzene	U	54	U	79	U	59	U	37
Bromobenzene	U	54	U	79	U	59	U	37
Bromodichloromethane	U	54	U	79	U	59	U	37
Bromoform	U	54	U	79	U	59	U	37
Bromomethane	U	110	U	160	U	120	U	73
Carbon Disulfide	U	54	U	79	U	59	U	37
Carbon tetrachloride	U	54	U	79	U	59	U	37
Chlorobenzene	U	54	U	79	U	59	U	37
Chloroethane	U	110	U	160	30 J	120	U	73
Chloroform	U	54	U	79	U	59	U	37
Chloromethane	U	110	U	160	130	120	U	73
cis-1 2-Dichloroethene	U	54	U	79	U	59	U	37
cis-1,3-Dichloropropene	U	54	U	79	U	59	U	37
Chlorodibromomethane	U	54	U	79	U	59	U	37
Dibromomethane	U	54	U	79	U	59	U	37
Dichlorodifluoromethane	U	54	U	79	U	59	U	37
Ethyl benzene	U	54	U	79	U	59	U	37
Isopropylbenzene	U	54	U	79	U	59	U	37
Methyl tert butyl ether	U	54	U	79	U	59	U	37
Methylene Chloride	U	54	31 J	79	16 J	59	12 J	37
o Xylene	U	54	U	79	U	59	U	37
m+p Xylene	U	54	U	79	U	59	U	37
Styrene	U	54	U	79	U	59	U	37
Tetrachloroethene	U	54	U	79	U	59	U	37
Toluene	U	54	U	79	U	59	U	37
trans-1 2-Dichloroethene	U	54	U	79	U	59	U	37
trans-1,3-Dichloropropene	U	54	U	79	U	59	U	37
Trichloroethene	U	54	U	79	U	59	U	37
Trichlorofluoromethane	U	54	U	79	U	59	U	37
Vinyl chloride	U	110	U	160	U	120	U	73
n-Propyl Benzene	U	54	U	79	U	59	U	37
2-Chlorotoluene	U	54	U	79	U	59	U	37
4-Chlorotoluene	U	54	U	79	U	59	U	37
1,3 5-Trimetnylbenzene	U	54	U	79	U	59	U	37
tert-Butylbenzene	U	54	U	79	U	59	U	37
1,2,4-Trimethylbenzene	U	54	U	79	U	59	U	37
sec-Butylbenzene	U	54	U	79	U	59	U	37
1 3-Dichlorobenzene	U	54	U	79	U	59	U	37
p-Isopropyltoluene	U	54	83	79	U	59	U	37
1 4-Dichlorobenzene	U	54	U	79	U	59	U	37
1,2-Dichlorobenzene	U	54	U	79	U	59	U	37
n-Butylbenzene	U	54	U	79	U	59	U	37
1,2,4-Trichlorobenzene	U	54	U	79	U	59	U	37
Naphthalene	U	54	U	79	U	59	U	37
Hexachlorobutadiene	U	54	U	79	U	59	U	37
1 2 3-Trichlorobenzene	U	54	U	79	U	59	U	37

Table 1.2 (Cont) Results of the Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample #	A 10496		E 10497		E 10498		E 10262	
Location	A5-1		A5-2		A6-1		A6-2	
Collected	6/19/97		6/19/97		6/19/97		6/19/97	
Analyzed	6/30/97		6/30/97		7/01/97		7/01/97	
Dil. Factor	5		5		5		5	

Compound	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg
1 1,1 2-Tetrachloroethane	U		40	U		34	U		100	U		130
1 1,1 -Trichloroethane	U		40	U		34	U		100	U		130
1 1,2,2-Tetrachloroethane	U		40	U		34	U		100	U		130
1 1,2-Trichloroethane	U		40	U		34	U		100	U		130
1,1-Dichloroethane	U		40	U		34	U		100	U		130
1,1-Dichloroethene	U		40	U		34	U		100	U		130
1 1-Dichloropropene	U		40	U		34	U		100	U		130
1,2,3-Trichloropropane	U		40	U		34	U		100	U		130
1,2-Dibromoethane	U		40	U		34	U		100	U		130
1 2-Dichloroethane	U		40	U		34	U		100	U		130
1,2-Dichloropropane	U		40	U		34	U		100	U		130
1,3-Dichloropropane	U		40	U		34	U		100	U		130
2,2-Dichloropropane	U		40	U		34	U		100	U		130
2-Butanone	U		79	U		68	U		200	U		250
2-Hexanone	U		79	U		68	U		200	U		250
4-Methyl-2-pentanone	U		79	U		68	U		200	U		250
Acetone	450		79	860		68	2300		200	3000		250
Benzene	U		40	U		34	U		100	U		130
Bromobenzene	U		40	U		34	U		100	U		130
Bromodichloromethane	U		40	U		34	U		100	U		130
Bromoform	U		40	U		34	U		100	U		130
Bromomethane	U		79	U		68	U		200	U		250
Carbon Disulfide	U		40	U		34	U		100	U		130
Carbon tetrachloride	U		40	U		34	U		100	U		130
Chlorobenzene	U		40	U		34	U		100	U		130
Chloroethane	U		79	U		68	U		200	U		250
Chloroform	U		40	U		34	U		100	U		130
Chloromethane	U		79	U		68	U		200	U		250
cis-1 2-Dichloroethene	U		40	U		34	U		100	U		130
cis-1,3-Dichloropropene	U		40	U		34	U		100	U		130
Chlorodibromomethane	U		40	U		34	U		100	U		130
Dibromomethane	U		40	U		34	U		100	U		130
Dichlorodifluoromethane	U		40	U		34	U		100	U		130
Ethyl benzene	U		40	U		34	U		100	U		130
Isopropylbenzene	U		40	U		34	U		100	U		130
Methyl tert butyl ether	U		40	U		34	U		100	U		130
Methylene Chloride	13	J	40	13	J	34	28	J	100	U		130
o Xylene	U		40	U		34	U		100	U		130
m+p Xylene	U		40	U		34	U		100	U		130
Styrene	U		40	U		34	U		100	U		130
Tetrachloroethene	U		40	U		34	U		100	U		130
Toluene	U		40	U		34	U		100	U		130
trans-1 2-Dichloroethene	U		40	U		34	U		100	U		130
trans-1,3-Dichloropropene	U		40	U		34	U		100	U		130
Trichloroethene	U		40	U		34	U		100	U		130
Trichlorofluoromethane	U		40	U		34	U		100	U		130
Vinyl chloride	U		79	U		68	U		200	U		250
n-Propyl Benzene	U		40	U		34	U		100	U		130
2-Chlorotoluene	U		40	U		34	U		100	U		130
4-Chlorotoluene	U		40	U		34	U		100	U		130
1,3 5-Trimethylbenzene	U		40	U		34	U		100	U		130
tert-Butylbenzene	U		40	U		34	U		100	U		130
1,2 4-Trimethylbenzene	U		40	U		34	U		100	U		130
sec-Butylbenzene	U		40	U		34	U		100	U		130
1 3-Dichlorobenzene	U		40	U		34	U		100	U		130
p-Isopropyltoluene	U		40	U		34	U		100	U		130
1 4-Dichlorobenzene	U		40	U		34	U		100	U		130
1 2-Dichlorobenzene	U		40	U		34	U		100	U		130
n-Butylbenzene	U		40	U		34	U		100	U		130
1 2 4-Trichlorobenzene	U		40	U		34	U		100	U		130
Naphthalene	U		40	U		34	U		100	U		130
Hexachlorobutadiene	U		40	U		34	U		100	U		130
1 2 3-Trichlorobenzene	U		40	U		34	U		100	U		130

Table 1.2 (Cont) Results of the Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample #	VBLKC		E 10371		E 10372		E 10373		E 10374	
Location	-		T2-12-5		T2-7-1		T2-6-7		T2-2-1	
Collected	NA		6/18/97		6/18/97		6/18/97		6/18/97	
Analyzed	7/10/97		7/10/97		7/10/97		7/10/97		7/10/97	
Dil. Factor	1		5		5		5		5	
% Solids	NA		57		57		65		63	

Compound	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
1 1,1,2-Tetrachloroethane	U	5	U	44	U	44	U	39	U	40
1 1,1 -Trichloroethane	U	5	U	44	11 JD	44	U	39	U	40
1,1 2,2-Tetrachloroethane	U	5	U	44	U	44	U	39	U	40
1 1,2-Trichloroethane	U	5	U	44	U	44	U	39	U	40
1 1-Dichloroethane	U	5	U	44	U	44	U	39	U	40
1 1-Dichloroethene	U	5	U	44	U	44	U	39	U	40
1 1-Dichloropropene	U	5	U	44	U	44	U	39	U	40
1 2,3-Trichloropropane	U	5	U	44	U	44	U	39	U	40
1,2-Dibromoethane	U	5	U	44	U	44	U	39	U	40
1 2-Dichloroethane	U	5	U	44	U	44	U	39	U	40
1,2-Dichloropropane	U	5	U	44	U	44	U	39	U	40
1 3-Dichloropropane	U	5	U	44	U	44	U	39	U	40
2,2-Dichloropropane	U	5	U	44	U	44	U	39	U	40
2-Butanone	U	10	U	87	220	88	U	77	U	80
2-Hexanone	U	10	U	87	U	88	U	77	U	80
4-Methyl-2-pentanone	U	10	U	87	U	88	U	77	U	80
Acetone	U	10	U	87	41 J	88	U	77	U	80
Benzene	U	5	U	44	U	44	U	39	U	40
Bromobenzene	U	5	U	44	U	44	U	39	U	40
Bromodichloromethane	U	5	U	44	U	44	U	39	U	40
Bromoform	U	5	U	44	U	44	U	39	U	40
Bromomethane	U	10	U	87	U	88	U	77	U	80
Carbon Disulfide	U	5	U	44	U	44	U	39	U	40
Carbon tetrachloride	U	5	U	44	U	44	U	39	U	40
Chlorobenzene	U	5	U	44	U	44	U	39	U	40
Chloroethane	U	10	U	87	U	88	U	77	U	80
Chloroform	U	5	U	44	U	44	U	39	U	44
Chloromethane	U	10	U	87	U	88	U	77	U	80
cis-1 2-Dichloroethene	U	5	U	44	U	44	U	39	U	40
cis-1,3-Dichloropropene	U	5	U	44	U	44	U	39	U	40
Chlorodibromomethane	U	5	U	44	U	44	U	39	U	40
Dibromomethane	U	5	U	44	U	44	U	39	U	40
Dichlorodifluoromethane	U	5	U	44	U	44	U	39	U	40
Ethyl benzene	U	5	U	44	U	44	U	39	U	40
Isopropylbenzene	U	5	U	44	U	44	U	39	U	40
Methyl tert butyl ether	U	5	U	44	U	44	U	39	U	40
Methylene Chloride	8	5	37 JBD	44	54 JB	44	40 BD	39	46 BD	40
o Xylene	U	5	U	44	U	44	U	39	U	40
m+p Xylene	U	5	U	44	U	44	U	39	U	40
Styrene	U	5	U	44	U	44	U	39	U	40
Tetrachloroethene	U	5	U	44	U	44	U	39	U	40
Toluene	U	5	U	44	U	44	U	39	U	40
trans-1 2-Dichloroethene	U	5	U	44	U	44	U	39	U	40
trans-1,3-Dichloropropene	U	5	U	44	U	44	U	39	U	40
Trichloroethene	U	5	U	44	U	44	U	39	U	40
Trichlorofluoromethane	U	5	18 JD	44	18 JD	44	18 JD	39	U	40
Vinyl chloride	U	10	U	87	U	88	U	77	U	80
n-Propyl Benzene	U	5	U	44	U	44	U	39	U	40
2-Chlorotoluene	U	5	U	44	U	44	U	39	U	40
4-Chlorotoluene	U	5	U	44	U	44	U	39	U	40
1,3 5-Trimethylbenzene	U	5	U	44	U	44	U	39	U	40
tert-Butylbenzene	U	5	U	44	U	44	U	39	U	40
1,2 4-Trimethylbenzene	U	5	U	44	U	44	U	39	U	40
sec-Butylbenzene	U	5	U	44	U	44	U	39	U	40
1 3-Dichlorobenzene	U	5	U	44	U	44	U	39	U	40
p-Isopropyltoluene	U	5	U	44	U	44	U	39	U	40
1 4-Dichlorobenzene	U	5	U	44	U	44	U	39	U	40
1 2-Dichlorobenzene	U	5	U	44	U	44	U	39	U	40
n-Butylbenzene	U	5	U	44	U	44	U	39	U	40
1 2,4-Trichlorobenzene	U	5	U	44	U	44	U	39	U	40
Naphthalene	U	5	U	44	U	44	U	39	U	40
Hexachlorobutadiene	U	5	U	44	U	44	U	39	U	40
1 2 3-Trichlorobenzene	U	5	U	44	U	44	U	39	U	40

Table 1.2 (Cont) Results of the Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample #	E 10375			E 10380			E 10381			E 10382			E 10383		
Location	T2-5-6			T2-1-3			T1-1-4			T1-4-5			T1-7-2		
Collected	6/18/97			6/18/97			6/18/97			6/18/97			6/18/97		
Analyzed	7/10/97			7/10/97			7/10/97			7/10/97			7/10/97		
Dil. *Factor*	5			5			5			5			5		
% Solids	68			77			87			89			81		
Compound	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg
1 1 1,2-Tetrachloroethane	U		37	U		33	U		29	U		29	U		31
1 1 1 -Trichloroethane	U		37	U		33	U		29	U		29	U		31
1 1,2,2-Tetrachloroethane	U		37	U		33	U		29	U		29	U		31
1 1,2-Trichloroethane	U		37	U		33	U		29	U		29	U		31
1 1-Dichloroethane	U		37	U		33	U		29	U		29	U		31
1 1-Dichloroethene	U		37	U		33	U		29	U		29	U		31
1 1-Dichloropropene	U		37	U		33	U		29	U		29	U		31
1 2 3-Trichloropropane	U		37	U		33	U		29	U		29	U		31
1 2-Dibromoethane	U		37	U		33	U		29	U		29	U		31
1 2-Dichloroethane	U		37	U		33	U		29	U		29	U		31
1,2-Dichloropropane	U		37	U		33	U		29	U		29	U		31
1 3-Dichloropropane	U		37	U		33	U		29	U		29	U		31
2,2-Dichloropropane	U		37	U		33	U		29	U		29	U		31
2-Butanone	U		74	U		65	U		58	U		57	U		62
2-Hexanone	U		74	U		65	U		58	U		57	U		62
4-Methyl-2-pentanone	U		74	U		65	U		58	U		57	U		62
Acetone	U		74	U		65	380		58	190	D	57	260	D	62
Benzene	U		37	U		33	U		29	U		29	U		31
Bromobenzene	U		37	U		33	U		29	U		29	U		31
Bromodichloromethane	U		37	U		33	U		29	U		29	U		31
Bromoform	U		37	U		33	U		29	U		29	U		31
Bromomethane	U		74	U		65	U		58	U		57	U		62
Carbon Disulfide	U		37	U		33	U		29	U		29	U		31
Carbon tetrachloride	U		37	U		33	U		29	U		29	U		31
Chlorobenzene	U		37	U		33	U		29	U		29	U		31
Chloroethane	U		74	U		65	U		58	U		57	U		62
Chloroform	U		37	U		33	U		29	U		29	U		31
Chloromethane	U		74	U		65	U		58	U		57	U		62
cis-1 2-Dichloroethene	U		37	U		33	U		29	U		29	U		31
cis-1,3-Dichloropropene	U		37	U		33	U		29	U		29	U		31
Chlorodibromomethane	U		37	U		33	U		29	U		29	U		31
Dibromomethane	U		37	U		33	U		29	U		29	U		31
Dichlorodifluoromethane	U		37	U		33	U		29	U		29	U		31
Ethyl benzene	U		37	U		33	U		29	U		29	U		31
Isopropylbenzene	U		37	U		33	U		29	U		29	U		31
Methyl tert butyl ether	U		37	U		33	U		29	U		29	U		31
Methylene Chloride	34	JBD	37	29	JBD	33	51	BD	29	39	BD	29	34	BD	31
o Xylene	U		37	U		33	U		29	U		29	U		31
m+p Xylene	U		37	U		33	U		29	U		29	U		31
Styrene	U		37	U		33	U		29	U		29	U		31
Tetrachloroethene	U		37	U		33	U		29	U		29	U		31
Toluene	U		37	U		33	U		29	U		29	U		31
trans-1 2-Dichloroethene	U		37	U		33	U		29	U		29	U		31
trans-1,3-Dichloropropene	U		37	U		33	U		29	U		29	U		31
Trichloroethene	U		37	U		33	U		29	U		29	U		31
Trichlorofluoromethane	12	JD	37	9	JD	33	49	D	29	17	JD	29	U		31
Vinyl chloride	U		74	U		65	U		58	U		57	U		62
n-Propyl Benzene	U		37	U		33	U		29	U		29	U		31
2-Chlorotoluene	U		37	U		33	U		29	U		29	U		31
4-Chlorotoluene	U		37	U		33	U		29	U		29	U		31
1,3 5-Trimethylbenzene	U		37	U		33	U		29	U		29	U		31
tert-Butylbenzene	U		37	U		33	U		29	U		29	U		31
1,2 4—Trimethylbenzene	U		37	U		33	U		29	U		29	U		31
sec-Butylbenzene	U		37	U		33	U		29	U		29	U		31
1 3-Dichlorobenzene	U		37	U		33	U		29	U		29	U		31
p-Isopropyltoluene	U		37	U		33	U		29	U		29	U		31
1 4-Dichlorobenzene	U		37	U		33	U		29	U		29	U		31
1 2-Dichlorobenzene	U		37	U		33	U		29	U		29	U		31
n-Butylbenzene	U		37	U		33	U		29	U		29	U		31
1 2 4—Trichlorobenzene	U		37	U		33	U		29	U		29	U		31
Naphthalene	U		37	U		33	U		29	U		29	U		31
Hexachlorobutadiene	U		37	U		33	U		29	U		29	U		31
1 2 3—Trichlorobenzene	U		37	U		33	U		29	U		29	U		31

Table 1.2 (Cont) Results of the Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample #	E 10384		E 10385		VBLKD		E 10386		E 10387	
Location	T1-3-7		T1-5-6		-		T1-10-2		T1-11-9	
Collected	6/18/97		6/18/97		NA		6/18/97		6/18/97	
Analyzed	7/10/97		7/10/97		7/11/97		7/11/97		7/11/97	
Dil. Factor	5		5		1		5		5	
% Solids	82		78		NA		80		78	

Compound	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg
1 1 1,2-Tetrachloroethane	U		31	U		32	U		5	U		32	U		32			
1 1 1 -Trichloroethane	U		31	U		32	U		5	U		32	U		32			
1 1 2,2-Tetrachloroethane	U		31	U		32	U		5	U		32	U		32			
1 1,2-Trichloroethane	U		31	U		32	U		5	U		32	U		32			
1 1-Dichloroethane	U		31	U		32	U		5	U		32	U		32			
1 1-Dichloroethene	U		31	U		32	U		5	U		32	U		32			
1 1-Dichloropropene	U		31	U		32	U		5	U		32	U		32			
1 2 3-Trichloropropane	U		31	U		32	U		5	U		32	U		32			
1 2-Dibromoethane	U		31	U		32	U		5	U		32	U		32			
1 2-Dichloroethane	U		31	U		32	U		5	U		32	U		32			
1 2-Dichloropropane	U		31	U		32	U		5	U		32	U		32			
1,3-Dichloropropane	U		31	U		32	U		5	U		32	U		32			
2,2-Dichloropropane	U		31	U		32	U		5	U		32	U		32			
2-Butanone	U		61	U		65	U		10	U		63	U		65			
2-Hexanone	U		61	U		65	U		10	U		63	U		65			
4-Methyl-2-pentanone	U		61	U		65	U		10	U		63	U		65			
Acetone	U		61	210	D	65	U		10	400	D	63	240	D	65			
Benzene	U		31	U		32	U		5	U		32	U		32			
Bromobenzene	U		31	U		32	U		5	U		32	U		32			
Bromodichloromethane	U		31	U		32	U		5	U		32	U		32			
Bromoform	U		31	U		32	U		5	U		32	U		32			
Bromomethane	U		61	U		65	U		10	U		63	U		65			
Carbon Disulfide	U		31	U		32	U		5	U		32	U		32			
Carbon tetrachloride	U		31	U		32	U		5	U		32	U		32			
Chlorobenzene	U		31	U		32	U		5	U		32	U		32			
Chloroethane	U		61	U		65	U		10	U		63	U		65			
Chloroform	U		31	U		32	U		5	U		32	U		32			
Chloromethane	U		61	U		65	U		10	U		63	U		65			
cis-1 2-Dichloroethene	U		31	U		32	U		5	U		32	U		32			
cis-1,3-Dichloropropene	U		31	U		32	U		5	U		32	U		32			
Chlorodibromomethane	U		31	U		32	U		5	U		32	U		32			
Dibromomethane	U		31	U		32	U		5	U		32	U		32			
Dichlorodifluoromethane	U		31	U		32	U		5	U		32	U		32			
Ethyl benzene	U		31	U		32	U		5	U		32	U		32			
Isopropylbenzene	U		31	U		32	U		5	U		32	U		32			
Methyl tert butyl ether	U		31	U		32	U		5	U		32	U		32			
Methylene Chloride	41	BD	31	31	JBD	32	3	J	5	U		32	17	JBD	32			
o Xylene	U		31	U		32	U		5	U		32	U		32			
m+p Xylene	U		31	U		32	U		5	U		32	U		32			
Styrene	U		31	U		32	U		5	U		32	U		32			
Tetrachloroethene	U		31	U		32	U		5	U		32	U		32			
Toluene	U		31	U		32	U		5	U		32	U		32			
trans-1 2-Dichloroethene	U		31	U		32	U		5	U		32	U		32			
trans-1,3-Dichloropropene	U		31	U		32	U		5	U		32	U		32			
Trichloroethene	U		31	U		32	U		5	U		32	U		32			
Trichlorofluoromethane	39	D	31	10	JD	32	U		5	14	JD	32	8	JD	32			
Vinyl chloride	U		61	U		65	U		10	U		63	U		65			
n-Propyl Benzene	U		31	U		32	U		5	U		32	U		32			
2-Chlorotoluene	U		31	U		32	U		5	U		32	U		32			
4-Chlorotoluene	U		31	U		32	U		5	U		32	U		32			
1,3 5-Trimethylbenzene	U		31	U		32	U		5	U		32	U		32			
tert-Butylbenzene	U		31	U		32	U		5	U		32	U		32			
1,2 4-Trimethylbenzene	U		31	U		32	U		5	U		32	U		32			
sec-Butylbenzene	U		31	U		32	U		5	U		32	U		32			
1 3-Dichlorobenzene	U		31	U		32	U		5	U		32	U		32			
p-Isopropyltoluene	U		31	U		32	U		5	U		32	U		32			
1 4-Dichlorobenzene	U		31	U		32	U		5	U		32	U		32			
1 2-Dichlorobenzene	U		31	U		32	U		5	U		32	U		32			
n-Butylbenzene	U		31	U		32	U		5	U		32	U		32			
1 2 4-Trichlorobenzene	U		31	U		32	U		5	U		32	U		32			
Naphthalene	U		31	U		32	U		5	U		32	U		32			
Hexachlorobutadiene	U		31	U		32	U		5	U		32	U		32			
1 2 3-Trichlorobenzene	U		31	U		32	U		5	U		32	U		32			

Table 1.2 (Cont) Results of the Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample #	E 10389			E 10390			E 10391			E 10393			E 10394		
Location	T3-1-7			T3-1-13			T3-2-11			T3-3-16			T3-4-6		
Collected	6/18/97			6/18/97			6/18/97			6/18/97			6/18/97		
Analyzed	7/11/97			7/11/97			7/11/97			7/11/97			7/11/97		
Dil. Factor	5			5			5			5			5		
% Solids	70			72			79			62			58		
Compound	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg
1,1,1,2-Tetrachloroethane	U		36	U		35	U		33	U		41	U		44
1 1 1 -Trichloroethane	U		36	U		35	U		33	U		41	U		44
1 1 2,2-Tetrachloroethane	U		36	U		35	U		33	U		41	U		44
1 1,2-Trichloroethane	U		36	U		35	U		33	U		41	U		44
1 1-Dichloroethane	U		36	U		35	U		33	U		41	U		44
1 1-Dichloroethene	U		36	U		35	U		33	U		41	U		44
1 1-Dichloropropene	U		36	U		35	U		33	U		41	U		44
1 2,3-Trichloropropane	U		36	U		35	U		33	U		41	U		44
1 2-Dibromoethane	U		36	U		35	U		33	U		41	U		44
1,2-Dichloroethane	U		36	U		35	U		33	U		41	U		44
1 2-Dichloropropane	U		36	U		35	U		33	U		41	U		44
1,3-Dichloropropane	U		36	U		35	U		33	U		41	U		44
2,2-Dichloropropane	U		36	U		35	U		33	U		41	U		44
2-Butanone	U		72	U		70	U		65	U		81	U		87
2-Hexanone	U		72	U		70	U		65	U		81	U		87
4-Methyl-2-pentanone	U		72	U		70	U		65	U		81	U		87
Acetone	370	D	72	710	D	70	560	D	65	U		81	310	D	87
Benzene	U		36	U		35	U		33	U		41	U		44
Bromobenzene	U		36	U		35	U		33	U		41	U		44
Bromodichloromethane	U		36	U		35	U		33	U		41	U		44
Bromoform	U		36	U		35	U		33	U		41	U		4
Bromomethane	U		72	U		70	U		65	U		81	U		8
Carbon Disulfide	U		36	U		35	U		33	U		41	U		44
Carbon tetrachloride	U		36	U		35	U		33	U		41	U		44
Chlorobenzene	U		36	U		35	U		33	U		41	U		44
Chloroethane	U		72	U		70	U		65	U		81	U		87
Chloroform	U		36	U		35	U		33	U		41	U		44
Chloromethane	U		72	U		70	U		65	U		81	U		87
cis-1 2-Dichloroethene	U		36	U		35	U		33	U		41	U		44
cis-1,3-Dichloropropene	U		36	U		35	U		33	U		41	U		44
Chlorodibromomethane	U		36	U		35	U		33	U		41	U		44
Dibromomethane	U		36	U		35	U		33	U		41	U		44
Dichlorodifluoromethane	U		36	U		35	U		33	U		41	U		44
Ethyl benzene	U		36	U		35	U		33	U		41	U		44
Isopropylbenzene	U		36	U		35	U		33	U		41	U		44
Methyl tert butyl ether	U		36	U		35	U		33	U		41	U		44
Methylene Chloride	15	JBD	36	23	JBD	35	18	JBD	33	42	BD	41	U		44
o Xylene	U		36	U		35	U		33	U		41	U		44
m+p Xylene	U		36	U		35	U		33	U		41	U		44
Styrene	U		36	U		35	U		33	U		41	U		44
Tetrachloroethene	U		36	U		35	U		33	U		41	U		44
Toluene	U		36	U		35	U		33	U		41	U		44
trans-1 2-Dichloroethene	U		36	U		35	U		33	U		41	U		44
trans-1,3-Dichloropropene	U		36	U		35	U		33	U		41	U		44
Trichloroethene	U		36	U		35	U		33	U		41	U		44
Trichlorofluoromethane	10	JD	36	15	JD	35	16	JD	33	23	JD	41	24	JD	44
Vinyl chloride	U		72	U		70	U		65	U		81	U		87
n-Propyl Benzene	U		36	U		35	U		33	U		41	U		44
2-Chlorotoluene	U		36	U		35	U		33	U		41	U		44
4-Chlorotoluene	U		36	U		35	U		33	U		41	U		44
1,3,5-Trimethylbenzene	U		36	U		35	U		33	U		41	U		44
tert-Butylbenzene	U		36	U		35	U		33	U		41	U		44
1,2,4-Trimethylbenzene	U		36	U		35	U		33	U		41	U		44
sec-Butylbenzene	U		36	U		35	U		33	U		41	U		44
1 3-Dichlorobenzene	U		36	U		35	U		33	U		41	U		44
p-Isopropyltoluene	U		36	U		35	U		33	U		41	U		44
1 4-Dichlorobenzene	U		36	U		35	U		33	U		41	U		44
1,2-Dichlorobenzene	U		36	U		35	U		33	U		41	U		44
n-Butylbenzene	U		36	U		35	U		33	U		41	U		44
1,2,4-Trichlorobenzene	U		36	U		35	U		33	U		41	U		44
Naphthalene	U		36	U		35	U		33	U		41	U		44
Hexachlorobutadiene	U		36	U		35	U		33	U		41	U		44
1 2 3-Trichlorobenzene	U		36	U		35	U		33	U		41	U		44

Table 1.2 (Cont) Results of the Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample #	VBLKA	E 10388	VBLKB	E 10392
Location	-	T1-14-3	-	T3-3-10
Collected	NA	6/18/97	NA	6/18/97
Analyzed	6/28/97	6/28/97	6/29/97	6/29/97
Dil. Factor	1	1	1	5
% Solids	NA	81	NA	66

Compound	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg
1,1 1,2-Tetrachloroethane	U		5	U		8	U		5	U		8
1,1 1 -Trichloroethane	U		5	U		8	U		5	3	J	8
1,1,2,2-Tetrachloroethane	U		5	U		8	U		5	U		8
1 1,2-Trichloroethane	U		5	U		8	U		5	U		8
1,1-Dichloroethane	U		5	U		8	U		5	U		8
1 1-Dichloroethene	U		5	U		8	U		5	U		8
1,1-Dichloropropene	U		5	U		8	U		5	U		8
1 2,3-Trichloropropane	U		5	U		8	U		5	U		8
1 2-Dibromoethane	U		5	U		8	U		5	U		8
1,2-Dichloroethane	U		5	U		8	U		5	U		8
1,2-Dichloropropane	U		5	U		8	U		5	U		8
1,3-Dichloropropane	U		5	U		8	U		5	U		8
2,2-Dichloropropane	U		5	U		8	U		5	U		8
2-Butanone	U		10	U		15	U		10	U		15
2-Hexanone	U		10	U		15	U		10	U		15
4-Methyl-2-pentanone	U		10	U		15	U		10	U		15
Acetone	U		10	150		15	17		10	25	JB	15
Benzene	U		5	U		8	U		5	U		8
Bromobenzene	U		5	U		8	U		5	U		8
Bromodichloromethane	U		5	U		8	U		5	U		8
Bromoform	U		5	U		8	U		5	U		8
Bromomethane	U		10	U		15	U		10	U		15
Carbon Disulfide	U		5	U		8	U		5	U		8
Carbon tetrachloride	U		5	U		8	U		5	U		8
Chlorobenzene	U		5	U		8	U		5	U		8
Chloroethane	U		10	U		15	U		10	U		15
Chloroform	U		5	U		8	U		5	U		8
Chloromethane	U		10	U		15	U		10	U		15
cis-1,2-Dichloroethene	U		5	U		8	U		5	U		8
cis-1,3-Dichloropropene	U		5	U		8	U		5	U		8
Chlorodibromomethane	U		5	U		8	U		5	U		8
Dibromomethane	U		5	U		8	U		5	U		8
Dichlorodifluoromethane	U		5	U		8	U		5	U		8
Ethyl benzene	U		5	U		8	U		5	U		8
Isopropylbenzene	U		5	U		8	U		5	U		8
Methyl tert butyl ether	U		5	U		8	U		5	U		8
Methylene Chloride	1	J	5	4	JB	8	2	J	5	3	JB	8
o Xylene	U		5	U		8	U		5	U		8
m+p Xylene	U		5	U		8	1	J	5	U		8
Styrene	U		5	U		8	U		5	U		8
Tetrachloroethene	U		5	U		8	U		5	U		8
Toluene	U		5	5	J	8	3	J	5	U		8
trans-1 2-Dichloroethene	U		5	U		8	U		5	U		8
trans-1,3-Dichloropropene	U		5	U		8	U		5	U		8
Trichloroethene	U		5	U		8	U		5	U		8
Trichlorofluoromethane	U		5	3	J	8	U		5	12	J	8
Vinyl chloride	U		10	U		15	U		10	U		15
n-Propyl Benzene	U		5	U		8	U		5	U		8
2-Chlorotoluene	U		5	U		8	U		5	U		8
4-Chlorotoluene	U		5	U		8	U		5	U		8
1,3 5-Trimethylbenzene	U		5	U		8	U		5	U		8
tert-Butylbenzene	U		5	U		8	U		5	U		8
1,2 4-Trimethylbenzene	U		5	U		8	U		5	U		8
sec-Butylbenzene	U		5	U		8	U		5	U		8
1 3-Dichlorobenzene	U		5	U		8	U		5	U		8
p-Isopropyltoluene	U		5	U		8	U		5	U		8
1 4-Dichlorobenzene	U		5	U		8	U		5	U		8
1 2-Dichlorobenzene	U		5	U		8	U		5	U		8
n-Butylbenzene	U		5	U		8	U		5	U		8
1,2,4-Trichlorobenzene	U		5	U		8	U		5	U		8
Naphthalene	U		5	U		8	U		5	U		8
Hexachlorobutadiene	U		5	U		8	U		5	U		8
1 2,3-Trichlorobenzene	U		5	U		8	U		5	U		8

Table 1.3 Results of the Analysis for BNA in Water
WA # 2-274 Cornell Dubilier Electronics

Sample ID	SBLKA (6/30/97)	10216
Location	-	A1
Dil. Factor	1	1

Analyte	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L
N-Nitrosodimethylamine	U	10	U	33
Pyridine	U	10	U	33
2-Picoline	U	10	U	33
Methyl Methanesulfonate	U	20	U	67
Ethyl Methanesulfonate	U	20	U	67
Aniline	U	10	U	33
Bis(2-chloroethyl) ether	U	10	U	33
Phenol	U	10	U	33
2-Chlorophenol	U	10	U	33
1,3-Dichlorobenzene	U	10	U	33
1,4-Dichlorobenzene	U	10	U	33
1,2-Dichlorobenzene	U	10	U	33
Benzyl alcohol	U	10	U	33
2,2'-Oxybis(1-chloropropane)	U	10	U	33
2-Methylphenol	U	10	U	33
Acetophenone	U	10	U	33
Hexachloroethane	U	10	U	33
N-Nitrosodi-n-propylamine	U	10	U	33
3 & 4-Methylphenol	U	10	U	33
Nitrobenzene	U	10	U	33
1-Nitrosopiperidine	U	10	U	33
Isophorone	U	10	U	33
2-Nitrophenol	U	10	U	33
2,4-Dimethylphenol	U	10	U	33
Benzoic Acid	U	10	U	33
Bis(2-chloroethoxy) methane	U	10	U	33
a,a-Dimethylphenethylamine	U	20	U	67
2,4-Dichlorophenol	U	10	U	33
1,2,4-Trichlorobenzene	U	10	U	33
Naphthalene	U	10	U	33
4-Chloroaniline	U	10	U	33
2,6-Dichlorophenol	U	10	U	33
Hexachlorobutadiene	U	10	U	33
4-Chloro-3-methylphenol	U	10	U	33
2-Methylnaphthalene	U	10	U	33
1,2,4,5-Tetrachlorobenzene	U	10	U	33
Hexachlorocyclopentadiene	U	10	U	33
2,4,6-Trichlorophenol	U	10	U	33
2,4,5-Trichlorophenol	U	20	U	67
2-Chloronaphthalene	U	10	U	33
1-Chloronaphthalene	U	10	U	33
2-Nitroaniline	U	50	U	170
Acenaphthylene	U	10	U	33
Dimethyl phthalate	U	10	U	33

Table 1.3 (Cont) Results of the Analysis for BNA in Water
WA # 2-274 Comell Dubilier Electronics

Sample ID	SBLKA (6/30/97)		10216	
Location	-		A1	
Dil. Factor	1		1	
% Solids	100			
Analyte	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg
2,6-Dinitrotoluene	U	10	U	33
Acenaphthene	U	10	U	33
3-Nitroaniline	U	50	U	170
2,4-Dinitrophenol	U	50	U	170
Dibenzofuran	U	10	U	33
2,4-Dinitrotoluene	U	10	U	33
4-Nitrophenol	U	50	U	170
Pentachlorobenzene	U	10	U	33
2-Naphthylamine	U	10	U	33
1-Naphtylamine	U	10	U	33
2,3,4,6-Tetrachlorophenol	U	50	U	170
Fluorene	U	10	U	33
4-Chlorophenyl phenyl ether	U	10	U	33
Diethylphthalate	U	10	U	33
4-Nitroaniline	U	50	U	170
1,2-Diphenylhydrazine	U	10	U	33
4,6-Dinitro-2-methylphenol	U	50	U	170
N-Nitrosodiphenylamine	U	10	U	33
4-Bromophenyl phenyl ether	U	10	U	33
Hexachlorobenzene	U	10	U	33
Pentachlorophenol	U	50	U	170
Benzidine	U	20	U	67
Pentachloronitrobenzene	U	10	U	33
Phenanthrene	U	10	U	33
Anthracene	U	10	U	33
Di-n-butyl phthalate	U	10	U	33
Fluoranthene	U	10	U	33
Pyrene	U	10	U	33
4-Dimethylaminoazobenzene	U	10	U	33
Butyl benzyl phthalate	U	10	U	33
3,3'-Dichlorobenzidine	U	10	U	33
Benzo(a)anthracene	U	10	U	33
Chrysene	U	10	U	33
Bis(2-ethylhexyl) phthalate	U	10	U	33
Di-n-octyl phthalate	U	10	U	33
7,12-Dimethylbenz(a)anthracene	U	10	U	33
Benzo(b)fluoranthene	U	10	U	33
Benzo(k)fluoranthene	U	10	U	33
Benzo(a)pyrene	U	10	U	33
3-Methylcholanthrene	U	10	U	33
Indeno(1,2,3-c,d)pyrene	U	10	U	33
Dibenzo(a,h)anthracene	U	10	U	33
Benzo(ghi)perylene	U	10	U	33

Table 1.3 (Cont) Results of the Analysis for BNA in Water
WA # 2-274 Cornell Dubilier Electronics

Client ID	Method Blank (7/4/97)		2000-1001 A1		2000-1002 A2		2000-1003 A3	
Location								
Collected			6/27/97		6/27/97		6/27/97	
Analyzed			7/11/97		7/11/97		7/11/97	
Dil. Factor			1		1		1	
Compound	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L
1,2-Diphenylhydrazine	U	10	U	10	U	10	U	10
Benzidine	U	10	U	10	U	10	U	10
Benzoic Acid	U	10	U	10	U	10	U	10
Ethyl Methanesulfonate	U	20	U	20	U	20	U	20
Methyl Methanesulfonate	U	20	U	20	U	20	U	20
p-Dimethylaminoazobenzene	U	10	U	10	U	10	U	10
Phenol	U	10	U	10	U	10	U	10
Pyridine	U	10	U	10	U	10	U	10
1,2,4,5-Tetrachlorobenzene	U	10	U	10	U	10	U	10
1,2,4-Trichlorobenzene	U	10	U	10	U	10	U	10
1,2-Dichlorobenzene	U	10	U	10	U	10	U	10
1,3-Dichlorobenzene	U	10	U	10	U	10	U	10
1,4-Dichlorobenzene	U	10	U	10	U	10	U	10
1-Naphtylamine	U	10	U	10	U	10	U	10
2,3,4,6-Tetrachlorophenol	U	50	U	50	U	50	U	50
2,4,5-Trichlorophenol	U	50	U	50	U	50	U	50
2,4,6-Trichlorophenol	U	10	U	10	U	10	U	10
2,4-Dichlorophenol	U	10	U	10	U	10	U	10
2,4-Dimethylphenol	U	10	U	10	U	10	U	10
2,4-Dinitrophenol	U	50	U	50	U	50	U	50
2,4-Dinitrotoluene	U	10	U	10	U	10	U	10
2,6-Dichlorophenol	U	10	U	10	U	10	U	10
2,6-Dinitrotoluene	U	10	U	10	U	10	U	10
2-Chloronaphthalene	U	10	U	10	U	10	U	10
2-Chlorophenol	U	10	U	10	U	10	U	10
2-Methylnaphthalene	U	10	U	10	U	10	U	10
2-Methylphenol	U	10	U	10	U	10	U	10
2-Naphthylamine	U	10	U	10	U	10	U	10
2-Nitroaniline	U	50	U	50	U	50	U	50
2-Nitrophenol	U	10	U	10	U	10	U	10
2-Picoline	U	10	U	10	U	10	U	10
3,3'-Dichlorobenzidine	U	20	U	20	U	20	U	20
3-Methylcholanthrene	U	10	U	10	U	10	U	10
3-Nitroaniline	U	50	U	50	U	50	U	50
4-Methylphenol	U	10	U	10	U	10	U	10
4,6-Dinitro-2-methylphenol	U	50	U	50	U	50	U	50
4-Bromophenyl phenyl ether	U	10	U	10	U	10	U	10
4-Chloro-3-methylphenol	U	10	U	10	U	10	U	10
4-Chloroaniline	U	10	U	10	U	10	U	10
4-Chlorophenyl phenyl ether	U	10	U	10	U	10	U	10
4-Nitroaniline	U	50	U	50	U	50	U	50
4-Nitrophenol	U	50	U	50	U	50	U	50
1-Chloronaphthalene	U	10	U	10	U	10	U	10
7,12-Dimethylbenz(a)anthracene	U	10	U	10	U	10	U	10
a,a-Dimethylphenethylamine	U	20	U	20	U	20	U	20
Acenaphthene	U	10	U	10	U	10	U	10
Acenaphthylene	U	10	U	10	U	10	U	10
Acetophenone	U	10	U	10	U	10	U	10
Aniline	U	10	U	10	U	10	U	10
Anthracene	U	10	U	10	U	10	U	10
Benzo(a)anthracene	U	10	U	10	U	10	U	10
Benzo(a)pyrene	U	10	U	10	U	10	U	10
Benzo(b)fluoranthene	U	10	U	10	U	10	U	10
Benzo(ghi)perylene	U	10	U	10	U	10	U	10
Benzo(k)fluoranthene	U	10	U	10	U	10	U	10
Benzyl alcohol	U	10	U	10	U	10	U	10
Bis(2-chloroethoxy) methane	U	10	U	10	U	10	U	10
Bis(2-chloroethyl) ether	U	10	U	10	U	10	U	10
Bis(2-chloroisopropyl) ether	U	10	U	10	U	10	U	10
Bis(2-ethylhexyl) phthalate	U	10	U	10	U	10	U	10
Butyl benzyl phthalate	U	10	U	10	U	10	U	10
Chrysene	U	10	U	10	U	10	U	10
Di-n-butyl phthalate	U	10	U	10	U	10	U	10
Di-n-octyl phthalate	U	10	U	10	U	10	U	10
Dibenzo(a,h)anthracene	U	10	U	10	U	10	U	10
Dibenzofuran	U	10	U	10	U	10	U	10
Diethylphthalate	U	10	U	10	U	10	U	10
Dimethyl phthalate	U	10	U	10	U	10	U	10
Fluoranthene	U	10	U	10	U	10	U	10
Fluorene	U	10	U	10	U	10	U	10
Hexachlorobenzene	U	10	U	10	U	10	U	10
Hexachlorobutadiene	U	10	U	10	U	10	U	10
Hexachlorocyclopentadiene	U	10	U	10	U	10	U	10
Hexachloroethane	U	10	U	10	U	10	U	10
Indeno(1,2,3-c d)pyrene	U	10	U	10	U	10	U	10
Isophorone	U	10	U	10	U	10	U	10
N-Nitrosodi-n-propylamine	U	10	U	10	U	10	U	10
N-Nitrosodimethylamine	U	10	U	10	U	10	U	10
N-Nitrosodiphenylamine	U	10	U	10	U	10	U	10
N-Nitrosopiperidine	U	10	U	10	U	10	U	10
Naphthalene	U	10	U	10	U	10	U	10
Nitrobenzene	U	10	U	10	U	10	U	10
Pentachlorobenzene	U	10	U	10	U	10	U	10
Pentachloronitrobenzene	U	50	U	50	U	50	U	50
Pentachlorophenol	U	50	U	50	U	50	U	50
Phenanthrene	U	10	U	10	U	10	U	10
Pyrene	U	10	U	10	U	10	U	10

Table 1.3 (Cont) Results of the Analysis for BNA in Water
WA # 2-274 Cornell Dubilier Electronics

Client ID	2000-1004		2000-1005		2000-1006		2000-1007	
Location	A4		A5		A6		A7	
Collected	6/27/97		6/27/97		6/27/97		6/27/97	
Analyzed	7/11/97		7/11/97		7/12/97		7/11/97	
Dil Factor	1		1		1		1	
Compound	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L
1,2-Diphenylhydrazine	U	10	U	10	U	10	U	10
Benzidine	U	10	U	10	U	10	U	10
Benzoic Acid	U	10	U	10	U	10	U	10
Ethyl Methanesulfonate	U	20	U	20	U	20	U	20
Methyl Methanesulfonate	U	20	U	20	U	20	U	20
p-Dimethylaminoazobenzene	U	10	U	10	U	10	U	10
Phenol	U	10	U	10	U	10	U	10
Pyridine	U	10	U	10	U	10	U	10
1,2,4,5-Tetrachlorobenzene	U	10	U	10	U	10	U	10
1,2,4-Trichlorobenzene	U	10	U	10	U	10	U	10
1,2-Dichlorobenzene	U	10	U	10	U	10	U	10
1,3-Dichlorobenzene	U	10	U	10	U	10	U	10
1,4-Dichlorobenzene	U	10	U	10	U	10	U	10
1-Naphtylamine	U	10	U	10	U	10	U	10
2,3,4,6-Tetrachlorophenol	U	50	U	50	U	50	U	50
2,4,5-Trichlorophenol	U	50	U	50	U	50	U	50
2,4,6-Trichlorophenol	U	10	U	10	U	10	U	10
2,4-Dichlorophenol	U	10	U	10	U	10	U	10
2,4-Dimethylphenol	U	10	U	10	U	10	U	10
2,4-Dinitrophenol	U	50	U	50	U	50	U	50
2,4-Dinitrotoluene	U	10	U	10	U	10	U	10
2,6-Dichlorophenol	U	10	U	10	U	10	U	10
2,6-Dinitrotoluene	U	10	U	10	U	10	U	10
2-Chloronaphthalene	U	10	U	10	U	10	U	10
2-Chlorophenol	U	10	U	10	U	10	U	10
2-Methylnaphthalene	U	10	U	10	U	10	U	10
2-Methylphenol	U	10	U	10	U	10	U	10
2-Naphthylamine	U	10	U	10	U	10	U	10
2-Nitroaniline	U	50	U	50	U	50	U	50
2-Nitrophenol	U	10	U	10	U	10	U	10
2-Picoline	U	10	U	10	U	10	U	10
3,3'-Dichlorobenzidine	U	20	U	20	U	20	U	20
3-Methylcholanthrene	U	10	U	10	U	10	U	10
3-Nitroaniline	U	50	U	50	U	50	U	50
4-Methylphenol	U	10	U	10	U	10	U	10
4,6-Dinitro-2-methylphenol	U	50	U	50	U	50	U	50
4-Bromophenyl phenyl ether	U	10	U	10	U	10	U	10
4-Chloro-3-methylphenol	U	10	U	10	U	10	U	10
4-Chloroaniline	U	10	U	10	U	10	U	10
4-Chlorophenyl phenyl ether	U	10	U	10	U	10	U	10
4-Nitroaniline	U	50	U	50	U	50	U	50
4-Nitrophenol	U	50	U	50	U	50	U	50
1-Chloronaphthalene	U	10	U	10	U	10	U	10
7,12-Dimethylbenz(a)anthracene	U	10	U	10	U	10	U	10
a,a-Dimethylphenethylamine	U	20	U	20	U	20	U	20
Acenaphthene	U	10	U	10	U	10	U	10
Acenaphthylene	U	10	U	10	U	10	U	10
Acetophenone	U	10	U	10	U	10	U	10
Aniline	U	10	U	10	U	10	U	10
Anthracene	U	10	U	10	U	10	U	10
Benzo(a)anthracene	U	10	U	10	U	10	U	10
Benzo(a)pyrene	U	10	U	10	U	10	U	10
Benzo(b)fluoranthene	U	10	U	10	U	10	U	10
Benzo(ghi)perylene	U	10	U	10	U	10	U	10
Benzo(k)fluoranthene	U	10	U	10	U	10	U	10
Benzyl alcohol	U	10	U	10	U	10	U	10
Bis(2-chloroethoxy) methane	U	10	U	10	U	10	U	10
Bis(2-chloroethyl) ether	U	10	U	10	U	10	U	10
Bis(2-chloroisopropyl) ether	U	10	U	10	U	10	U	10
Bis(2-ethylhexyl) phthalate	U	10	U	10	J	10	U	10
Butyl benzyl phthalate	U	10	U	10	U	10	U	10
Chrysene	U	10	U	10	U	10	U	10
Di-n-butyl phthalate	U	10	U	10	J	10	U	10
Di-n-octyl phthalate	U	10	U	10	U	10	U	10
Dibenzo(a,h)anthracene	U	10	U	10	U	10	U	10
Dibenzofuran	U	10	U	10	U	10	U	10
Diethylphthalate	U	10	U	10	J	10	U	10
Dimethyl phthalate	U	10	U	10	U	10	U	10
Fluoranthene	U	10	U	10	U	10	U	10
Fluorene	U	10	U	10	U	10	U	10
Hexachlorobenzene	U	10	U	10	U	10	U	10
Hexachlorobutadiene	U	10	U	10	U	10	U	10
Hexachlorocyclopentadiene	U	10	U	10	U	10	U	10
Hexachloroethane	U	10	U	10	U	10	U	10
Indeno(1,2,3-c,d)pyrene	U	10	U	10	U	10	U	10
Isophorone	U	10	U	10	U	10	U	10
N-Nitrosodi-n-propylamine	U	10	U	10	U	10	U	10
N-Nitrosodimethylamine	U	10	U	10	U	10	U	10
N-Nitrosodiphenylamine	U	10	U	10	U	10	U	10
N-Nitrosopiperidine	U	10	U	10	U	10	U	10
Naphthalene	U	10	U	10	U	10	U	10
Nitrobenzene	U	10	U	10	U	10	U	10
Pentachlorobenzene	U	50	U	50	U	50	U	50
Pentachloronitrobenzene	U	50	U	50	U	50	U	50
Pentachlorophenol	U	10	U	10	U	10	U	10
Phenanthrene	U	10	U	10	U	10	U	10
Pyrene	U	10	U	10	U	10	U	10

Table (Cont) 1.3 Results of the Analysis for BNA in Water
WA # 2-274 Cornell Dubilier Electronics

Client ID	2000-1008	2000-1010
Location	A9	Laboratory Blank
Collected	6/27/97	6/27/97
Analyzed	7/12/97	7/12/97
Dil. Factor	1	1

Compound	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L
1,2-Diphenylhydrazine	U	10	U	10
Benzidine	U	10	U	10
Benzoic Acid	U	10	U	10
Ethyl Methanesulfonate	U	20	U	20
Methyl Methanesulfonate	U	20	U	20
p-Dimethylaminoazobenzene	U	10	U	10
Phenol	U	10	U	10
Pyridine	U	10	U	10
1,2,4,5-Tetrachlorobenzene	U	10	U	10
1,2,4-Trichlorobenzene	U	10	U	10
1,2-Dichlorobenzene	U	10	U	10
1,3-Dichlorobenzene	U	10	U	10
1,4-Dichlorobenzene	U	10	U	10
1-Naphthylamine	U	10	U	10
2,3,4,6-Tetrachlorophenol	U	50	U	50
2,4,5-Trichlorophenol	U	50	U	50
2,4,6-Trichlorophenol	U	10	U	10
2,4-Dichlorophenol	U	10	U	10
2,4-Dimethylphenol	U	10	U	10
2,4-Dinitrophenol	U	50	U	50
2,4-Dinitrotoluene	U	10	U	10
2,6-Dichlorophenol	U	10	U	10
2,6-Dinitrotoluene	U	10	U	10
2-Chloronaphthalene	U	10	U	10
2-Chlorophenol	U	10	U	10
2-Methylnaphthalene	U	10	U	10
2-Methylphenol	U	10	U	10
2-Naphthylamine	U	10	U	10
2-Nitroaniline	U	50	U	50
2-Nitrophenol	U	10	U	10
2-Picoline	U	10	U	10
3,3'-Dichlorobenzidine	U	20	U	20
3-Methylcholanthrene	U	10	U	10
3-Nitroaniline	U	50	U	50
4-Methylphenol	U	10	U	10
4,6-Dinitro-2-methylphenol	U	50	U	50
4-Bromophenyl phenyl ether	U	10	U	10
4-Chloro-3-methylphenol	U	10	U	10
4-Chloroaniline	U	10	U	10
4-Chlorophenyl phenyl ether	U	10	U	10
4-Nitroaniline	U	50	U	50
4-Nitrophenol	U	50	U	50
1-Chloronaphthalene	U	10	U	10
7,12-Dimethylbenz(a)anthracene	U	10	U	10
a,a-Dimethylphenethylamine	U	20	U	20
Acenaphthene	U	10	U	10
Acenaphthylene	U	10	U	10
Acetophenone	U	10	U	10
Aniline	U	10	U	10
Anthracene	U	10	U	10
Benzo(a)anthracene	U	10	U	10
Benzo(a)pyrene	U	10	U	10
Benzo(b)fluoranthene	U	10	U	10
Benzo(ghi)perylene	U	10	U	10
Benzo(k)fluoranthene	U	10	U	10
Benzyl alcohol	U	10	U	10
Bis(2-chloroethoxy) methane	U	10	U	10
Bis(2-chloroethyl) ether	U	10	U	10
Bis(2-chloroisopropyl) ether	U	10	U	10
Bis(2-ethylhexyl) phthalate	U	10	U	10
Butyl benzyl phthalate	U	10	U	10
Chrysene	U	10	U	10
Di-n-butyl phthalate	U	10	U	10
Di-n-octyl phthalate	U	10	U	10
Dibenzo(a,h)anthracene	U	10	U	10
Dibenzofuran	U	10	U	10
Diethylphthalate	U	10	U	10
Dimethyl phthalate	U	10	U	10
Fluoranthene	U	10	U	10
Fluorene	U	10	U	10
Hexachlorobenzene	U	10	U	10
Hexachlorobutadiene	U	10	U	10
Hexachlorocyclopentadiene	U	10	U	10
Hexachloroethane	U	10	U	10
Indeno(1,2,3-c,d)pyrene	U	10	U	10
Isophorone	U	10	U	10
N-Nitrosodi-n-propylamine	U	10	U	10
N-Nitrosodimethylamine	U	10	U	10
N-Nitrosodiphenylamine	U	10	U	10
N-Nitrosopiperidine	U	10	U	10
Naphthalene	U	10	U	10
Nitrobenzene	U	10	U	10
Pentachlorobenzene	U	10	U	10
Pentachloronitrobenzene	U	50	U	50
Pentachlorophenol	U	50	U	50
Phenanthrene	U	10	U	10
Pyrene	U	10	U	10

Table 1.4 Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Soil

Sample ID	SBLKC (7/2/97)		10485 Field Blank	
Location	-			
Dil. Factor	1		1	
% Solids	100		100	

Analyte	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg
N-Nitrosodimethylamine	U		1000	U		970
Pyridine	U		1000	U		970
2-Picoline	U		1000	U		970
Methyl Methanesulfonate	U		2000	U		1900
Ethyl Methanesulfonate	U		2000	U		1900
Aniline	U		1000	U		970
Bis(2-chloroethyl) ether	U		1000	U		970
Phenol	U		1000	U		970
2-Chlorophenol	U		1000	U		970
1,3-Dichlorobenzene	U		1000	U		970
1,4-Dichlorobenzene	U		1000	U		970
1,2-Dichlorobenzene	U		1000	U		970
Benzyl alcohol	U		1000	U		970
2,2'-Oxybis(1-chloropropane)	U		1000	U		970
2-Methylphenol	U		1000	U		970
Acetophenone	U		1000	U		970
Hexachloroethane	U		1000	U		970
N-Nitrosodi-n-propylamine	U		1000	U		970
3 & 4-Methylphenol	U		1000	U		970
Nitrobenzene	U		1000	U		970
1-Nitrosopiperidine	U		1000	U		970
Isophorone	120	J	1000	110	JB	970
2-Nitrophenol	U		1000	U		970
2 4-Dimethylphenol	U		1000	U		970
Benzoic Acid	U		1000	U		970
Bis(2-chloroethoxy) methane	U		1000	U		970
a a-Dimethylphenethylamine	U		2000	U		1900
2 4-Dichlorophenol	U		1000	U		970
1 2,4-Trichlorobenzene	U		1000	U		970
Naphthalene	U		1000	U		970
4-Chloroaniline	U		1000	U		970
2 6-Dichlorophenol	U		1000	U		970
Hexachlorobutadiene	U		1000	U		970
4-Chloro-3-methylphenol	U		1000	U		970
2-Methylnaphthalene	U		1000	U		970
1 2 4,5-Tetrachlorobenzene	U		1000	U		970
Hexachlorocyclopentadiene	U		1000	U		970
2 4 6-Trichlorophenol	U		1000	U		970
2 4,5-Trichlorophenol	U		2000	U		1900
2-Chloronaphthalene	U		1000	U		970
1-Chloronaphthalene	U		1000	U		970
2-Nitroaniline	U		5000	U		4900
Acenaphthylene	U		1000	U		970
Dimethyl phthalate	U		1000	U		970

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID	SBLKC (7/2/97)			10485		
Location	-			Field Blank		
Dil. Factor	1			1		
% Solids	100			100		
Analyte	Conc ug/kg		MDL ug/kg	Conc ug/kg		MDL ug/kg
2,6-Dinitrotoluene	U		1000	U		970
Acenaphthene	U		1000	U		970
3-Nitroaniline	U		5000	U		4900
2,4-Dinitrophenol	U		5000	U		4900
Dibenzofuran	U		1000	U		970
2 4-Dinitrotoluene	U		1000	U		970
4-Nitrophenol	U		5000	U		4900
Pentachlorobenzene	U		1000	U		970
2-Naphthylamine	U		1000	U		970
1-Naphtylamine	U		1000	U		970
2,3,4,6-Tetrachlorophenol	U		5000	U		4900
Fluorene	U		1000	U		970
4-Chlorophenyl phenyl ether	U		1000	U		970
Diethylphthalate	U		1000	U		970
4-Nitroaniline	U		5000	U		4900
1,2-Diphenylhydrazine	U		1000	U		970
4,6-Dinitro-2-methylphenol	U		5000	U		4900
N-Nitrosodiphenylamine	U		1000	U		970
4-Bromophenyl phenyl ether	U		1000	U		970
Hexachlorobenzene	U		1000	U		970
Pentachlorophenol	U		5000	U		4900
Benzidine	U		2000	U		1900
Pentachloronitrobenzene	U		1000	U		970
Phenanthrene	U		1000	U		970
Anthracene	U		1000	U		970
Di-n-butyl phthalate	360	J	1000	460	JB	970
Fluoranthene	U		1000	U		970
Pyrene	U		1000	U		970
4-Dimethylaminoazobenzene	U		1000	U		970
Butyl benzyl phthalate	U		1000	U		970
3 3'-Dichlorobenzidine	U		1000	U		970
Benzo(a)anthracene	U		1000	U		970
Chrysene	U		1000	U		970
Bis(2-ethylhexyl) phthalate	130	J	1000	U		970
Di-n-octyl phthalate	U		1000	U		970
7 12-Dimethylbenz(a)anthracene	U		1000	U		970
Benzo(b)fluoranthene	U		1000	U		970
Benzo(k)fluoranthene	U		1000	U		970
Benzo(a)pyrene	U		1000	U		970
3-Methylcholanthrene	U		1000	U		970
Indeno(1,2,3-c,d)pyrene	U		1000	U		970
Dibenzo(a,h)anthracene	U		1000	U		970
Benzo(ghi)perylene	U		1000	U		970

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID	SBLKB (7/3/97)		10264 A3-1		10267 A3-2	
Location	-		1		1	
Dil. Factor	1		1		1	
% Solids	100		24		29	
Analyte	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg
N-Nitrosodimethylamine	U	1000	U	4100	U	3400
Pyridine	U	1000	U	4100	U	3400
2-Picoline	U	1000	U	4100	U	3400
Methyl Methanesulfonate	U	2000	U	8300	U	6900
Ethyl Methanesulfonate	U	2000	U	8300	U	6900
Aniline	U	1000	U	4100	U	3400
Bis(2-chloroethyl) ether	U	1000	U	4100	U	3400
Phenol	U	1000	U	4100	U	3400
2-Chlorophenol	U	1000	U	4100	U	3400
1,3-Dichlorobenzene	U	1000	U	4100	U	3400
1 4-Dichlorobenzene	U	1000	U	4100	U	3400
1,2-Dichlorobenzene	U	1000	U	4100	U	3400
Benzyl alcohol	U	1000	U	4100	U	3400
2,2'-Oxybis(1-chloropropane)	U	1000	U	4100	U	3400
2-Methylphenol	U	1000	U	4100	U	3400
Acetophenone	U	1000	U	4100	U	3400
Hexachloroethane	U	1000	U	4100	U	3400
N-Nitrosodi-n-propylamine	U	1000	U	4100	U	3400
3 & 4-Methylphenol	U	1000	U	4100	13000	3400
Nitrobenzene	U	1000	U	4100	U	3400
1-Nitrosopiperidine	U	1000	U	4100	U	3400
Isophorone	U	1000	U	4100	U	3400
2-Nitrophenol	U	1000	U	4100	U	3400
2 4-Dimethylphenol	U	1000	U	4100	U	3400
Benzoic Acid	U	1000	U	4100	U	3400
Bis(2-chloroethoxy) methane	U	1000	U	4100	U	3400
a a-Dimethylphenethylamine	U	2000	U	8300	U	6900
2 4-Dichlorophenol	U	1000	U	4100	U	3400
1,2,4-Trichlorobenzene	U	1000	U	4100	U	3400
Naphthalene	U	1000	U	4100	U	3400
4-Chloroaniline	U	1000	U	4100	U	3400
2 6-Dichlorophenol	U	1000	U	4100	U	3400
Hexachlorobutadiene	U	1000	U	4100	U	3400
4-Chloro-3-methylphenol	U	1000	U	4100	U	3400
2-Methylnaphthalene	U	1000	U	4100	U	3400
1,2,4,5-Tetrachlorobenzene	U	1000	U	4100	U	3400
Hexachlorocyclopentadiene	U	1000	U	4100	U	3400
2 4 6-Trichlorophenol	U	1000	U	4100	U	3400
2 4,5-Trichlorophenol	U	2000	U	8300	U	6900
2-Chloronaphthalene	U	1000	U	4100	U	3400
1-Chloronaphthalene	U	1000	U	4100	U	3400
2-Nitroaniline	U	5000	U	21000	U	17000
Acenaphthylene	U	1000	U	4100	U	3400
Dimethyl phthalate	U	1000	U	4100	U	3400

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID	SBLKB (7/3/97)		10264		10267	
Location	-		A3-1		A3-2	
Dil. Factor	1		1		1	
% Solids	100		24		29	
Analyte	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg
2,6-Dinitrotoluene	U	1000	U	4100	U	3400
Acenaphthene	U	1000	U	4100	U	3400
3-Nitroaniline	U	5000	U	21000	U	17000
2,4-Dinitrophenol	U	5000	U	21000	U	17000
Dibenzofuran	U	1000	U	4100	U	3400
2,4-Dinitrotoluene	U	1000	U	4100	U	3400
4-Nitrophenol	U	5000	U	21000	U	17000
Pentachlorobenzene	U	1000	U	4100	U	3400
2-Naphthylamine	U	1000	U	4100	U	3400
1-Naphtylamine	U	1000	U	4100	U	3400
2,3,4,6-Tetrachlorophenol	U	5000	U	21000	U	17000
Fluorene	U	1000	U	4100	U	3400
4-Chlorophenyl phenyl ether	U	1000	U	4100	U	3400
Diethylphthalate	U	1000	U	4100	U	3400
4-Nitroaniline	U	5000	U	21000	U	17000
1,2-Diphenylhydrazine	U	1000	U	4100	U	3400
4,6-Dinitro-2-methylphenol	U	5000	U	21000	U	17000
N-Nitrosodiphenylamine	U	1000	U	4100	U	3400
4-Bromophenyl phenyl ether	U	1000	U	4100	U	3400
Hexachlorobenzene	U	1000	U	4100	U	3400
Pentachlorophenol	U	5000	U	21000	U	17000
Benzidine	U	2000	28000	8300	23000	6900
Pentachloronitrobenzene	U	1000	U	4100	U	3400
Phenanthrene	U	1000	2900 J	4100	2300 J	3400
Anthracene	U	1000	530 J	4100	360 J	3400
Di-n-butyl phthalate	720 J	1000	2300 JB	4100	2400 JB	3400
Fluoranthene	U	1000	6200	4100	4900	3400
Pyrene	U	1000	5900	4100	4200	3400
4-Dimethylaminoazobenzene	U	1000	U	4100	U	3400
Butyl benzyl phthalate	U	1000	2700 J	4100	U	3400
3,3'-Dichlorobenzidine	U	1000	U	4100	U	3400
Benzo(a)anthracene	U	1000	3300 J	4100	2300 J	3400
Chrysene	U	1000	3600 J	4100	2700 J	3400
Bis(2-ethylhexyl) phthalate	180 J	1000	38000 B	4100	18000 B	3400
Di-n-octyl phthalate	U	1000	35000	4100	4100	3400
7,12-Dimethylbenz(a)anthracene	U	1000	U	4100	U	3400
Benzo(b)fluoranthene	U	1000	6100	4100	4600	3400
Benzo(k)fluoranthene	U	1000	U	4100	U	3400
Benzo(a)pyrene	U	1000	3200 J	4100	2300 J	3400
3-Methylcholanthrene	U	1000	U	4100	U	3400
Indeno(1,2,3-c,d)pyrene	U	1000	2100 J	4100	1600 J	3400
Dibenzo(a,h)anthracene	U	1000	U	4100	U	3400
Benzo(ghi)perylene	U	1000	2300 J	4100	1800 J	3400

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID	10263		10266		10265	
Location	A7-1		A9-2		A9-1	
Dil. Factor	1		1		1	
% Solids	68		39		46	
Analyte	Conc ug/kg		MDL ug/kg	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg
N-Nitrosodimethylamine	U		1500	U	2600	U	2200
Pyridine	U		1500	U	2600	U	2200
2-Picoline	U		1500	U	2600	U	2200
Methyl Methanesulfonate	U		2900	U	5100	U	4300
Ethyl Methanesulfonate	U		2900	U	5100	U	4300
Aniline	U		1500	U	2600	U	2200
Bis(2-chloroethyl) ether	U		1500	U	2600	U	2200
Phenol	U		1500	U	2600	U	2200
2-Chlorophenol	U		1500	U	2600	U	2200
1,3-Dichlorobenzene	U		1500	U	2600	U	2200
1,4-Dichlorobenzene	U		1500	U	2600	U	2200
1,2-Dichlorobenzene	U		1500	U	2600	U	2200
Benzyl alcohol	U		1500	U	2600	U	2200
2,2'-Oxybis(1-chloropropane)	U		1500	U	2600	U	2200
2-Methylphenol	U		1500	U	2600	U	2200
Acetophenone	U		1500	U	2600	U	2200
Hexachloroethane	U		1500	U	2600	U	2200
N-Nitrosodi-n-propylamine	U		1500	U	2600	U	2200
3 & 4-Methylphenol	380	J	1500	U	2600	U	2200
Nitrobenzene	U		1500	U	2600	U	2200
1-Nitrosopiperidine	U		1500	U	2600	U	2200
Isophorone	U		1500	U	2600	U	2200
2-Nitrophenol	U		1500	U	2600	U	2200
2,4-Dimethylphenol	U		1500	U	2600	U	2200
Benzoic Acid	U		1500	U	2600	U	2200
Bis(2-chloroethoxy) methane	U		1500	U	2600	U	2200
a,a-Dimethylphenethylamine	U		2900	U	5100	U	4300
2,4-Dichlorophenol	U		1500	U	2600	U	2200
1,2,4-Trichlorobenzene	U		1500	U	2600	U	2200
Naphthalene	U		1500	U	2600	U	2200
4-Chloroaniline	U		1500	U	2600	U	2200
2,6-Dichlorophenol	U		1500	U	2600	U	2200
Hexachlorobutadiene	U		1500	U	2600	U	2200
4-Chloro-3-methylphenol	U		1500	U	2600	U	2200
2-Methylnaphthalene	U		1500	U	2600	U	2200
1,2,4,5-Tetrachlorobenzene	U		1500	U	2600	U	2200
Hexachlorocyclopentadiene	U		1500	U	2600	U	2200
2,4,6-Trichlorophenol	U		1500	U	2600	U	2200
2,4,5-Trichlorophenol	U		2900	U	5100	U	4300
2-Chloronaphthalene	U		1500	U	2600	U	2200
1-Chloronaphthalene	U		1500	U	2600	U	2200
2-Nitroaniline	U		7300	U	13000	U	11000
Acenaphthylene	U		1500	U	2600	U	2200
Dimethyl phthalate	U		1500	U	2600	U	2200

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID	10263			10266			10265		
Location	A7-1			A9-2			A9-1		
Dil. Factor	1			1			1		
% Solids	68			39			46		
Analyte	Conc ug/kg		MDL ug/kg	Conc ug/kg		MDL ug/kg	Conc ug/kg		MDL ug/kg
2,6-Dinitrotoluene	U		1500	U		2600	U		2200
Acenaphthene	U		1500	U		2600	U		2200
3-Nitroaniline	U		7300	U		13000	U		11000
2,4-Dinitrophenol	U		7300	U		13000	U		11000
Dibenzofuran	U		1500	U		2600	U		2200
2 4-Dinitrotoluene	U		1500	U		2600	U		2200
4-Nitrophenol	U		7300	U		13000	U		11000
Pentachlorobenzene	U		1500	U		2600	U		2200
2-Naphthylamine	U		1500	U		2600	U		2200
1-Naphtylamine	U		1500	U		2600	U		2200
2,3,4,6-Tetrachlorophenol	U		7300	U		13000	U		11000
Fluorene	U		1500	U		2600	U		2200
4-Chlorophenyl phenyl ether	U		1500	U		2600	U		2200
Diethylphthalate	U		1500	U		2600	U		2200
4-Nitroaniline	U		7300	U		13000	U		11000
1,2-Diphenylhydrazine	U		1500	U		2600	U		2200
4,6-Dinitro-2-methylphenol	U		7300	U		13000	U		11000
N-Nitrosodiphenylamine	U		1500	U		2600	U		2200
4-Bromophenyl phenyl ether	U		1500	U		2600	U		2200
Hexachlorobenzene	U		1500	U		2600	U		2200
Pentachlorophenol	U		7300	U		13000	U		11000
Benzidine	15000		2900	10000		5100	9700		4300
Pentachloronitrobenzene	U		1500	U		2600	U		2200
Phenanthrene	1600		1500	1200	J	2600	950	J	2200
Anthracene	320	J	1500	U		2600	U		2200
Di-n-butyl phthalate	1200	JB	1500	2600	B	2600	1500	JB	2200
Fluoranthene	2700		1500	2900		2600	2500		2200
Pyrene	2500		1500	2500	J	2600	2200		2200
4-Dimethylaminoazobenzene	U		1500	U		2600	U		2200
Butyl benzyl phthalate	U		1500	U		2600	U		2200
3 3-Dichlorobenzidine	U		1500	U		2600	U		2200
Benzo(a)anthracene	1600		1500	1400	J	2600	1300	J	2200
Chrysene	1500	J	1500	1600	J	2600	1600	J	2200
Bis(2-ethylhexyl) phthalate	1300	JB	1500	1400	JB	2600	990	JB	2200
Di-n-octyl phthalate	200	J	1500	U		2600	U		2200
7 12-Dimethylbenz(a)anthracene	U		1500	U		2600	U		2200
Benzo(b)fluoranthene	2300		1500	2800		2600	2900		2200
Benzo(k)fluoranthene	U		1500	U		2600	U		2200
Benzo(a)pyrene	1300	J	1500	1500	J	2600	1500	J	2200
3-Methylcholanthrene	U		1500	U		2600	U		2200
Indeno(1,2,3-c,d)pyrene	740	J	1500	1100	J	2600	1200	J	2200
Dibenzo(a,h)anthracene	U		1500	U		2600	U		2200
Benzo(ghi)perylene	810	J	1500	1200	J	2600	1500	J	2200

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID	SBLKA (7/2/97)		10395 T4-1-1		10396 T4-1-10		10397 T4-2-19	
Location	-		1		1		1	
Dil. Factor	1		64		69		75	
% Solids	100							
Analyte	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg
N-Nitrosodimethylamine	U	1000	U	1600	U	1400	U	1300
Pyridine	U	1000	U	1600	U	1400	U	1300
2-Picoline	U	1000	U	1600	U	1400	U	1300
Methyl Methanesulfonate	U	2000	U	3100	U	2900	U	2700
Ethyl Methanesulfonate	U	2000	U	3100	U	2900	U	2700
Aniline	U	1000	U	1600	U	1400	U	1300
Bis(2-chloroethyl) ether	U	1000	U	1600	U	1400	U	1300
Phenol	U	1000	U	1600	U	1400	U	1300
2-Chlorophenol	U	1000	U	1600	U	1400	U	1300
1,3-Dichlorobenzene	U	1000	U	1600	U	1400	U	1300
1,4-Dichlorobenzene	U	1000	U	1600	U	1400	U	1300
1,2-Dichlorobenzene	U	1000	U	1600	U	1400	U	1300
Benzyl alcohol	U	1000	U	1600	U	1400	U	1300
2,2'-Oxybis(1-chloropropane)	U	1000	U	1600	U	1400	U	1300
2-Methylphenol	U	1000	U	1600	U	1400	U	1300
Acetophenone	U	1000	U	1600	U	1400	U	1300
Hexachloroethane	U	1000	U	1600	U	1400	U	1300
N-Nitrosodi-n-propylamine	U	1000	U	1600	U	1400	U	1300
3 & 4-Methylphenol	U	1000	U	1600	U	1400	U	1300
Nitrobenzene	U	1000	U	1600	U	1400	U	1300
1-Nitrosopiperidine	U	1000	U	1600	U	1400	U	1300
Isophorone	120 J	1000	U	1600	U	1400	U	1300
2-Nitrophenol	U	1000	U	1600	U	1400	U	1300
2,4-Dimethylphenol	U	1000	U	1600	U	1400	U	1300
Benzoic Acid	U	1000	U	1600	180 J	1400	U	1300
Bis(2-chloroethoxy) methane	U	1000	U	1600	U	1400	U	1300
a,a-Dimethylphenethylamine	U	2000	U	3100	U	2900	U	2700
2,4-Dichlorophenol	U	1000	U	1600	U	1400	U	1300
1,2,4-Trichlorobenzene	U	1000	U	1600	U	1400	U	1300
Naphthalene	U	1000	U	1600	U	1400	U	1300
4-Chloroaniline	U	1000	U	1600	U	1400	U	1300
2,6-Dichlorophenol	U	1000	U	1600	U	1400	U	1300
Hexachlorobutadiene	U	1000	U	1600	U	1400	U	1300
4-Chloro-3-methylphenol	U	1000	U	1600	U	1400	U	1300
2-Methylnaphthalene	U	1000	U	1600	U	1400	U	1300
1,2,4,5-Tetrachlorobenzene	U	1000	U	1600	U	1400	U	1300
Hexachlorocyclopentadiene	U	1000	U	1600	U	1400	U	1300
2,4,6-Trichlorophenol	U	1000	U	1600	U	1400	U	1300
2,4,5-Trichlorophenol	U	2000	U	3100	U	2900	U	2700
2-Chloronaphthalene	U	1000	U	1600	U	1400	U	1300
1-Chloronaphthalene	U	1000	U	1600	U	1400	U	1300
2-Nitroaniline	U	5000	U	7800	U	7200	U	6700
Acenaphthylene	U	1000	U	1600	U	1400	U	1300
Dimethyl phthalate	U	1000	U	1600	U	1400	U	1300

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID	SBLKA (7/2/97)		10395		10396		10397	
Location	-		T4-1-1		T4-1-10		T4-2-19	
Dil. Factor	1		1		1		1	
% Solids	100		64		69		75	
Analyte	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg
2,6-Dinitrotoluene	U	1000	U	1600	U	1400	U	1300
Acenaphthene	U	1000	U	1600	U	1400	U	1300
3-Nitroaniline	U	5000	U	7800	U	7200	U	6700
2,4-Dinitrophenol	U	5000	U	7800	U	7200	U	6700
Dibenzofuran	U	1000	U	1600	U	1400	U	1300
2,4-Dinitrotoluene	U	1000	U	1600	U	1400	U	1300
4-Nitrophenol	U	5000	U	7800	U	7200	U	6700
Pentachlorobenzene	U	1000	U	1600	U	1400	U	1300
2-Napnthylamine	U	1000	U	1600	U	1400	U	1300
1-Naphtylamine	U	1000	U	1600	U	1400	U	1300
2,3,4,6-Tetrachlorophenol	U	5000	U	7800	U	7200	U	6700
Fluorene	U	1000	U	1600	U	1400	U	1300
4-Chlorophenyl phenyl ether	U	1000	U	1600	U	1400	U	1300
Diethylphthalate	U	1000	U	1600	U	1400	U	1300
4-Nitroaniline	U	5000	U	7800	U	7200	U	6700
1 2-Diphenylhydrazine	U	1000	U	1600	U	1400	U	1300
4,6-Dinitro-2-methylphenol	U	5000	U	7800	U	7200	U	6700
N-Nitrosodiphenylamine	U	1000	U	1600	U	1400	U	1300
4-Bromophenyl phenyl ether	U	1000	U	1600	U	1400	U	1300
Hexachlorobenzene	U	1000	U	1600	U	1400	U	1300
Pentachlorophenol	U	5000	U	7800	U	7200	U	6700
Benzidine	U	2000	12000	3100	11000	2900	3600	2700
Pentachloronitrobenzene	U	1000	U	1600	U	1400	U	1300
Phenanthrene	U	1000	1300 J	1600	1100 J	1400	500 J	1300
Anthracene	U	1000	170 J	1600	180 J	1400	U	1300
Di-n-butyl phthalate	360 J	1000	1400 JB	1600	860 JB	1400	470 JB	1300
Fluoranthene	U	1000	2200	1600	2100	1400	750 J	1300
Pyrene	U	1000	2500	1600	1900	1400	890 J	1300
4-Dimethylaminoazobenzene	U	1000	U	1600	U	1400	U	1300
Butyl benzyl phthalate	U	1000	710 J	1600	620 J	1400	280 J	1300
3 3'-Dichlorobenzidine	U	1000	U	1600	U	1400	U	1300
Benzo(a)anthracene	U	1000	1200 J	1600	1100 J	1400	450 J	1300
Chrysene	U	1000	1800	1600	1600	1400	780 J	1300
Bis(2-ethylhexyl) phthalate	130 J	1000	1300 JB	1600	1200 JB	1400	500 JB	1300
Di-n-octyl phthalate	U	1000	U	1600	U	1400	U	1300
7,12-Dimethylbenz(a)anthracene	U	1000	U	1600	U	1400	U	1300
Benzo(b)fluoranthene	U	1000	3100	1600	2100	1400	820 J	1300
Benzo(k)fluoranthene	U	1000	U	1600	510 J	1400	430 J	1300
Benzo(a)pyrene	U	1000	1500 J	1600	1300 J	1400	540 J	1300
3-Methylcholanthrene	U	1000	U	1600	U	1400	U	1300
Indeno(1,2,3-c,d)pyrene	U	1000	950 J	1600	840 J	1400	370 J	1300
Dibenzo(a,h)anthracene	U	1000	U	1600	U	1400	U	1300
Benzo(ghi)perylene	U	1000	1100 J	1600	860 J	1400	340 J	1300

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID	10398		
Location	T4-3-3		
Dil. Factor	1		
% Solids	56		

Analyte	Conc ug/kg		MDL ug/kg
N-Nitrosodimethylamine	U		1700
Pyridine	U		1700
2-Picoline	U		1700
Methyl Methanesulfonate	U		3500
Ethyl Methanesulfonate	U		3500
Aniline	U		1700
Bis(2-chloroethyl) ether	U		1700
Phenol	U		1700
2-Chlorophenol	U		1700
1,3-Dichlorobenzene	U		1700
1,4-Dichlorobenzene	U		1700
1,2-Dichlorobenzene	U		1700
Benzyl alcohol	U		1700
2,2'-Oxybis(1-chloropropane)	U		1700
2-Methylphenol	U		1700
Acetophenone	U		1700
Hexachloroethane	U		1700
N-Nitrosodi-n-propylamine	U		1700
3 & 4-Methylphenol	U		1700
Nitrobenzene	U		1700
1-Nitrosopiperidine	U		1700
Isophorone	U		1700
2-Nitrophenol	U		1700
2,4-Dimethylphenol	U		1700
Benzoic Acid	U		1700
Bis(2-chloroethoxy) methane	U		1700
a,a-Dimethylphenethylamine	U		3500
2,4-Dichlorophenol	U		1700
1,2,4-Trichlorobenzene	U		1700
Naphthalene	370	J	1700
4-Chloroaniline	U		1700
2,6-Dichlorophenol	U		1700
Hexachlorobutadiene	U		1700
4-Chloro-3-methylphenol	U		1700
2-Methylnaphthalene	270	J	1700
1,2,4,5-Tetrachlorobenzene	U		1700
Hexachlorocyclopentadiene	U		1700
2,4,6-Trichlorophenol	U		1700
2,4,5-Trichlorophenol	U		3500
2-Chloronaphthalene	U		1700
1-Chloronaphthalene	U		1700
2-Nitroaniline	U		8700
Acenaphthylene	430	J	1700
Dimethyl phthalate	U		1700

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID	10396		
Location	T4-3-3		
Dil. Factor	1		
% Solids	56		

Analyte	Conc ug/kg		MDL ug/kg
2,6-Dinitrotoluene	U		1700
Acenaphthene	340	J	1700
3-Nitroaniline	U		8700
2,4-Dinitrophenol	U		8700
Dibenzofuran	220	J	1700
2,4-Dinitrotoluene	U		1700
4-Nitrophenol	U		8700
Pentachlorobenzene	U		1700
2-Naphthylamine	U		1700
1-Naphtylamine	U		1700
2,3,4,6-Tetrachlorophenol	U		8700
Fluorene	410	J	1700
4-Chlorophenyl phenyl ether	U		1700
Diethylphthalate	U		1700
4-Nitroaniline	8700		8700
1,2-Diphenylhydrazine	U		1700
4,6-Dinitro-2-methylphenol	U		8700
N-Nitrosodiphenylamine	U		1700
4-Bromophenyl phenyl ether	U		1700
Hexachlorobenzene	U		1700
Pentachlorophenol	U		8700
Benzidine	180000		3500
Pentachloronitrobenzene	U		1700
Phenanthrene	5700		1700
Anthracene	760	J	1700
Di-n-butyl phthalate	620	JB	1700
Fluoranthene	11000		1700
Pyrene	11000		1700
4-Dimethylaminoazobenzene	U		1700
Butyl benzyl phthalate	910	J	1700
3,3'-Dichlorobenzidine	U		1700
Benzo(a)anthracene	6400		1700
Chrysene	8500		1700
Bis(2-ethylhexyl) phthalate	2500	B	1700
Di-n-octyl phthalate	U		1700
7 12-Dimethylbenz(a)anthracene	U		1700
Benzo(b)fluoranthene	9900		1700
Benzo(k)fluoranthene	2200		1700
Benzo(a)pyrene	6200		1700
3-Methylcholanthrene	U		1700
Indeno(1,2,3-c,d)pyrene	3600		1700
Dibenzo(a,h)anthracene	U		1700
Benzo(ghi)perylene	3600		1700

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Comell Dubilier Electronics
based on dry weight

Sample ID	SBLKB (7/1/97)		10262		10399		10400	
Location	-		A6-2		T4-4-1		T4-5-6	
Dil. Factor	1		1		1		1	
% Solids	100		20		60		69	

Analyte	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg
N-Nitrosodimethylamine	U	1000	U	5000	U	1700	U	1400
Pyridine	U	1000	U	5000	U	1700	U	1400
2-Picoline	U	1000	U	5000	U	1700	U	1400
Methyl Methanesulfonate	U	2000	U	10000	U	3300	U	2900
Ethyl Methanesulfonate	U	2000	U	10000	U	3300	U	2900
Aniline	U	1000	U	5000	U	1700	U	1400
Bis(2-chloroethyl) ether	U	1000	U	5000	U	1700	U	1400
Phenol	U	1000	U	5000	U	1700	U	1400
2-Chlorophenol	U	1000	U	5000	U	1700	U	1400
1,3-Dichlorobenzene	U	1000	U	5000	U	1700	U	1400
1,4-Dichlorobenzene	U	1000	U	5000	U	1700	U	1400
1,2-Dichlorobenzene	U	1000	U	5000	U	1700	U	1400
Benzyl alcohol	U	1000	U	5000	U	1700	U	1400
2,2'-Oxybis(1-chloropropane)	U	1000	U	5000	U	1700	U	1400
2-Methylphenol	U	1000	U	5000	U	1700	U	1400
Acetophenone	U	1000	U	5000	U	1700	U	1400
Hexachloroethane	U	1000	U	5000	U	1700	U	1400
N-Nitrosodi-n-propylamine	U	1000	U	5000	U	1700	U	1400
3 & 4-Methylphenol	U	1000	980 J	5000	U	1700	U	1400
Nitrobenzene	U	1000	U	5000	U	1700	U	1400
1-Nitrosopiperidine	U	1000	U	5000	U	1700	U	1400
Isophorone	U	1000	U	5000	U	1700	U	1400
2-Nitrophenol	U	1000	U	5000	U	1700	U	1400
2,4-Dimethylphenol	U	1000	U	5000	U	1700	U	1400
Benzoic Acid	U	1000	U	5000	300 J	1700	U	1400
Bis(2-chloroethoxy) methane	U	1000	U	5000	U	1700	U	1400
a,a-Dimethylphenethylamine	U	2000	U	10000	U	3300	U	2900
2,4-Dichlorophenol	U	1000	U	5000	U	1700	U	1400
1,2,4-Trichlorobenzene	U	1000	U	5000	U	1700	U	1400
Naphthalene	U	1000	U	5000	260 J	1700	160 J	1400
4-Chloroaniline	U	1000	U	5000	U	1700	U	1400
2,6-Dichlorophenol	U	1000	U	5000	U	1700	U	1400
Hexachlorobutadiene	U	1000	U	5000	U	1700	U	1400
4-Chloro-3-methylphenol	U	1000	U	5000	U	1700	U	1400
2-Methylnaphthalene	U	1000	U	5000	180 J	1700	U	1400
1,2,4,5-Tetrachlorobenzene	U	1000	U	5000	U	1700	U	1400
Hexachlorocyclopentadiene	U	1000	U	5000	U	1700	U	1400
2,4,6-Trichlorophenol	U	1000	U	5000	U	1700	U	1400
2,4,5-Trichlorophenol	U	2000	U	10000	U	3300	U	2900
2-Chloronaphthalene	U	1000	U	5000	U	1700	U	1400
1-Chloronaphthalene	U	1000	U	5000	U	1700	U	1400
2-Nitroaniline	U	5000	U	25000	U	8300	U	7200
Acenaphthylene	U	1000	U	5000	210 J	1700	U	1400
Dimethyl phthalate	U	1000	U	5000	U	1700	U	1400

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID	SBLKB (7/1/97)		10262		10399		10400	
Location	-		A6-2		T4-4-1		T4-5-6	
Dil. Factor	1		1		1		1	
% Solids	100		20		60		69	
Analyte	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg
2,6-Dinitrotoluene	U	1000	U	5000	U	1700	U	1400
Acenaphthene	U	1000	U	5000	200 J	1700	U	1400
3-Nitroaniline	U	5000	U	25000	U	8300	U	7200
2,4-Dinitrophenol	U	5000	U	25000	U	8300	U	7200
Dibenzofuran	U	1000	U	5000	U	1700	U	1400
2,4-Dinitrotoluene	U	1000	U	5000	U	1700	U	1400
4-Nitrophenol	U	5000	U	25000	U	8300	U	7200
Pentachlorobenzene	U	1000	U	5000	U	1700	U	1400
2-Naphthylamine	U	1000	U	5000	U	1700	U	1400
1-Naphthylamine	U	1000	U	5000	U	1700	U	1400
2,3,4,6-Tetrachlorophenol	U	5000	U	25000	U	8300	U	7200
Fluorene	U	1000	U	5000	260 J	1700	U	1400
4-Chlorophenyl phenyl ether	U	1000	U	5000	U	1700	U	1400
Diethylphthalate	U	1000	U	5000	U	1700	U	1400
4-Nitroaniline	U	5000	U	25000	U	8300	U	7200
1,2-Diphenylhydrazine	U	1000	U	5000	U	1700	U	1400
4,6-Dinitro-2-methylphenol	U	5000	U	25000	U	8300	U	7200
N-Nitrosodiphenylamine	U	1000	U	5000	U	1700	U	1400
4-Bromophenyl phenyl ether	U	1000	U	5000	U	1700	U	1400
Hexachlorobenzene	U	1000	U	5000	U	1700	U	1400
Pentachlorophenol	U	5000	U	25000	U	8300	U	7200
Benzidine	U	2000	17000	10000	32000 E	3300	15000	2900
Pentachloronitrobenzene	U	1000	U	5000	U	1700	U	1400
Phenanthrene	U	1000	1400 J	5000	3600	1700	1700	1400
Anthracene	U	1000	U	5000	430 J	1700	210 J	1400
Di-n-butyl phthalate	1100	1000	2100 JB	5000	1100 JB	1700	610 JB	1400
Fluoranthene	U	1000	2500 J	5000	5800	1700	3600	1400
Pyrene	U	1000	3600 J	5000	8800	1700	3800	1400
4-Dimethylaminoazobenzene	U	1000	U	5000	U	1700	U	1400
Butyl benzyl phthalate	U	1000	U	5000	820 J	1700	960 J	1400
3,3'-Dichlorobenzidine	U	1000	U	5000	170 J	1700	U	1400
Benzo(a)anthracene	U	1000	1900 J	5000	3500	1700	1800	1400
Chrysene	U	1000	2200 J	5000	5500	1700	2700	1400
Bis(2-ethylhexyl) phthalate	100 J	1000	19000 B	5000	2500 B	1700	1600 B	1400
Di-n-octyl phthalate	U	1000	25000	5000	U	1700	U	1400
7,12-Dimethylbenz(a)anthracene	U	1000	U	5000	U	1700	U	1400
Benzo(b)fluoranthene	U	1000	2700 J	5000	7800	1700	3600	1400
Benzo(k)fluoranthene	U	1000	1300 J	5000	1500 J	1700	1300 J	1400
Benzo(a)pyrene	U	1000	1600 J	5000	4500	1700	2200	1400
3-Methylcholanthrene	U	1000	U	5000	U	1700	U	1400
Indeno(1,2,3-c,d)pyrene	U	1000	U	5000	2600	1700	1200 J	1400
Dibenzo(a,h)anthracene	U	1000	U	5000	U	1700	330 J	1400
Benzo(ghi)perylene	U	1000	1300 J	5000	3000	1700	1200 J	1400

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID	10486	10487	10488	10489
Location	A1-1	A1-2	A1-3	A1-4
Dil. Factor	1	1	1	1
% Solids	42	33	27	40

Analyte	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg
N-Nitrosodimethylamine	U	2300	U	2900	U	3700	U	2500
Pyridine	U	2300	U	2900	U	3700	U	2500
2-Picoline	U	2300	U	2900	U	3700	U	2500
Methyl Methanesulfonate	U	4600	U	5800	U	7400	U	5000
Ethyl Methanesulfonate	U	4600	U	5800	U	7400	U	5000
Aniline	U	2300	U	2900	U	3700	U	2500
Bis(2-chloroethyl) ether	U	2300	U	2900	U	3700	U	2500
Phenol	U	2300	U	2900	U	3700	U	2500
2-Chlorophenol	U	2300	U	2900	U	3700	U	2500
1,3-Dichlorobenzene	U	2300	U	2900	U	3700	U	2500
1,4-Dichlorobenzene	U	2300	U	2900	U	3700	U	2500
1,2-Dichlorobenzene	U	2300	U	2900	U	3700	U	2500
Benzyl alcohol	U	2300	U	2900	U	3700	U	2500
2,2'-Oxybis(1-chloropropane)	U	2300	U	2900	U	3700	U	2500
2-Methylphenol	U	2300	U	2900	U	3700	U	2500
Acetophenone	U	2300	U	2900	U	3700	U	2500
Hexachloroethane	U	2300	U	2900	U	3700	U	2500
N-Nitrosodi-n-propylamine	U	2300	U	2900	U	3700	U	2500
3 & 4-Methylphenol	U	2300	U	2900	37000	3700	U	2500
Nitrobenzene	U	2300	U	2900	U	3700	U	2500
1-Nitrosopiperidine	U	2300	U	2900	U	3700	U	2500
Isophorone	U	2300	U	2900	U	3700	U	2500
2-Nitrophenol	U	2300	U	2900	U	3700	U	2500
2,4-Dimethylphenol	U	2300	U	2900	U	3700	U	2500
Benzoic Acid	U	2300	480 J	2900	U	3700	U	2500
Bis(2-chloroethoxy) methane	U	2300	U	2900	U	3700	U	2500
a,a-Dimethylphenethylamine	U	4600	U	5800	U	7400	U	5000
2,4-Dichlorophenol	U	2300	U	2900	U	3700	U	2500
1,2,4-Trichlorobenzene	U	2300	U	2900	U	3700	U	2500
Naphthalene	U	2300	U	2900	U	3700	U	2500
4-Chloroaniline	U	2300	U	2900	U	3700	U	2500
2,6-Dichlorophenol	U	2300	U	2900	U	3700	U	2500
Hexachlorobutadiene	U	2300	U	2900	U	3700	U	2500
4-Chloro-3-methylphenol	U	2300	U	2900	U	3700	U	2500
2-Methylnaphthalene	U	2300	U	2900	U	3700	U	2500
1,2,4,5-Tetrachlorobenzene	U	2300	U	2900	U	3700	U	2500
Hexachlorocyclopentadiene	U	2300	U	2900	U	3700	U	2500
2,4,6-Trichlorophenol	U	2300	U	2900	U	3700	U	2500
2,4,5-Trichlorophenol	U	4600	U	5800	U	7400	U	5000
2-Chloronaphthalene	U	2300	U	2900	U	3700	U	2500
1-Chloronaphthalene	U	2300	U	2900	U	3700	U	2500
2-Nitroaniline	U	12000	U	15000	U	19000	U	12000
Acenaphthylene	U	2300	U	2900	U	3700	U	2500
Dimethyl phthalate	U	2300	U	2900	U	3700	U	2500

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID	10486	10487	10488	10489
Location	A1-1	A1-2	A1-3	A1-4
Dil. Factor	1	1	1	1
% Solids	42	33	27	40

Analyte	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg
2,6-Dinitrotoluene	U	2300	470 J	2900	U	3700	U	2500
Acenaphthene	U	2300	U	2900	U	3700	U	2500
3-Nitroaniline	U	12000	U	15000	U	19000	U	12000
2,4-Dinitrophenol	U	12000	U	15000	U	19000	U	12000
Dibenzofuran	U	2300	U	2900	U	3700	U	2500
2,4-Dinitrotoluene	U	2300	U	2900	U	3700	U	2500
4-Nitrophenol	U	12000	U	15000	U	19000	U	12000
Pentachlorobenzene	U	2300	U	2900	U	3700	U	2500
2-Naphthylamine	U	2300	U	2900	U	3700	U	2500
1-Naphtylamine	U	2300	U	2900	U	3700	U	2500
2,3,4,6-Tetrachlorophenol	U	12000	U	15000	U	19000	U	12000
Fluorene	U	2300	U	2900	U	3700	U	2500
4-Chlorophenyl phenyl ether	U	2300	U	2900	U	3700	U	2500
Diethylphthalate	U	2300	U	2900	U	3700	U	2500
4-Nitroaniline	U	12000	U	15000	U	19000	U	12000
1,2-Diphenylhydrazine	U	2300	U	2900	U	3700	U	2500
4,6-Dinitro-2-methylphenol	U	12000	U	15000	U	19000	U	12000
N-Nitrosodiphenylamine	U	2300	U	2900	U	3700	U	2500
4-Bromophenyl phenyl ether	U	2300	U	2900	U	3700	U	2500
Hexachlorobenzene	U	2300	U	2900	U	3700	U	2500
Pentachlorophenol	U	12000	U	15000	U	19000	U	12000
Benzidine	11000	4600	10000	5800	14000	7400	14000	5000
Pentachloronitrobenzene	U	2300	U	2900	U	3700	U	2500
Phenanthrene	1200 J	2300	1100 J	2900	1400 J	3700	1600 J	2500
Anthracene	U	2300	U	2900	U	3700	340 J	2500
Di-n-butyl phthalate	1700 JB	2300	2100 JB	2900	4400 B	3700	2100 JB	2500
Fluoranthene	2000 J	2300	2100 J	2900	2700 J	3700	2300 J	2500
Pyrene	2600	2300	2200 J	2900	3400 J	3700	2800	2500
4-Dimethylaminoazobenzene	U	2300	U	2900	U	3700	U	2500
Butyl benzyl phthalate	11000	2300	6600	2900	2800 J	3700	14000	2500
3,3'-Dichlorobenzidine	U	2300	U	2900	U	3700	U	2500
Benzo(a)anthracene	1500 J	2300	1000 J	2900	1600 J	3700	1400 J	2500
Chrysene	1400 J	2300	1700 J	2900	2000 J	3700	1500 J	2500
Bis(2-ethylhexyl) phthalate	86000 B	2300	43000 B	2900	33000 B	3700	170000 B	2500
Di-n-octyl phthalate	13000	2300	9800	2900	6200	3700	17000	2500
7,12-Dimethylbenz(a)anthracene	U	2300	U	2900	U	3700	U	2500
Benzo(b)fluoranthene	2700	2300	2800 J	2900	3100 J	3700	2900	2500
Benzo(k)fluoranthene	710 J	2300	770 J	2900	710 J	3700	U	2500
Benzo(a)pyrene	1500 J	2300	1600 J	2900	U	3700	1400 J	2500
3-Methylcholanthrene	U	2300	U	2900	U	3700	U	2500
Indeno(1,2,3-c,d)pyrene	930 J	2300	970 J	2900	1100 J	3700	620 J	2500
Dibenzo(a,h)anthracene	U	2300	U	2900	U	3700	U	2500
Benzo(ghi)perylene	970 J	2300	990 J	2900	1300 J	3700	730 J	2500

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID	10490	10491	10492	10493
Location	A1-5	A1-6	A2-1	A2-2
Dil. Factor	1	1	1	1
% Solids	39	46	47	32

Analyte	Conc ug/kg		MDL ug/kg	Conc ug/kg		MDL ug/kg	Conc ug/kg		MDL ug/kg	Conc ug/kg		MDL ug/kg
N-Nitrosodimethylamine	U		2500	U		2100	U		2100	U		3000
Pyridine	U		2500	U		2100	U		2100	U		3000
2-Picoline	U		2500	U		2100	U		2100	U		3000
Methyl Methanesulfonate	U		5100	U		4300	U		4200	U		6100
Ethyl Methanesulfonate	U		5100	U		4300	U		4200	U		6100
Aniline	U		2500	U		2100	U		2100	U		3000
Bis(2-chloroethyl) ether	U		2500	U		2100	U		2100	U		3000
Phenol	U		2500	U		2100	U		2100	U		3000
2-Chlorophenol	U		2500	U		2100	U		2100	U		3000
1,3-Dichlorobenzene	U		2500	U		2100	U		2100	U		3000
1,4-Dichlorobenzene	U		2500	U		2100	U		2100	U		3000
1,2-Dichlorobenzene	U		2500	U		2100	U		2100	U		3000
Benzyl alcohol	U		2500	U		2100	U		2100	U		3000
2,2'-Oxybis(1-chloropropane)	U		2500	U		2100	U		2100	U		3000
2-Methylphenol	U		2500	U		2100	U		2100	U		3000
Acetophenone	U		2500	U		2100	U		2100	U		3000
Hexachloroethane	U		2500	U		2100	U		2100	U		3000
N-Nitrosodi-n-propylamine	U		2500	U		2100	U		2100	U		3000
3 & 4-Methylphenol	2600		2500	570	J	2100	U		2100	U		3000
Nitrobenzene	U		2500	U		2100	U		2100	U		3000
1-Nitrosopiperidine	U		2500	U		2100	U		2100	U		3000
Isophorone	U		2500	U		2100	U		2100	U		3000
2-Nitrophenol	U		2500	U		2100	U		2100	U		3000
2,4-Dimethylphenol	U		2500	U		2100	U		2100	U		3000
Benzoic Acid	350	J	2500	U		2100	570	J	2100	500	J	3000
Bis(2-chloroethoxy) methane	U		2500	U		2100	U		2100	U		3000
a,a-Dimethylphenethylamine	U		5100	U		4300	U		4200	U		6100
2,4-Dichlorophenol	U		2500	U		2100	U		2100	U		3000
1,2,4-Trichlorobenzene	U		2500	U		2100	U		2100	U		3000
Naphthalene	U		2500	U		2100	230	J	2100	U		3000
4-Chloroaniline	U		2500	U		2100	U		2100	U		3000
2,6-Dichlorophenol	U		2500	U		2100	U		2100	U		3000
Hexachlorobutadiene	U		2500	U		2100	U		2100	U		3000
4-Chloro-3-methylphenol	U		2500	U		2100	U		2100	U		3000
2-Methylnaphthalene	U		2500	U		2100	U		2100	U		3000
1,2,4,5-Tetrachlorobenzene	U		2500	U		2100	U		2100	U		3000
Hexachlorocyclopentadiene	U		2500	U		2100	U		2100	U		3000
2,4,6-Trichlorophenol	U		2500	U		2100	U		2100	U		3000
2,4,5-Trichlorophenol	U		5000	U		4300	U		4200	U		6100
2-Chloronaphthalene	U		2500	U		2100	U		2100	U		3000
1-Chloronaphthalene	U		2500	U		2100	U		2100	U		3000
2-Nitroaniline	U		13000	U		11000	U		10000	U		15000
Acenaphthylene	U		2500	U		2100	U		2100	U		3000
Dimethyl phthalate	U		2500	U		2100	U		2100	U		3000

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID	10490		10491		10492		10493	
Location	A1-5		A1-6		A2-1		A2-2	
Dil. Factor	1		1		1		1	
% Solids	39		46		47		32	

Analyte	Conc ug/kg		MDL ug/kg	Conc ug/kg		MDL ug/kg	Conc ug/kg		MDL ug/kg	Conc ug/kg		MDL ug/kg
2,6-Dinitrotoluene	U		2500	U		2100	U		2100	U		3000
Acenaphthene	U		2500	U		2100	U		2100	U		3000
3-Nitroaniline	U		13000	U		11000	U		10000	U		15000
2,4-Dinitrophenol	U		13000	U		11000	U		10000	U		15000
Dibenzofuran	U		2500	U		2100	U		2100	U		3000
2 4-Dinitrotoluene	U		2500	U		2100	U		2100	U		3000
4-Nitrophenol	U		13000	U		11000	U		10000	U		15000
Pentachlorobenzene	U		2500	U		2100	U		2100	U		3000
2-Naphthylamine	U		2500	U		2100	U		2100	U		3000
1-Naphthylamine	U		2500	U		2100	U		2100	U		3000
2,3,4,6-Tetrachlorophenol	U		13000	U		11000	U		10000	U		15000
Fluorene	U		2500	U		2100	U		2100	U		3000
4-Chlorophenyl phenyl ether	U		2500	U		2100	U		2100	U		3000
Diethylphthalate	U		2500	U		2100	U		2100	U		3000
4-Nitroaniline	U		13000	U		11000	U		10000	U		15000
1,2-Diphenylhydrazine	U		2500	U		2100	U		2100	U		3000
4 6-Dinitro-2-methylphenol	U		13000	U		11000	U		10000	U		15000
N-Nitrosodiphenylamine	U		2500	U		2100	U		2100	U		3000
4-Bromophenyl phenyl ether	U		2500	U		2100	U		2100	U		3000
Hexachlorobenzene	U		2500	U		2100	U		2100	U		3000
Pentachlorophenol	U		13000	U		11000	U		10000	U		15000
Benzidine	9200		5100	5400		4300	20000		4200	18000		6100
Pentachloronitrobenzene	U		2500	U		2100	U		2100	U		3000
Phenanthrene	860	J	2500	510	J	2100	1900	J	2100	2200	J	3000
Anthracene	U		2500	U		2100	380	J	2100	380	J	3000
Di-n-butyl phthalate	1100	JB	2500	1200	JB	2100	1600	JB	2100	3900	B	3000
Fluoranthene	1700	J	2500	880	J	2100	3200		2100	3600		3000
Pyrene	2000	J	2500	1200	J	2100	4000		2100	4100		3000
4-Dimethylaminoazobenzene	U		2500	U		2100	U		2100	U		3000
Butyl benzyl phthalate	2500	J	2500	3700		2100	1900	J	2100	3200		3000
3 3'-Dichlorobenzidine	U		2500	U		2100	U		2100	U		3000
Benzo(a)anthracene	860	J	2500	570	J	2100	2500		2100	2300	J	3000
Chrysene	1400	J	2500	690	J	2100	2900		2100	2500	J	3000
Bis(2-ethylhexyl) phthalate	17000	B	2500	90000	B	2100	11000	B	2100	18000	B	3000
Di-n-octyl phthalate	4100		2500	9100		2100	4000		2100	2700	J	3000
7 12-Dimethylbenz(a)anthracene	U		2500	U		2100	U		2100	U		3000
Benzo(b)fluoranthene	2000	J	2500	1100	J	2100	4200		2100	3500		3000
Benzo(k)fluoranthene	540	J	2500	290	J	2100	1200	J	2100	1100	J	3000
Benzo(a)pyrene	1200	J	2500	630	J	2100	2500		2100	2200	J	3000
3-Methylcholanthrene	U		2500	U		2100	U		2100	U		3000
Indeno(1,2,3-c,d)pyrene	710	J	2500	430	J	2100	1400	J	2100	1500	J	3000
Dibenzo(a,h)anthracene	U		2500	U		2100	U		2100	U		3000
Benzo(ghi)perylene	830	J	2500	450	J	2100	1500	J	2100	1600	J	3000

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID	10494			10495			10496			10497		
Location	A4-1			A4-2			A5-1			A5-2		
Dil. Factor	1			1			1			1		
% Solids	42			69			64			75		
Analyte	Conc ug/kg		MDL ug/kg	Conc ug/kg		MDL ug/kg	Conc ug/kg		MDL ug/kg	Conc ug/kg		MDL ug/kg
N-Nitrosodimethylamine	U		2300	U		1400	U		1500	U		1300
Pyridine	U		2300	U		1400	U		1500	U		1300
2-Picoline	U		2300	U		1400	U		1500	U		1300
Methyl Methanesulfonate	U		4600	U		2800	U		3100	U		2600
Ethyl Methanesulfonate	U		4600	U		2800	U		3100	U		2600
Aniline	U		2300	U		1400	U		1500	U		1300
Bis(2-chloroethyl) ether	U		2300	U		1400	U		1500	U		1300
Phenol	U		2300	U		1400	U		1500	U		1300
2-Chlorophenol	U		2300	U		1400	U		1500	U		1300
1,3-Dichlorobenzene	U		2300	U		1400	U		1500	U		1300
1,4-Dichlorobenzene	U		2300	U		1400	U		1500	U		1300
1,2-Dichlorobenzene	U		2300	U		1400	U		1500	U		1300
Benzyl alcohol	U		2300	U		1400	U		1500	U		1300
2,2'-Oxybis(1-chloropropane)	U		2300	U		1400	U		1500	U		1300
2-Methylphenol	U		2300	U		1400	U		1500	U		1300
Acetophenone	U		2300	U		1400	U		1500	U		1300
Hexachloroethane	U		2300	U		1400	U		1500	U		1300
N-Nitrosodi-n-propylamine	U		2300	U		1400	U		1500	U		1300
3 & 4-Methylphenol	U		2300	U		1400	U		1500	U		1300
Nitrobenzene	U		2300	U		1400	U		1500	U		1300
1-Nitrosopiperidine	U		2300	U		1400	U		1500	U		1300
Isophorone	U		2300	U		1400	U		1500	U		1300
2-Nitrophenol	U		2300	U		1400	U		1500	U		1300
2,4-Dimethylphenol	U		2300	U		1400	U		1500	U		1300
Benzoic Acid	300	J	2300	U		1400	U		1500	U		1300
Bis(2-chloroethoxy) methane	U		2300	U		1400	U		1500	U		1300
a,a-Dimethylphenethylamine	U		4600	U		2800	U		3100	U		2600
2,4-Dichlorophenol	U		2300	U		1400	U		1500	U		1300
1,2,4-Trichlorobenzene	U		2300	U		1400	U		1500	U		1300
Naphthalene	U		2300	U		1400	160	J	1500	U		1300
4-Chloroaniline	U		2300	U		1400	U		1500	U		1300
2,6-Dichlorophenol	U		2300	U		1400	U		1500	U		1300
Hexachlorobutadiene	U		2300	U		1400	U		1500	U		1300
4-Chloro-3-methylphenol	U		2300	U		1400	U		1500	U		1300
2-Methylnaphthalene	U		2300	U		1400	U		1500	U		1300
1,2,4,5-Tetrachlorobenzene	U		2300	U		1400	U		1500	U		1300
Hexachlorocyclopentadiene	U		2300	U		1400	U		1500	U		1300
2,4,6-Trichlorophenol	U		2300	U		1400	U		1500	U		1300
2,4,5-Trichlorophenol	U		4600	U		2800	U		3100	U		2600
2-Chloronaphthalene	U		2300	U		1400	U		1500	U		1300
1-Chloronaphthalene	U		2300	U		1400	U		1500	U		1300
2-Nitroaniline	U		12000	U		7000	U		7700	U		6400
Acenaphthylene	U		2300	U		1400	600	J	1500	U		1300
Dimethyl phthalate	U		2300	U		1400	U		1500	U		1300

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID	10494		10495		10496		10497	
Location	A4-1		A4-2		A5-1		A5-2	
Dil. Factor	1		1		1		1	
% Solids	42		69		64		75	
Analyte	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg	Conc ug/kg	MDL ug/kg
2,6-Dinitrotoluene	U	2300	U	1400	U	1500	U	1300
Acenaphthene	U	2300	U	1400	260 J	1500	U	1300
3-Nitroaniline	U	12000	U	7000	U	7700	U	6400
2,4-Dinitrophenol	U	12000	U	7000	U	7700	U	6400
Dibenzofuran	U	2300	U	1400	240 J	1500	U	1300
2,4-Dinitrotoluene	U	2300	U	1400	U	1500	U	1300
4-Nitrophenol	U	12000	U	7000	U	7700	U	6400
Pentachlorobenzene	U	2300	U	1400	U	1500	U	1300
2-Naphthylamine	U	2300	U	1400	U	1500	U	1300
1-Naphtylamine	U	2300	U	1400	U	1500	U	1300
2,3,4,6-Tetrachlorophenol	U	12000	U	7000	U	7700	U	6400
Fluorene	U	2300	U	1400	1400 J	1500	U	1300
4-Chlorophenyl phenyl ether	U	2300	U	1400	U	1500	U	1300
Diethylphthalate	U	2300	U	1400	U	1500	U	1300
4-Nitroaniline	U	12000	U	7000	U	7700	U	6400
1,2-Diphenylhydrazine	U	2300	U	1400	U	1500	U	1300
4,6-Dinitro-2-methylphenol	U	12000	U	7000	U	7700	U	6400
N-Nitrosodiphenylamine	U	2300	U	1400	U	1500	U	1300
4-Bromophenyl phenyl ether	U	2300	U	1400	U	1500	U	1300
Hexachlorobenzene	U	2300	U	1400	U	1500	U	1300
Pentachlorophenol	U	12000	U	7000	U	7700	U	6400
Benzidine	13000	4600	4600	2800	81000	3100	U	2600
Pentachloronitrobenzene	U	2300	U	1400	U	1500	U	1300
Phenanthrene	1900 J	2300	650 J	1400	14000	1500	U	1300
Anthracene	250 J	2300	U	1400	3900	1500	U	1300
Di-n-butyl phthalate	2000 JB	2300	1800 B	1400	700 JB	1500	1300 JB	1300
Fluoranthene	3500	2300	1000 J	1400	12000	1500	U	1300
Pyrene	4500	2300	1100 J	1400	17000	1500	140 J	1300
4-Dimethylaminoazobenzene	U	2300	U	1400	U	1500	U	1300
Butyl benzyl phthalate	380 J	2300	U	1400	U	1500	U	1300
3,3'-Dichlorobenzidine	U	2300	U	1400	U	1500	U	1300
Benzo(a)anthracene	2200 J	2300	570 J	1400	8300	1500	U	1300
Chrysene	2600	2300	610 J	1400	7300	1500	U	1300
Bis(2-ethylhexyl) phthalate	3100 B	2300	510 JB	1400	2600 B	1500	520 JB	1300
Di-n-octyl phthalate	U	2300	U	1400	450 J	1500	140 J	1300
7,12-Dimethylbenz(a)anthracene	U	2300	U	1400	U	1500	U	1300
Benzo(b)fluoranthene	3400	2300	770 J	1400	7100	1500	U	1300
Benzo(k)fluoranthene	1400 J	2300	230 J	1400	2300	1500	U	1300
Benzo(a)pyrene	2500	2300	500 J	1400	6400	1500	U	1300
3-Methylcholanthrene	U	2300	U	1400	U	1500	U	1300
Indeno(1,2,3-c,d)pyrene	1600 J	2300	320 J	1400	2700	1500	U	1300
Dibenzo(a,h)anthracene	U	2300	U	1400	U	1500	U	1300
Benzo(ghi)perylene	1700 J	2300	400 J	1400	3100	1500	U	1300

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID	10496
Location	A6-1
Dil. Factor	1
% Solids	25

Analyte	Conc ug/kg		MDL ug/kg
N-Nitrosodimethylamine	U		4000
Pyridine	U		4000
2-Picoline	U		4000
Methyl Methanesulfonate	U		8000
Ethyl Methanesulfonate	U		8000
Aniline	U		4000
Bis(2-chloroethyl) ether	U		4000
Phenol	U		4000
2-Chlorophenol	U		4000
1,3-Dichlorobenzene	U		4000
1,4-Dichlorobenzene	U		4000
1,2-Dichlorobenzene	U		4000
Benzyl alcohol	U		4000
2,2'-Oxybis(1-chloropropane)	U		4000
2-Methylphenol	U		4000
Acetophenone	U		4000
Hexachloroethane	U		4000
N-Nitrosodi-n-propylamine	U		4000
3 & 4-Methylphenol	U		4000
Nitrobenzene	U		4000
1-Nitrosopiperidine	U		4000
Isophorone	U		4000
2-Nitrophenol	U		4000
2 4-Dimethylphenol	U		4000
Benzoic Acid	U		4000
Bis(2-chloroethoxy) methane	U		4000
a,a-Dimethylphenethylamine	U		8000
2 4-Dichlorophenol	U		4000
1,2,4-Trichlorobenzene	U		4000
Naphthalene	420	J	4000
4-Chloroaniline	U		4000
2,6-Dichlorophenol	U		4000
Hexachlorobutadiene	U		4000
4-Chloro-3-methylphenol	U		4000
2-Methylnaphthalene	U		4000
1,2,4,5-Tetrachlorobenzene	U		4000
Hexachlorocyclopentadiene	U		4000
2 4 6-Trichlorophenol	U		4000
2 4,5-Trichlorophenol	U		8000
2-Chloronaphthalene	U		4000
1-Chloronaphthalene	U		4000
2-Nitroaniline	U		20000
Acenaphthylene	U		4000
Dimethyl phthalate	U		4000

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID	10498
Location	A6-1
Dil. Factor	1
% Solids	25

Analyte	Conc ug/kg		MDL ug/kg
2,6-Dinitrotoluene	U		4000
Acenaphthene	U		4000
3-Nitroaniline	U		20000
2,4-Dinitrophenol	U		20000
Dibenzofuran	U		4000
2,4-Dinitrotoluene	U		4000
4-Nitrophenol	U		20000
Pentachlorobenzene	U		4000
2-Naphthylamine	U		4000
1-Naphtylamine	U		4000
2,3,4,6-Tetrachlorophenol	U		20000
Fluorene	U		4000
4-Chlorophenyl phenyl ether	U		4000
Diethylphthalate	U		4000
4-Nitroaniline	U		20000
1,2-Diphenylhydrazine	U		4000
4,6-Dinitro-2-methylphenol	U		20000
N-Nitrosodiphenylamine	U		4000
4-Bromophenyl phenyl ether	U		4000
Hexachlorobenzene	U		4000
Pentachlorophenol	U		20000
Benzidine	19000		8000
Pentachloronitrobenzene	U		4000
Phenanthrene	1300	J	4000
Anthracene	U		4000
Di-n-butyl phthalate	3400	JB	4000
Fluoranthene	2700	J	4000
Pyrene	4200		4000
4-Dimethylaminoazobenzene	U		4000
Butyl benzyl phthalate	930	J	4000
3 3'-Dichlorobenzidine	U		4000
Benzo(a)anthracene	1900	J	4000
Chrysene	2600	J	4000
Bis(2-ethylhexyl) phthalate	26000	B	4000
Di-n-octyl phthalate	13000		4000
7 12-Dimethylbenz(a)anthracene	U		4000
Benzo(b)fluoranthene	4700		4000
Benzo(k)fluoranthene	U		4000
Benzo(a)pyrene	2300	J	4000
3-Methylcholanthrene	U		4000
Indeno(1,2,3-c,d)pyrene	1300	J	4000
Dibenzo(a,h)anthracene	U		4000
Benzo(ghi)perylene	1600	J	4000

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Client ID	SBLKA (6/29/97)		C 10384 T1-3-7		C 10388 T1-14-3		C 10371 T2-12-5	
Location								
Dil. Factor	1		1		1		1	
% Solids	NA		82		70		58	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
1,2,4,5-Tetrachlorobenzene	U	1000	U	1200	U	1400	U	1700
1,2,4-Trichlorobenzene	U	1000	U	1200	U	1400	U	1700
1,2-Dichlorobenzene	U	1000	U	1200	U	1400	U	1700
1,2-Diphenylhydrazine	U	1000	U	1200	U	1400	U	1700
1,3-Dichlorobenzene	U	1000	U	1200	U	1400	U	1700
1,4-Dichlorobenzene	U	1000	U	1200	U	1400	U	1700
1-Naphtylamine	U	1000	U	1200	U	1400	U	1700
2,3,4,6-Tetrachlorophenol	U	5000	U	5800	U	7000	U	8400
2,4,5-Trichlorophenol	U	2000	U	5800	U	7000	U	8400
2,4,6-Trichlorophenol	U	1000	U	1200	U	1400	U	1700
2,4-Dichlorophenol	U	1000	U	1200	U	1400	U	1700
2,4-Dimethylphenol	U	1000	U	1200	U	1400	U	1700
2,4-Dinitrophenol	U	5000	U	5800	U	7000	U	8400
2,4-Dinitrotoluene	U	1000	U	1200	U	1400	U	1700
2,6-Dichlorophenol	U	1000	U	1200	U	1400	U	1700
2,6-Dinitrotoluene	U	1000	U	1200	U	1400	U	1700
2-Chloronaphthalene	U	1000	U	1200	U	1400	U	1700
2-Chlorophenol	U	1000	U	1200	U	1400	U	1700
2-Methylnaphthalene	U	1000	650 J	1200	U	1400	U	1700
2-Methylphenol	U	1000	U	1200	U	1400	U	1700
2-Naphthylamine	U	1000	U	1200	U	1400	U	1700
2-Nitroaniline	U	5000	U	5800	U	7000	U	8400
2-Nitrophenol	U	1000	U	1200	U	1400	U	1700
2-Picoline	U	1000	U	1200	U	1400	U	1700
3,3'-Dichlorobenzidine	U	1000	U	2400	U	2800	U	3400
3-Methylcholanthrene	U	1000	U	1200	U	1400	U	1700
3-Nitroaniline	U	5000	U	5800	U	7000	U	8400
4-Methylphenol	U	1000	U	1200	U	1400	U	1700
4,6-Dinitro-2-methylphenol	U	5000	U	5800	U	7000	U	8400
4-Bromophenyl phenyl ether	U	1000	U	1200	U	1400	U	1700
4-Chloro-3-methylphenol	U	1000	U	1200	U	1400	U	1700
4-Chloroaniline	U	1000	U	1200	U	1400	U	1700
4-Chlorophenyl phenyl ether	U	1000	U	1200	U	1400	U	1700
4-Nitroaniline	U	5000	U	5800	U	7000	U	8400
4-Nitrophenol	U	5000	U	5800	U	7000	U	8400
1-Chloronaphthalene	U	1000	U	1200	U	1400	U	1700
7,12-Dimethylbenz(a)anthracene	U	1000	U	1200	U	1400	U	1700
a,a-Dimethylphenethylamine	U	2000	U	2400	U	2800	U	3400
Acenaphthene	U	1000	U	1200	U	1400	U	1700
Acenaphthylene	U	1000	U	1200	U	1400	U	1700
Acetophenone	U	1000	130 J	1200	U	1400	U	1700
Aniline	U	1000	U	1200	U	1400	U	1700
Anthracene	U	1000	1400	1200	U	1400	210 J	1700
Benzidine	U	2000	14000	1200	U	1400	12000	1700
Benzo(a)anthracene	U	1000	480 J	1200	250 J	1400	1500 J	1700
Benzo(a)pyrene	U	1000	340 J	1200	270 J	1400	1700	1700
Benzo(b)fluoranthene	U	1000	660 J	1200	360 J	1400	2300	1700
Benzo(ghi)perylene	U	1000	390 J	1200	260 J	1400	1600 J	1700
Benzo(k)fluoranthene	U	1000	U	1200	U	1400	770 J	1700
Benzoic Acid	U	1000	880 J	1200	290 J	1400	310 J	1700
Benzyl alcohol	U	1000	U	1200	U	1400	U	1700
Bis(2-chloroethoxy) methane	U	1000	U	1200	U	1400	U	1700
Bis(2-chloroethyl) ether	U	1000	U	1200	U	1400	U	1700
Bis(2-chloroisopropyl) ether	U	1000	U	1200	U	1400	U	1700
Bis(2-ethylhexyl) phthalate	200 J	1000	1300 B	1200	1200 JB	1400	16000 B	1700
Butyl benzyl phthalate	U	1000	180 J	1200	150 J	1400	1900	1700
Chrysene	U	1000	1200	1200	340 J	1400	2000	1700
Di-n-butyl phthalate	2700	1000	680 JB	1200	1600 B	1400	1200 JB	1700
Di-n-octyl phthalate	U	1000	U	1200	U	1400	630 J	1700
Dibenzo(a,h)antnracene	U	1000	U	1200	U	1400	U	1700
Dibenzofuran	U	1000	260 J	1200	U	1400	U	1700
Diethylphthalate	U	1000	U	1200	U	1400	U	1700
Dimethyl phthalate	U	1000	U	1200	U	1400	U	1700
p-Dimethylaminoazobenzene	U	1000	U	1200	U	1400	U	1700
Ethyl Methanesulfonate	U	2000	U	2400	U	2800	U	3400
Fluoranthene	U	1000	640 J	1200	460 J	1400	2400	1700
Fluorene	U	1000	U	1200	U	1400	U	1700
Hexachlorobenzene	U	1000	U	1200	U	1400	U	1700
Hexachlorobutadiene	U	1000	U	1200	U	1400	U	1700
Hexachlorocyclopentadiene	U	1000	U	1200	U	1400	U	1700
Hexachloroethane	U	1000	U	1200	U	1400	U	1700
Indeno(1,2,3-c d)pyrene	U	1000	260 J	1200	200 J	1400	1300 J	1700
Isophorone	U	1000	U	1200	U	1400	U	1700
Methyl Methanesulfonate	U	2000	U	2400	U	2800	U	3400
N-Nitrosodi-n-propylamine	U	1000	U	1200	U	1400	U	1700
N-Nitrosodimethylamine	U	1000	U	1200	U	1400	U	1700
N-Nitrosodiphenylamine	U	1000	U	1200	U	1400	U	1700
N-Nitrosopiperidine	U	1000	U	1200	U	1400	U	1700
Naphthalene	U	1000	420 J	1200	U	1400	U	1700
Nitrobenzene	U	1000	U	1200	U	1400	U	1700
Pentachlorobenzene	U	1000	U	1200	U	1400	U	1700
Pentachloronitrobenzene	U	1000	U	5800	U	7000	U	8400
Pentachlorophenol	U	5000	U	5800	U	7000	U	8400
Phenanthrene	U	1000	1400	1200	310 J	1400	1300 J	1700
Phenol	U	1000	U	1200	U	1400	U	1700
Pyrene	U	1000	780 J	1200	400 J	1400	2800	1700
Pyridine	U	1000	U	1200	U	1400	U	1700

Table 1.4 (Cont). Results of the Analysis for BNA in Soil
WA # 2-274 Comell Dubilier Electronics
based on dry weight

Client ID	C 10372		C 10373		C 10374		C_10375	
Location	T2-7-1		T2-6-7		T2-2-1		T2-5-6	
Dil. Factor	1		1		1		1	
% Solids	57		65		63		68	

Analyte	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg
1,2,4,5-Tetrachlorobenzene	U		1800	U		1500	U		1600	U		1400
1,2,4-Trichlorobenzene	U		1800	U		1500	U		1600	U		1400
1,2-Dichlorobenzene	U		1800	U		1500	U		1600	U		1400
1,2-Diphenylhydrazine	U		1800	U		1500	U		1600	U		1400
1,3-Dichlorobenzene	U		1800	U		1500	U		1600	U		1400
1,4-Dichlorobenzene	U		1800	U		1500	U		1600	U		1400
1-Naphtylamine	U		1800	U		1500	U		1600	U		1400
2,3,4,6-Tetrachlorophenol	U		8800	U		7700	U		7900	U		7100
2,4,5-Trichlorophenol	U		8800	U		7700	U		7900	U		7100
2,4,6-Trichlorophenol	U		1800	U		1500	U		1600	U		1400
2,4-Dichlorophenol	U		1800	U		1500	U		1600	U		1400
2,4-Dimethylphenol	U		1800	U		1500	U		1600	U		1400
2,4-Dinitrophenol	U		8800	U		7700	U		7900	U		7100
2,4-Dinitrotoluene	U		1800	U		1500	U		1600	U		1400
2,6-Dichlorophenol	U		1800	U		1500	U		1600	U		1400
2,6-Dinitrotoluene	U		1800	U		1500	U		1600	U		1400
2-Chloronaphthalene	U		1800	U		1500	U		1600	U		1400
2-Chlorophenol	U		1800	U		1500	U		1600	U		1400
2-Methylnaphthalene	U		1800	170	J	1500	160	J	1600	U		1400
2-Methylphenol	U		1800	U		1500	U		1600	U		1400
2-Naphthylamine	U		1800	U		1500	U		1600	U		1400
2-Nitroaniline	U		8800	U		7700	U		7900	U		7100
2-Nitrophenol	U		1800	U		1500	U		1600	U		1400
2-Picoline	U		1800	U		1500	U		1600	U		1400
3,3'-Dichlorobenzidine	U		3600	U		3100	U		3200	U		2800
3-Methylcholanthrene	U		1800	U		1500	U		1600	U		1400
3-Nitroaniline	U		8800	U		7700	U		7900	U		7100
4-Methylphenol	U		1800	U		1500	U		1600	U		1400
4,6-Dinitro-2-methylphenol	U		8800	U		7700	U		7900	U		7100
4-Bromophenyl phenyl ether	U		1800	U		1500	U		1600	U		1400
4-Chloro-3-methylphenol	U		1800	U		1500	U		1600	U		1400
4-Chloroaniline	U		1800	U		1500	U		1600	U		1400
4-Chlorophenyl phenyl ether	U		1800	U		1500	U		1600	U		1400
4-Nitroaniline	U		8800	U		7700	U		7900	U		7100
4-Nitrophenol	U		8800	U		7700	U		7900	U		7100
1-Chloronaphthalene	U		1800	U		1500	U		1600	U		1400
7,12-Dimethylbenz(a)anthracene	U		1800	U		1500	U		1600	U		1400
a,a-Dimethylphenethylamine	U		3600	U		3100	U		3200	U		2800
Acenaphthene	U		1800	U		1500	U		1600	U		1400
Acenaphthylene	U		1800	U		1500	U		1600	U		1400
Acetophenone	U		1800	U		1500	U		1600	U		1400
Aniline	U		1800	U		1500	U		1600	U		1400
Anthracene	230	J	1800	U		1500	200	J	1600	150	J	1400
Benzidine	12000		1800	9100		1500	11000		1600	7900		1400
Benzo(a)anthracene	1400	J	1800	1100	J	1500	1400	J	1600	1100	J	1400
Benzo(a)pyrene	1500	J	1800	1200	J	1500	1500	J	1600	1200	J	1400
Benzo(b)fluoranthene	2400		1800	2200		1500	1700		1600	1800		1400
Benzo(ghi)perylene	1500	J	1800	1400	J	1500	1400	J	1600	1200	J	1400
Benzo(k)fluoranthene	650	J	1800	480	J	1500	890	J	1600	740	J	1400
Benzoic Acid	270	J	1800	340	J	1500	U		1600	270	J	1400
Benzyl alcohol	U		1800	U		1500	U		1600	U		1400
Bis(2-chloroethoxy) methane	U		1800	U		1500	U		1600	U		1400
Bis(2-chloroethyl) ether	U		1800	U		1500	U		1600	U		1400
Bis(2-chloroisopropyl) ether	U		1800	U		1500	U		1600	U		1400
Bis(2-ethylhexyl) phthalate	15000	B	1800	6200	B	1500	25000	B	1600	7400	B	1400
Butyl benzyl phthalate	2300		1800	2600		1500	3600		1600	1700		1400
Chrysene	1800		1800	1400	J	1500	1600		1600	1400	J	1400
Di-n-butyl phthalate	1300	JB	1800	1500	JB	1500	1700	B	1600	1500	B	1400
Di-n-octyl phthalate	920	J	1800	180	J	1500	1200	J	1600	230	J	1400
Dibenzo(a,h)anthracene	U		1800	U		1500	U		1600	U		1400
Dibenzofuran	U		1800	U		1500	U		1600	U		1400
Diethylphthalate	U		1800	U		1500	U		1600	U		1400
Dimethyl phthalate	U		1800	U		1500	U		1600	U		1400
p-Dimethylaminoazobenzene	U		1800	U		1500	U		1600	U		1400
Ethyl Methanesulfonate	U		3600	U		3100	U		3200	U		2800
Fluoranthene	2100		1800	1500	J	1500	1800		1600	1400	J	1400
Fluorene	U		1800	U		1500	U		1600	U		1400
Hexachlorobenzene	U		1800	U		1500	260	J	1600	U		1400
Hexachlorobutadiene	U		1800	U		1500	U		1600	U		1400
Hexachlorocyclopentadiene	U		1800	U		1500	U		1600	U		1400
Hexachloroethane	U		1800	U		1500	U		1600	U		1400
Indeno(1,2,3-c,d)pyrene	1200	J	1800	1100	J	1500	1100	J	1600	1000	J	1400
Isophorone	U		1800	U		1500	U		1600	U		1400
Methyl Methanesulfonate	U		3600	U		3100	U		3200	U		2800
N-Nitrosodi-n-propylamine	U		1800	U		1500	U		1600	U		1400
N-Nitrosodimethylamine	U		1800	U		1500	U		1600	U		1400
N-Nitrosodiphenylamine	U		1800	U		1500	U		1600	U		1400
N-Nitrosopiperidine	U		1800	U		1500	U		1600	U		1400
Naphthalene	U		1800	210	J	1500	180	J	1600	160	J	1400
Nitrobenzene	U		1800	U		1500	U		1600	U		1400
Pentachlorobenzene	U		1800	U		1500	U		1600	U		1400
Pentachloronitrobenzene	U		8800	U		7700	U		7900	U		7100
Pentachlorophenol	U		8800	U		7700	U		7900	U		7100
Phenanthrene	1300	J	1800	890	J	1500	1200	J	1600	830	J	1400
Phenol	U		1800	U		1500	U		1600	U		1400
Pyrene	2500		1800	2100		1500	2700		1600	1900		1400
Pyridine	U		1800	U		1500	U		1600	U		1400

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Client ID	C 10380			C 10381			C 10382			C 10383		
Location	T2-1-3			T1-1-4			T1-4-5			T1-7-2		
Dil. Factor	1			1			1			1		
% Solids	77			87			89			81		
Analyte	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg
1,2,4,5-Tetrachlorobenzene	U		1300	U		1200	U		1100	U		1200
1,2,4-Trichlorobenzene	U		1300	120	J	1200	120	J	1100	3200		1200
1,2-Dichlorobenzene	U		1300	U		1200	U		1100	U		1200
1,2-Diphenylhydrazine	U		1300	U		1200	U		1100	U		1200
1,3-Dichlorobenzene	U		1300	U		1200	U		1100	U		1200
1,4-Dichlorobenzene	U		1300	U		1200	U		1100	U		1200
1-Naphtylamine	U		1300	U		1200	U		1100	U		1200
2,3,4,6-Tetrachlorophenol	U		6300	U		5800	U		5500	U		6200
2,4,5-Trichlorophenol	U		6300	U		5800	U		5500	U		6200
2,4,6-Trichlorophenol	U		1300	U		1200	U		1100	U		1200
2,4-Dichlorophenol	U		1300	U		1200	U		1100	U		1200
2,4-Dimethylphenol	U		1300	U		1200	U		1100	U		1200
2,4-Dinitrophenol	U		6300	U		5800	U		5500	U		6200
2,4-Dinitrotoluene	U		1300	U		1200	U		1100	U		1200
2,6-Dichlorophenol	U		1300	U		1200	U		1100	U		1200
2,6-Dinitrotoluene	U		1300	U		1200	U		1100	U		1200
2-Chloronaphthalene	U		1300	U		1200	U		1100	U		1200
2-Chlorophenol	U		1300	U		1200	U		1100	U		1200
2-Methylnaphthalene	150	J	1300	1400		1200	1100	J	1100	1700		1200
2-Methylphenol	U		1300	U		1200	U		1100	U		1200
2-Naphthylamine	U		1300	U		1200	U		1100	U		1200
2-Nitroaniline	U		6300	U		5800	U		5500	U		6200
2-Nitrophenol	U		1300	U		1200	U		1100	U		1200
2-Picoline	U		1300	U		1200	U		1100	U		1200
3,3'-Dichlorobenzidine	U		2600	U		2300	U		2200	U		2500
3-Methylcholanthrene	U		1300	U		1200	U		1100	U		1200
3-Nitroaniline	U		6300	U		5800	U		5500	U		6200
4-Methylphenol	U		1300	U		1200	U		1100	U		1200
4,6-Dinitro-2-methylphenol	U		6300	U		5800	U		5500	U		6200
4-Bromophenyl phenyl ether	U		1300	U		1200	U		1100	U		1200
4-Chloro-3-methylphenol	U		1300	U		1200	U		1100	U		1200
4-Chloroaniline	U		1300	U		1200	U		1100	U		1200
4-Chlorophenyl phenyl ether	U		1300	U		1200	U		1100	U		1200
4-Nitroaniline	U		6300	U		5800	U		5500	U		6200
4-Nitrophenol	U		6300	U		5800	U		5500	U		6200
1-Chloronaphthalene	U		1300	U		1200	U		1100	U		1200
7,12-Dimethylbenz(a)anthracene	U		1300	U		1200	U		1100	U		1200
a,a-Dimethylphenethylamine	U		2600	U		2300	U		2200	U		2500
Acenaphthene	U		1300	U		1200	290	J	1100	140	J	1200
Acenaphthylene	U		1300	U		1200	U		1100	160	J	1200
Acetophenone	U		1300	210	J	1200	180	J	1100	290	J	1200
Aniline	U		1300	U		1200	U		1100	U		1200
Anthracene	140	J	1300	2300		1200	410	J	1100	400	J	1200
Benzidine	10000		1300	40000		12000	29000		11000	35000		12000
Benzo(a)anthracene	920	J	1300	950	J	1200	1500		1100	2100		1200
Benzo(a)pyrene	1000	J	1300	610	J	1200	1400		1100	2000		1200
Benzo(b)fluoranthene	1400		1300	1200		1200	1700		1100	2800		1200
Benzo(ghi)perylene	920	J	1300	550	J	1200	920	J	1100	1600		1200
Benzo(k)fluoranthene	600	J	1300	U		1200	650	J	1100	940	J	1200
Benzoic Acid	270	J	1300	950	J	1200	560	J	1100	610	J	1200
Benzyl alcohol	U		1300	U		1200	U		1100	U		1200
Bis(2-chloroethoxy) methane	U		1300	U		1200	U		1100	U		1200
Bis(2-chloroethyl) ether	U		1300	U		1200	U		1100	U		1200
Bis(2-chloroisopropyl) ether	U		1300	U		1200	U		1100	U		1200
Bis(2-ethylhexyl) phthalate	15000	B	1300	1700	B	1200	1600	B	1100	430	JB	1200
Butyl benzyl phthalate	3500		1300	190	J	1200	360	J	1100	U		1200
Chrysene	1100	J	1300	2100		1200	2000		1100	2400		1200
Di-n-butyl phthalate	900	JB	1300	980	JB	1200	830	JB	1100	830	JB	1200
Di-n-octyl phthalate	400	J	1300	U		1200	U		1100	U		1200
Dibenzo(a,h)anthracene	U		1300	U		1200	U		1100	U		1200
Dibenzofuran	U		1300	430	J	1200	330	J	1100	530	J	1200
Diethylphthalate	U		1300	U		1200	U		1100	U		1200
Dimethyl phthalate	U		1300	U		1200	U		1100	610	J	1200
p-Dimethylaminoazobenzene	U		1300	U		1200	U		1100	U		1200
Ethyl Methanesulfonate	U		2600	U		2300	U		2200	U		2500
Fluoranthene	1000	J	1300	870	J	1200	2100		1100	2900		1200
Fluorene	U		1300	U		1200	260	J	1100	260	J	1200
Hexachlorobenzene	U		1300	U		1200	U		1100	U		1200
Hexachlorobutadiene	U		1300	U		1200	U		1100	U		1200
Hexachlorocyclopentadiene	U		1300	U		1200	U		1100	U		1200
Hexachloroethane	U		1300	U		1200	U		1100	U		1200
Indeno(1,2,3-c,d)pyrene	830	J	1300	420	J	1200	810	J	1100	1300		1200
Isophorone	U		1300	U		1200	U		1100	U		1200
Methyl Methanesulfonate	U		2600	U		2300	U		2200	U		2500
N-Nitrosodi-n-propylamine	U		1300	U		1200	U		1100	U		1200
N-Nitrosodimethylamine	U		1300	U		1200	U		1100	U		1200
N-Nitrosodiphenylamine	U		1300	U		1200	U		1100	U		1200
N-Nitrosopiperidine	U		1300	U		1200	U		1100	U		1200
Naphthalene	150	J	1300	860	J	1200	710	J	1100	1200	J	1200
Nitrobenzene	U		1300	U		1200	U		1100	U		1200
Pentachlorobenzene	U		1300	U		1200	U		1100	U		1200
Pentachloronitrobenzene	U		6300	U		5800	U		5500	U		6200
Pentachlorophenol	U		6300	U		5800	U		5500	U		6200
Phenanthrene	830	J	1300	2300		1200	2600		1100	2900		1200
Phenol	U		1300	U		1200	U		1100	U		1200
Pyrene	2000		1300	940	J	1200	2200		1100	3100		1200
Pyridine	U		1300	U		1100	U		1100	U		1200

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Comell Dubilier Electronics
based on dry weight

Client ID	C 10390			C 10385			C 10387		
Location	T3-1-13			T1-5-6			T1-11-9		
Dil. Factor	1			1			1		
% Solids	72			78			78		
Analyte	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg
1,2,4,5-Tetrachlorobenzene	U		1400	U		1300	U		1200
1,2,4-Trichlorobenzene	U		1400	U		1300	180	J	1200
1,2-Dichlorobenzene	U		1400	U		1300	U		1200
1,2-Diphenylhydrazine	U		1400	U		1300	U		1200
1,3-Dichlorobenzene	U		1400	U		1300	U		1200
1,4-Dichlorobenzene	U		1400	U		1300	U		1200
1-Naphtylamine	U		1400	U		1300	U		1200
2,3,4,6-Tetrachlorophenol	U		6900	U		6400	U		6100
2,4,5-Trichlorophenol	U		6900	U		6400	U		6100
2,4,6-Trichlorophenol	U		1400	U		1300	U		1200
2,4-Dichlorophenol	U		1400	U		1300	U		1200
2,4-Dimethylphenol	U		1400	U		1300	U		1200
2,4-Dinitrophenol	U		6900	U		6400	U		6100
2,4-Dinitrotoluene	U		1400	U		1300	U		1200
2,6-Dichlorophenol	U		1400	U		1300	U		1200
2,6-Dinitrotoluene	U		1400	U		1300	U		1200
2-Chloronaphthalene	U		1400	U		1300	U		1200
2-Chlorophenol	U		1400	U		1300	U		1200
2-Methylnaphthalene	U		1400	1200	J	1300	410	J	1200
2-Methylphenol	U		1400	U		1300	U		1200
2-Naphthylamine	U		1400	U		1300	U		1200
2-Nitroaniline	U		6900	U		6400	U		6100
2-Nitrophenol	U		1400	U		1300	U		1200
2-Picoline	U		1400	U		1300	U		1200
3,3'-Dichlorobenzidine	U		2800	U		2600	U		2400
3-Methylcholanthrene	U		1400	U		1300	U		1200
3-Nitroaniline	U		6900	U		6400	U		6100
4-Methylphenol	U		1400	U		1300	140	J	1200
4,6-Dinitro-2-methylphenol	U		6900	U		6400	U		6100
4-Bromophenyl phenyl ether	U		1400	U		1300	U		1200
4-Chloro-3-methylphenol	U		1400	U		1300	U		1200
4-Chloroaniline	U		1400	U		1300	U		1200
4-Chlorophenyl phenyl ether	U		1400	U		1300	U		1200
4-Nitroaniline	U		6900	U		6400	U		6100
4-Nitrophenol	U		6900	U		6400	U		6100
1-Chloronaphthalene	U		1400	U		1300	U		1200
7,12-Dimethylbenz(a)anthracene	U		1400	U		1300	U		1200
a,a-Dimethylphenethylamine	U		2800	U		2600	U		2400
Acenaphthene	U		1400	U		1300	640	J	1200
Acenaphthylene	U		1400	U		1300	610	J	1200
Acetophenone	U		1400	U		1300	220	J	1200
Aniline	U		1400	U		1300	U		1200
Anthracene	U		1400	U		1300	1800		1200
Benzidine	4900		1400	17000		1300	36000		12000
Benzo(a)anthracene	660	J	1400	630	J	1300	9500		1200
Benzo(a)pyrene	760	J	1400	610	J	1300	9700		1200
Benzo(b)fluoranthene	840	J	1400	1100	J	1300	15000		1200
Benzo(ghi)perylene	610	J	1400	620	J	1300	6400		1200
Benzo(k)fluoranthene	410	J	1400	290	J	1300	4200		1200
Benzoic Acid	U		1400	620	J	1300	U		1200
Benzyl alcohol	U		1400	U		1300	U		1200
Bis(2-chloroethoxy) methane	U		1400	U		1300	U		1200
Bis(2-chloroethyl) ether	U		1400	U		1300	U		1200
Bis(2-chloroisopropyl) ether	U		1400	U		1300	U		1200
Bis(2-ethylhexyl) phthalate	6300	B	1400	2200	B	1300	2600	B	1200
Butyl benzyl phthalate	U		1400	580	J	1300	510	J	1200
Chrysene	750	J	1400	960	J	1300	11000		1200
Di-n-butyl phthalate	2000	B	1400	520	JB	1300	500	JB	1200
Di-n-octyl phthalate	U		1400	U		1300	U		1200
Dibenzo(a,h)anthracene	U		1400	U		1300	U		1200
Dibenzofuran	U		1400	290	J	1300	420	J	1200
Diethylphthalate	U		1400	U		1300	78000	E	1200
Dimethyl phthalate	U		1400	U		1300	3600		1200
p-Dimethylaminoazobenzene	U		1400	U		1300	U		1200
Ethyl Methanesulfonate	U		2800	U		2600	U		2400
Fluoranthene	900	J	1400	1200	J	1300	12000		1200
Fluorene	U		1400	U		1300	890	J	1200
Hexachlorobenzene	U		1400	U		1300	U		1200
Hexachlorobutadiene	U		1400	U		1300	U		1200
Hexachlorocyclopentadiene	U		1400	U		1300	U		1200
Hexachloroethane	U		1400	U		1300	U		1200
Indeno(1,2,3-c d)pyrene	520	J	1400	470	J	1300	6000		1200
Isophorone	U		1400	U		1300	U		1200
Methyl Methanesulfonate	U		2800	U		2600	U		2400
N-Nitrosodi-n-propylamine	U		1400	U		1300	U		1200
N-Nitrosodimethylamine	U		1400	U		1300	U		1200
N-Nitrosodiphenylamine	U		1400	U		1300	U		1200
N-Nitrosopiperidine	U		1400	U		1300	U		1200
Naphthalene	U		1400	860	J	1300	610	J	1200
Nitrobenzene	U		1400	U		1300	U		1200
Pentachlorobenzene	U		1400	U		1300	U		1200
Pentachloronitrobenzene	U		6900	U		6400	U		6100
Pentachlorophenol	U		6900	U		6400	U		6100
Phenanthrene	640	J	1400	1200	J	1300	9400		1200
Phenol	U		1400	U		1300	U		1200
Pyrene	1100	J	1400	1100	J	1300	16000		1200
Pyridine	U		1400	U		1300	U		1200

Table 1.4 (Cont). Results of the Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Client ID	C 10389		C 10391		C 10392		C 10393	
Location	T3-1-7		T3-2-11		T3-3-10		T3-3-16	
Dil. Factor	1		1		1		1	
% Solids	70		79		66		62	

Analyte	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg
1,2,4,5-Tetrachlorobenzene	U		1400	U		1300	U		1500	U		1600
1,2,4-Trichlorobenzene	U		1400	U		1300	U		1500	U		1600
1,2-Dichlorobenzene	U		1400	U		1300	U		1500	U		1600
1,2-Diphenylhydrazine	U		1400	U		1300	U		1500	U		1600
1,3-Dichlorobenzene	U		1400	U		1300	U		1500	U		1600
1,4-Dichlorobenzene	U		1400	U		1300	U		1500	U		1600
1-Naphtylamine	U		1400	U		1300	U		1500	U		1600
2,3,4,6-Tetrachlorophenol	U		7000	U		6300	U		7500	U		8000
2,4,5-Trichlorophenol	U		7000	U		6300	U		7500	U		8000
2,4,6-Trichlorophenol	U		1400	U		1300	U		1500	U		1600
2,4-Dichlorophenol	U		1400	U		1300	U		1500	U		1600
2,4-Dimethylphenol	U		1400	U		1300	U		1500	U		1600
2,4-Dinitrophenol	U		7000	U		6300	U		7500	U		8000
2,4-Dinitrotoluene	U		1400	U		1300	U		1500	U		1600
2,6-Dichlorophenol	U		1400	U		1300	U		1500	U		1600
2,6-Dinitrotoluene	U		1400	U		1300	U		1500	U		1600
2-Chloronaphthalene	U		1400	U		1300	U		1500	U		1600
2-Chlorophenol	U		1400	U		1300	U		1500	U		1600
2-Methylnaphthalene	U		1400	U		1300	U		1500	U		1600
2-Methylphenol	U		1400	U		1300	U		1500	U		1600
2-Naphthylamine	U		1400	U		1300	U		1500	U		1600
2-Nitroaniline	U		7000	U		6300	U		7500	U		8000
2-Nitrophenol	U		1400	U		1300	U		1500	U		1600
2-Picoline	U		1400	U		1300	U		1500	U		1600
3,3'-Dichlorobenzidine	U		2800	U		2600	U		3000	U		3200
3-Methylcholanthrene	U		1400	U		1300	U		1500	U		1600
3-Nitroaniline	U		7000	U		6300	U		7500	U		8000
4-Methylphenol	U		1400	230	J	1300	820	J	1500	300	J	1600
4,6-Dinitro-2-methylphenol	U		7000	U		6300	U		7500	U		8000
4-Bromophenyl phenyl ether	U		1400	U		1300	U		1500	U		1600
4-Chloro-3-methylphenol	U		1400	U		1300	U		1500	U		1600
4-Chloroaniline	U		1400	U		1300	U		1500	U		1600
4-Chlorophenyl phenyl ether	U		1400	U		1300	U		1500	U		1600
4-Nitroaniline	U		7000	U		6300	U		7500	U		8000
4-Nitrophenol	U		7000	U		6300	U		7500	U		8000
1-Chloronaphthalene	U		1400	U		1300	U		1500	U		1600
7,12-Dimethylbenz(a)anthracene	U		1400	U		1300	U		1500	U		1600
a,a-Dimethylphenethylamine	U		2800	U		2600	U		3000	U		3200
Acenaphthene	250	J	1400	U		1300	U		1500	700	J	1600
Acenaphthylene	U		1400	U		1300	U		1500	U		1600
Acetophenone	U		1400	U		1300	U		1500	U		1600
Aniline	U		1400	U		1300	U		1500	U		1600
Anthracene	280		1400	420	J	1300	U		1500	1100	J	1600
Benzidine	14000		1400	16000		1300	5100		1500	34000		16000
Benzo(a)anthracene	1400	J	1400	1800		1300	570	J	1500	4900		1600
Benzo(a)pyrene	1600		1400	1800		1300	570	J	1500	4500		1600
Benzo(b)fluoranthene	2200		1400	2200		1300	920		1500	6600		1600
Benzo(ghi)perylene	990	J	1400	1000	J	1300	400	J	1500	2500		1600
Benzo(k)fluoranthene	450	J	1400	1000	J	1300	200	J	1500	1700		1600
Benzoic Acid	U		1400	U		1300	U		1500	U		1600
Benzyl alcohol	U		1400	U		1300	U		1500	U		1600
Bis(2-chloroethoxy) methane	U		1400	U		1300	U		1500	U		1600
Bis(2-chloroethyl) ether	U		1400	U		1300	U		1500	U		1600
Bis(2-chloroisopropyl) ether	1000	JB	1400	U		1300	U		1500	U		1600
Bis(2-ethylhexyl) phthalate	140	J	1400	520	JB	1300	460	JB	1500	410	JB	1600
Butyl benzyl phthalate	1800		1400	U		1300	U		1500	U		1600
Chrysene	1000	JB	1400	2100		1300	600	J	1500	4700		1600
Di-n-butyl phthalate	U		1400	970	JB	1300	850	JB	1500	1100	JB	1600
Di-n-octyl phthalate	U		1400	U		1300	U		1500	U		1600
Dibenzo(a,h)anthracene	U		1400	U		1300	U		1500	620	J	1600
Dibenzofuran	U		1400	U		1300	U		1500	230	J	1600
Diethylphthalate	U		1400	U		1300	U		1500	U		1600
Dimethyl phthalate	U		1400	U		1300	U		1500	U		1600
p-Dimethylaminoazobenzene	U		1400	U		1300	U		1500	U		1600
Ethyl Methanesulfonate	U		2800	U		2600	U		3000	U		3200
Fluoranthene	2200		1400	2600		1300	680	J	1500	6000		1600
Fluorene	170	J	1400	U		1300	U		1500	420	J	1600
Hexachlorobenzene	U		1400	U		1300	U		1500	U		1600
Hexachlorobutadiene	U		1400	U		1300	U		1500	U		1600
Hexachlorocyclopentadiene	U		1400	U		1300	U		1500	U		1600
Hexachloroethane	U		1400	U		1300	U		1500	U		1600
Indeno(1,2,3-c,d)pyrene	840	J	1400	910	J	1300	320	J	1500	2500		1600
Isophorone	U		1400	U		1300	U		1500	U		1600
Methyl Methanesulfonate	U		2800	U		2600	U		3000	U		3200
N-Nitrosodi-n-propylamine	U		1400	U		1300	U		1500	U		1600
N-Nitrosodimethylamine	U		1400	U		1300	U		1500	U		1600
N-Nitrosodiphenylamine	U		1400	U		1300	U		1500	U		1600
N-Nitrosopiperidine	U		1400	U		1300	U		1500	U		1600
Naphthalene	160	J	1400	140	J	1300	U		1500	200	J	1600
Nitrobenzene	U		1400	U		1300	U		1500	U		1600
Pentachlorobenzene	U		1400	U		1300	U		7500	U		1600
Pentachloronitrobenzene	U		7000	U		6300	U		7500	U		8000
Pentachlorophenol	U		7000	U		6300	U		1500	U		8000
Phenanthrene	1900		1400	1900		1300	590	J	1500	4800		1600
Phenol	U		1400	U		1300	U		1500	U		1600
Pyrene	3100		1400	2900		1300	1000	J	1500	7700		1600
Pyridine	U		1400	U		1300	U		1500	U		1600

Table 1.4 (Cont) Results of the Analysis for BNA in Soil
WA # 2-274 Comell Dubilier Electronics
based on dry weight

Client ID	C 10394		SBLKB (7/2/97)		C 10386	
Location	T3-4-6		-		T1-10-2	
Dil. Factor	1		1		1	
% Solids	58		-		80	

Analyte	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg
1,2,4,5-Tetrachlorobenzene	U		1700	U		1000	U		1200
1,2,4-Trichlorobenzene	U		1700	U		1000	320	J	1200
1,2-Dichlorobenzene	U		1700	U		1000	U		1200
1,2-Diphenylhydrazine	U		1700	U		1000	U		1200
1,3-Dichlorobenzene	U		1700	U		1000	U		1200
1,4-Dichlorobenzene	U		1700	U		1000	U		1200
1-Naphtylamine	U		1700	U		1000	U		1200
2,3,4,6-Tetrachlorophenol	U		8600	U		5000	U		6200
2,4,5-Trichlorophenol	U		8600	U		2000	U		6200
2,4,6-Trichlorophenol	U		1700	U		1000	U		1200
2,4-Dichlorophenol	U		1700	U		1000	U		1200
2,4-Dimethylphenol	U		1700	U		1000	U		1200
2,4-Dinitrophenol	U		8600	U		5000	U		6200
2,4-Dinitrotoluene	U		1700	U		1000	U		1200
2,6-Dichlorophenol	U		1700	U		1000	U		1200
2,6-Dinitrotoluene	U		1700	U		1000	U		1200
2-Chloronaphthalene	U		1700	U		1000	U		1200
2-Chlorophenol	U		1700	U		1000	U		1200
2-Methylnaphthalene	U		1700	U		1000	620	J	1200
2-Methylphenol	U		1700	U		1000	U		1200
2-Naphthylamine	U		1700	U		1000	U		1200
2-Nitroaniline	U		8600	U		5000	U		6200
2-Nitrophenol	U		1700	U		1000	U		1200
2-Picoline	U		1700	U		1000	U		1200
3,3'-Dichlorobenzidine	U		3400	U		2000	U		2500
3-Methylcholanthrene	U		1700	U		1000	U		1200
3-Nitroaniline	U		8600	U		5000	U		6200
4-Methylphenol	U		1700	U		1000	240	J	1200
4,6-Dinitro-2-methylphenol	U		8600	U		5000	U		6200
4-Bromophenyl phenyl ether	U		1700	U		1000	U		1200
4-Chloro-3-methylphenol	U		1700	U		1000	U		1200
4-Chloroaniline	U		1700	U		1000	U		1200
4-Chlorophenyl phenyl ether	U		1700	U		1000	U		1200
4-Nitroaniline	U		8600	U		5000	U		6200
4-Nitrophenol	U		8600	U		5000	U		6200
1-Chloronaphthalene	U		1700	U		1000	U		1200
7,12-Dimethylbenz(a)anthracene	U		1700	U		1000	U		1200
a,a-Dimethylphenethylamine	U		3400	U		2000	U		2500
Acenaphthene	U		1700	U		1000	840	J	1200
Acenaphthylene	U		1700	U		1000	320	J	1200
Acetophenone	U		1700	U		1000	U		1200
Aniline	U		1700	U		1000	U		1200
Anthracene	U		1700	U		1000	2000		1200
Benzidine	5700		1700	U		2000	84000		12000
Benzo(a)anthracene	400	J	1700	U		1000	6900		1200
Benzo(a)pyrene	500	J	1700	U		1000	5900		1200
Benzo(b)fluoranthene	560	J	1700	U		1000	9000		1200
Benzo(ghi)perylene	420	J	1700	U		1000	4100		1200
Benzo(k)fluoranthene	290	J	1700	U		1000	3500		1200
Benzoic Acid	190	J	1700	U		1000	U		1200
Benzyl alcohol	U		1700	U		1000	U		1200
Bis(2-chloroethoxy) methane	U		1700	U		1000	U		1200
Bis(2-chloroethyl) ether	U		1700	U		1000	U		1200
Bis(2-chloroisopropyl) ether	U		1700	U		1000	U		1200
Bis(2-ethylhexyl) phthalate	1300	JB	1700	130	J	1000	670	JB	1200
Butyl benzyl phthalate	U		1700	U		1000	U		1200
Chrysene	620	J	1700	U		1000	7500		1200
Di-n-butyl phthalate	1900	B	1700	360	J	1000	570	JB	1200
Di-n-octyl phthalate	U		1700	U		1000	U		1200
Dibenzo(a,h)anthracene	U		1700	U		1000	1000	J	1200
Dibenzofuran	U		1700	U		1000	660	J	1200
Diethylphthalate	U		1700	U		1000	U		1200
Dimethyl phthalate	U		1700	U		1000	U		1200
p-Dimethylaminoazobenzene	U		1700	U		1000	U		1200
Ethyl Methanesulfonate	U		3400	U		2000	U		2500
Fluoranthene	650	J	1700	U		1000	11000		1200
Fluorene	U		1700	U		1000	890	J	1200
Hexachlorobenzene	U		1700	U		1000	U		1200
Hexachlorobutadiene	U		1700	U		1000	U		1200
Hexachlorocyclopentadiene	U		1700	U		1000	U		1200
Hexachloroethane	U		1700	U		1000	U		1200
Indeno(1,2,3-c,d)pyrene	340	J	1700	U		1000	3800		1200
Isophorone	U		1700	120	J	1000	U		1200
Methyl Methanesulfonate	U		3400	U		2000	U		1200
N-Nitrosodi-n-propylamine	U		1700	U		1000	U		1200
N-Nitrosodimethylamine	U		1700	U		1000	U		1200
N-Nitrosodiphenylamine	U		1700	U		1000	U		1200
N-Nitrosopiperidine	U		1700	U		1000	U		1200
Naphthalene	210	J	1700	U		1000	700	J	1200
Nitrobenzene	U		1700	U		1000	U		1200
Pentachlorobenzene	U		1700	U		1000	U		1200
Pentachloronitrobenzene	U		8600	U		1000	U		6200
Pentachlorophenol	U		8600	U		5000	U		6200
Phenanthrene	540	J	1700	U		1000	9400		1200
Phenol	U		1700	U		1000	U		1200
Pyrene	780	J	1700	U		1000	10000		1200
Pyridine	U		1700	U		1000	U		1200

Table 1.5 Results of the Analysis for BNA in Tissue
WA # 2-274 Cornell Dubilier Electronics
based on wet weight

Client ID	SBLKA (7/11/97)		B 08634		B 08635	
Location	NA		A5-2		A5-3	
Collected			6/20/97		6/20/97	
Analyzed	7/16/97		7/17/97		7/17/97	
Dil. Factor	1		1		1	

Compound	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg
1,2,4,5-Tetrachlorobenzene	U		4000	U		3800	U		3800
1,2,4-Trichlorobenzene	U		4000	U		3800	U		3800
1,2-Dichlorobenzene	U		4000	U		3800	U		3800
1,2-Diphenylhydrazine	U		4000	U		3800	U		3800
1,3-Dichlorobenzene	U		4000	U		3800	U		3800
1,4-Dichlorobenzene	U		4000	U		3800	U		3800
1-Naphtylamine	U		4000	U		3800	U		3800
2,3,4,6-Tetrachlorophenol	U		20000	U		19000	U		19000
2,4,5-Trichlorophenol	U		20000	U		19000	U		19000
2,4,6-Trichlorophenol	U		4000	U		3800	U		3800
2,4-Dichlorophenol	U		4000	U		3800	U		3800
2,4-Dimethylphenol	U		4000	U		3800	U		3800
2,4-Dinitrophenol	U		20000	U		19000	U		19000
2,4-Dinitrotoluene	U		4000	U		3800	U		3800
2,6-Dichlorophenol	U		4000	U		3800	U		3800
2,6-Dinitrotoluene	U		4000	U		3800	U		3800
2-Chloronaphthalene	U		4000	U		3800	U		3800
2-Chlorophenol	U		4000	U		3800	U		3800
2-Methylnaphthalene	U		4000	U		3800	U		3800
2-Methylphenol	U		4000	U		3800	U		3800
2-Naphthylamine	U		4000	U		3800	U		3800
2-Nitroaniline	U		20000	U		19000	U		19000
2-Nitrophenol	U		4000	U		3800	U		3800
2-Picoline	U		4000	U		3800	U		3800
3,3'-Dichlorobenzidine	U		8000	U		7700	U		7700
3-Methylcholanthrene	U		4000	U		3800	U		3800
3-Nitroaniline	U		20000	U		19000	U		19000
4-Methylphenol	U		4000	U		3800	U		3800
4,6-Dinitro-2-methylphenol	U		20000	U		19000	U		19000
4-Bromophenyl phenyl ether	U		4000	U		3800	U		3800
4-Chloro-3-methylphenol	U		4000	U		3800	U		3800
4-Chloroaniline	U		4000	U		3800	U		3800
4-Chlorophenyl phenyl ether	U		4000	U		3800	U		3800
4-Nitroaniline	U		20000	U		19000	U		19000
4-Nitrophenol	U		20000	U		19000	U		19000
1-Chloronaphthalene	U		4000	U		3800	U		3800
7 12-Dimethylbenz(a)anthracene	U		4000	U		3800	U		3800
a,a-Dimethylphenethylamine	U		8000	U		7700	U		7700
Acenaphthene	U		4000	U		3800	U		3800
Acenaphthylene	U		4000	U		3800	U		3800
Acetophenone	U		4000	U		3800	U		3800
Aniline	U		4000	U		3800	U		3800
Anthracene	U		4000	U		3800	U		3800
Benzidine	U		4000	U		3800	U		3800
Benzo(a)anthracene	U		4000	U		3800	U		3800
Benzo(a)pyrene	U		4000	U		3800	U		3800
Benzo(b)fluoranthene	U		4000	U		3800	U		3800
Benzo(ghi)perylene	U		4000	U		3800	U		3800
Benzo(k)fluoranthene	U		4000	U		3800	U		3800
Benzoic Acid	U		4000	U		3800	U		3800
Benzyl alcohol	U		4000	U		3800	U		3800
Bis(2-chloroethoxy) methane	U		4000	U		3800	U		3800
Bis(2-chloroethyl) ether	U		4000	U		3800	U		3800
Bis(2-chloroisopropyl) ether	U		4000	U		3800	U		3800
Bis(2-ethylhexyl) phthalate	4000		670 J	3800		420 J	3800		3800
Butyl benzyl phthalate	U		4000	U		3800	U		3800
Chrysene	U		4000	U		3800	U		3800
Di-n-butyl phthalate	4000		750 J	3800		580 J	3800		3800
Di-n-octyl phthalate	U		4000	U		3800	U		3800
Dibenzo(a,h)anthracene	U		4000	U		3800	U		3800
Dibenzofuran	U		4000	U		3800	U		3800
Diethylphthalate	U		4000	U		3800	U		3800
Dimethyl phthalate	U		4000	U		3800	U		3800
p-Dimethylaminoazobenzene	U		4000	U		3800	U		3800
Ethyl Methanesulfonate	U		8000	U		7700	U		7700
Fluoranthene	U		4000	U		3800	U		3800
Fluorene	U		4000	U		3800	U		3800
Hexachlorobenzene	U		4000	U		3800	U		3800
Hexachlorobutadiene	U		4000	U		3800	U		3800
Hexachlorocyclopentadiene	U		4000	U		3800	U		3800
Hexachloroethane	U		4000	U		3800	U		3800
Indeno(1,2,3-c d)pyrene	U		4000	U		3800	U		3800
Isophorone	U		4000	U		3800	U		3800
Methyl Methanesulfonate	U		8000	U		7700	U		7700
N-Nitrosodi-n-propylamine	U		4000	U		3800	U		3800
N-Nitrosodimethylamine	U		4000	U		3800	U		3800
N-Nitrosodiphenylamine	U		4000	U		3800	U		3800
N-Nitrosopiperidine	U		4000	U		3800	U		3800
Naphthalene	U		4000	U		3800	U		3800
Nitrobenzene	U		4000	U		3800	U		3800
Pentachlorobenzene	U		4000	U		3800	U		3800
Pentachloronitrobenzene	U		20000	U		19000	U		19000
Pentachlorophenol	U		20000	U		19000	29000		19000
Phenanthrene	U		4000	U		3800	U		3800
Phenol	U		4000	U		3800	U		3800
Pyrene	U		4000	U		3800	U		3800
Pyridine	U		4000	U		3800	U		3800

Table 1.5 (Cont) Results of the Analysis for BNA in Tissue
WA # 2-274 Cornell Dubilier Electronics
based on wet weight

Client ID	SBLKA (7/11/97)		B 10241 A9-2		B 10242 A9-3		B 10248 A9-13	
Location	-		-		-		-	
Collected	NA		6/18/97		6/18/97		6/20/97	
Analyzed	7/16/97		7/17/97		7/16/97		7/16/97	
Dil. Factor	1		1		1		1	
Compound	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
1,2,4,5-Tetrachlorobenzene	U	4000	U	3700	U	2300	U	2400
1,2,4-Trichlorobenzene	U	4000	U	3700	U	2300	U	2400
1,2-Dichlorobenzene	U	4000	U	3700	U	2300	U	2400
1,2-Diphenylhydrazine	U	4000	U	3700	U	2300	U	2400
1,3-Dichlorobenzene	U	4000	U	3700	U	2300	U	2400
1,4-Dichlorobenzene	U	4000	U	3700	U	2300	U	2400
1-Naphthylamine	U	4000	U	3700	U	2300	U	2400
2,3,4,6-Tetrachlorophenol	U	20000	U	19000	U	11000	U	12000
2,4,5-Trichlorophenol	U	20000	U	19000	U	11000	U	12000
2,4,6-Trichlorophenol	U	4000	U	3700	U	2300	U	2400
2,4-Dichlorophenol	U	4000	U	3700	U	2300	U	2400
2,4-Dimethylphenol	U	4000	U	3700	U	2300	U	2400
2,4-Dinitrophenol	U	20000	U	19000	U	11000	U	12000
2,4-Dinitrotoluene	U	4000	U	3700	U	2300	U	2400
2,6-Dichlorophenol	U	4000	U	3700	U	2300	U	2400
2,6-Dinitrotoluene	U	4000	U	3700	U	2300	U	2400
2-Chloronaphthalene	U	4000	U	3700	U	2300	U	2400
2-Chlorophenol	U	4000	U	3700	U	2300	U	2400
2-Methylnaphthalene	U	4000	U	3700	U	2300	U	2400
2-Methylphenol	U	4000	U	3700	U	2300	U	2400
2-Naphthylamine	U	4000	U	3700	U	2300	U	2400
2-Nitroaniline	U	20000	U	19000	U	11000	U	12000
2-Nitrophenol	U	4000	U	3700	U	2300	U	2400
2-Picoline	U	4000	U	3700	U	2300	U	2400
3,3'-Dichlorobenzidine	U	8000	U	7400	U	4500	U	4800
3-Methylcholanthrene	U	4000	U	3700	U	2300	U	2400
3-Nitroaniline	U	20000	U	19000	U	11000	U	12000
4-Methylphenol	U	4000	U	3700	U	2300	U	2400
4,6-Dinitro-2-methylphenol	U	20000	U	19000	U	11000	U	12000
4-Bromophenyl phenyl ether	U	4000	U	3700	U	2300	U	2400
4-Chloro-3-methylphenol	U	4000	U	3700	U	2300	U	2400
4-Chloroaniline	U	4000	U	3700	U	2300	U	2400
4-Chlorophenyl phenyl ether	U	4000	U	3700	U	2300	U	2400
4-Nitroaniline	U	20000	U	19000	U	11000	U	12000
4-Nitrophenol	U	20000	U	19000	U	11000	U	12000
1-Chloronaphthalene	U	4000	U	3700	U	2300	U	2400
7 12-Dimethylbenz(a)anthracene	U	4000	U	3700	U	2300	U	2400
a a-Dimethylphenethylamine	U	8000	U	7400	U	4500	U	4800
Acenaphthene	U	4000	U	3700	U	2300	U	2400
Acenaphthylene	U	4000	U	3700	U	2300	U	2400
Acetophenone	U	4000	U	3700	U	2300	U	2400
Aniline	U	4000	U	3700	U	2300	U	2400
Anthracene	U	4000	U	3700	U	2300	U	2400
Benzidine	U	4000	U	3700	U	2300	U	2400
Benzo(a)anthracene	U	4000	U	3700	U	2300	U	2400
Benzo(a)pyrene	U	4000	U	3700	U	2300	U	2400
Benzo(b)fluoranthene	U	4000	U	3700	U	2300	U	2400
Benzo(ghi)perylene	U	4000	U	3700	U	2300	U	2400
Benzo(k)fluoranthene	U	4000	U	3700	U	2300	U	2400
Benzoic Acid	U	4000	U	3700	U	2300	U	2400
Benzyl alcohol	U	4000	U	3700	U	2300	U	2400
Bis(2-chloroethoxy) methane	U	4000	U	3700	U	2300	U	2400
Bis(2-chloroethyl) ether	U	4000	U	3700	U	2300	U	2400
Bis(2-chlorosopropyl) ether	U	4000	U	3700	U	2300	U	2400
Bis(2-ethylhexyl) phthalate		4000	560 J	3700	250 J	2300	330 J	2400
Butyl benzyl phthalate	U	4000	U	3700	U	2300	U	2400
Chrysene	U	4000	U	3700	U	2300	U	2400
Di-n-butyl phthalate		4000	420 J	3700	680 J	2300	1500 J	2400
Di-n-octyl phthalate	U	4000	U	3700	U	2300	U	2400
Dibenzo(a,h)anthracene	U	4000	U	3700	U	2300	U	2400
Dibenzofuran	U	4000	U	3700	U	2300	U	2400
Diethylphthalate	U	4000	U	3700	U	2300	U	2400
Dimethyl phthalate	U	4000	U	3700	U	2300	U	2400
p-Dimethylaminoazobenzene	U	4000	U	3700	U	2300	U	2400
Ethyl Methanesulfonate	U	8000	U	7400	U	4500	U	4800
Fluoranthene	U	4000	U	3700	U	2300	U	2400
Fluorene	U	4000	U	3700	U	2300	U	2400
Hexachlorobenzene	U	4000	U	3700	U	2300	U	2400
Hexachlorobutadiene	U	4000	U	3700	U	2300	U	2400
Hexachlorocyclopentadiene	U	4000	U	3700	U	2300	U	2400
Hexachloroethane	U	4000	U	3700	U	2300	U	2400
Indeno(1,2,3-c,d)pyrene	U	4000	U	3700	U	2300	U	2400
Isophorone	U	4000	U	3700	400 J	2300	U	2400
Methyl Methanesulfonate	U	8000	U	7400	U	4500	U	4800
N-Nitrosodi-n-propylamine	U	4000	U	3700	U	2300	U	2400
N-Nitrosodimethylamine	U	4000	U	3700	U	2300	U	2400
N-Nitrosodiphenylamine	U	4000	U	3700	U	2300	U	2400
N-Nitrosopiperidine	U	4000	U	3700	U	2300	U	2400
Naphthalene	U	4000	U	3700	U	2300	U	2400
Nitrobenzene	U	4000	U	3700	U	2300	U	2400
Pentachlorobenzene	U	4000	U	3700	U	2300	U	2400
Pentachloronitrobenzene	U	20000	U	19000	U	11000	U	12000
Pentachlorophenol	U	20000	U	19000	U	11000	U	12000
Phenanthrene	U	4000	U	3700	U	2300	U	2400
Phenol	U	4000	U	3700	U	2300	U	2400
Pyrene	U	4000	U	3700	U	2300	U	2400
Pyridine	U	4000	U	3700	U	2300	U	2400

Table 1.5 (Cont) Results of the Analysis for BNA in Tissue
WA # 2-274 Cornell Dubilier Electronics
based on wet weight

Client ID	B 10249		B 10268		B 08628		B 08631	
Location	A9-14		A4-1		A4-3		A1-1	
Collected	6/20/97		6/18/97		6/18/97		6/20/97	
Analyzed	7/16/97		7/18/97		7/18/97		7/18/97	
Dil. Factor	1		1		1		1	

Compound	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
1,2,4,5-Tetrachlorobenzene	U	3900	U	4600	U	5000	U	3900
1,2,4-Trichlorobenzene	U	3900	U	4600	U	5000	U	3900
1,2-Dichlorobenzene	U	3900	U	4600	U	5000	U	3900
1,2-Diphenylhydrazine	U	3900	U	4600	U	5000	U	3900
1,3-Dichlorobenzene	U	3900	U	4600	U	5000	U	3900
1,4-Dichlorobenzene	U	3900	U	4600	U	5000	U	3900
1-Naphtylamine	U	3900	U	4600	U	5000	U	3900
2,3,4,6-Tetrachlorophenol	U	20000	U	23000	U	25000	U	20000
2,4,5-Trichlorophenol	U	20000	U	23000	U	25000	U	20000
2,4,6-Trichlorophenol	U	3900	U	4600	U	5000	U	3900
2,4-Dichlorophenol	U	3900	U	4600	U	5000	U	3900
2,4-Dimethylphenol	U	3900	U	4600	U	5000	U	3900
2,4-Dinitrophenol	U	20000	U	23000	U	25000	U	20000
2,4-Dinitrotoluene	U	3900	U	4600	U	5000	U	3900
2,6-Dichlorophenol	U	3900	U	4600	U	5000	U	3900
2,6-Dinitrotoluene	U	3900	U	4600	U	5000	U	3900
2-Chloronaphthalene	U	3900	U	4600	U	5000	U	3900
2-Chlorophenol	U	3900	U	4600	U	5000	U	3900
2-Methylnaphthalene	U	3900	U	4600	U	5000	U	3900
2-Methylphenol	U	3900	U	4600	U	5000	U	3900
2-Naphthylamine	U	3900	U	4600	U	5000	U	3900
2-Nitroaniline	U	20000	U	23000	U	25000	U	20000
2-Nitrophenol	U	7800	U	9300	U	10000	U	7800
2-Picoline	U	3900	U	4600	U	5000	U	3900
3,3'-Dichlorobenzidine	U	3900	U	4600	U	5000	U	3900
3-Methylcholanthrene	U	3900	U	4600	U	5000	U	3900
3-Nitroaniline	U	20000	U	23000	U	25000	U	20000
4-Methylphenol	U	3900	U	4600	U	5000	U	3900
4,6-Dinitro-2-methylphenol	U	20000	U	23000	U	25000	U	20000
4-Bromophenyl phenyl ether	U	3900	U	4600	U	5000	U	3900
4-Chloro-3-methylphenol	U	3900	U	4600	U	5000	U	3900
4-Chloroaniline	U	3900	U	4600	U	5000	U	3900
4-Chlorophenyl phenyl ether	U	3900	U	4600	U	5000	U	3900
4-Nitroaniline	U	20000	U	23000	U	25000	U	20000
4-Nitrophenol	U	20000	U	23000	U	25000	U	20000
1-Chloronaphthalene	U	20000	U	22300	U	25000	U	20000
7,12-Dimethylbenz(a)anthracene	U	3900	U	4600	U	5000	U	3900
a,a-Dimethylphenethylamine	U	7800	U	9300	U	10000	U	7800
Acenaphthene	U	3900	U	4600	U	5000	U	3900
Acenaphthylene	U	3900	U	4600	U	5000	U	3900
Acetophenone	U	3900	U	4600	U	5000	U	3900
Aniline	U	3900	U	4600	U	5000	U	3900
Anthracene	U	3900	U	4600	U	5000	U	3900
Benzidine	U	3900	U	4600	U	5000	U	3900
Benzo(a)anthracene	U	3900	U	4600	U	5000	U	3900
Benzo(a)pyrene	U	3900	U	4600	U	5000	U	3900
Benzo(b)fluoranthene	U	3900	U	4600	U	5000	U	3900
Benzo(ghi)perylene	U	3900	U	4600	U	5000	U	3900
Benzo(k)fluoranthene	U	3900	U	4600	U	5000	U	3900
Benzoic Acid	U	3900	U	4600	U	5000	U	3900
Benzyl alcohol	U	3900	U	4600	U	5000	U	3900
Bis(2-chloroethoxy) methane	U	3900	U	4600	U	5000	U	3900
Bis(2-chloroethyl) ether	U	3900	U	4600	U	5000	U	3900
Bis(2-chloroisopropyl) ether	U	3900	U	4600	U	5000	U	3900
Bis(2-ethylhexyl) phthalate	400 J	3900	490 J	4600	800 J	5000	530 J	3900
Butyl benzyl phthalate	U	3900	U	4600	U	5000	U	3900
Chrysene	U	3900	U	4600	U	5000	U	3900
Di-n-butyl phthalate	1000 J	3900	1100 J	4600	710 J	5000	630 J	3900
Di-n-octyl phthalate	U	3900	U	4600	U	5000	U	3900
Dibenzo(a,h)anthracene	U	3900	U	4600	U	5000	U	3900
Dibenzofuran	U	3900	U	4600	U	5000	U	3900
Diethylphthalate	U	3900	U	4600	U	5000	U	3900
Dimethyl phthalate	U	3900	U	4600	U	5000	U	3900
p-Dimethylaminoazobenzene	U	3900	U	4600	U	5000	U	3900
Ethyl Methanesulfonate	U	7800	U	9300	U	10000	U	7800
Fluoranthene	U	3900	U	4600	U	5000	U	3900
Fluorene	U	3900	U	4600	U	5000	U	3900
Hexachlorobenzene	U	3900	U	4600	U	5000	U	3900
Hexachlorobutadiene	U	3900	U	4600	U	5000	U	3900
Hexachlorocyclopentadiene	U	3900	U	4600	U	5000	U	3900
Hexachloroethane	U	3900	U	4600	U	5000	U	3900
Indeno(1,2,3-c d)pyrene	U	3900	U	4600	U	5000	U	3900
Isophorone	U	3900	U	4600	U	5000	U	3900
Methyl Methanesulfonate	U	7800	U	9300	U	10000	U	7800
N-Nitrosodi-n-propylamine	U	3900	U	4600	U	5000	U	3900
N-Nitrosodimethylamine	U	3900	U	4600	U	5000	U	3900
N-Nitrosodiphenylamine	U	3900	U	4600	U	5000	U	3900
N-Nitrosopiperidine	U	3900	U	4600	U	5000	U	3900
Naphthalene	U	3900	U	4600	U	5000	U	3900
Nitrobenzene	U	3900	U	4600	U	5000	U	3900
Pentachlorobenzene	U	3900	U	4600	U	5000	U	3900
Pentachloronitrobenzene	U	20000	U	23000	U	25000	U	20000
Pentachlorophenol	U	20000	U	23000	U	25000	U	20000
Phenanthrene	U	3900	U	4600	U	5000	U	3900
Phenol	U	3900	U	4600	U	5000	U	3900
Pyrene	U	3900	U	4600	U	5000	U	3900
Pyridine	U	3900	U	4600	U	5000	U	3900

Table 1.5 (Cont) Results of the Analysis for BNA in Tissue
WA # 2-274 Cornell Dubilier Electronics
based on wet weight

Client ID	B 08632		B 08633	
Location	A1-2		A5-1	
Collected	6/20/97		6/20/97	
Analyzed	7/18/97		7/18/97	
Dil. Factor	1		1	

Compound	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg
1,2,4,5-Tetrachlorobenzene	U		3800	U		3400
1,2,4-Trichlorobenzene	U		3800	U		3400
1,2-Dichlorobenzene	U		3800	U		3400
1,2-Diphenylhydrazine	U		3800	U		3400
1,3-Dichlorobenzene	U		3800	U		3400
1,4-Dichlorobenzene	U		3800	U		3400
1-Naphtylamine	U		3800	U		3400
2,3,4,6-Tetrachlorophenol	U		19000	U		17000
2,4,5-Trichlorophenol	U		19000	U		17000
2,4,6-Trichlorophenol	U		3800	U		3400
2,4-Dichlorophenol	U		3800	U		3400
2,4-Dimethylphenol	U		3800	U		3400
2,4-Dinitrophenol	U		19000	U		17000
2,4-Dinitrotoluene	U		3800	U		3400
2,6-Dichlorophenol	U		3800	U		3400
2,6-Dinitrotoluene	U		3800	U		3400
2-Chloronaphthalene	U		3800	U		3400
2-Chlorophenol	U		3800	U		3400
2-Methylnaphthalene	U		3800	U		3400
2-Methylphenol	U		3800	U		3400
2-Naphthylamine	U		3800	U		3400
2-Nitroaniline	U		19000	U		17000
2-Nitrophenol	U		3800	U		3400
2-Picoline	U		3800	U		3400
3,3'-Dichlorobenzidine	U		7500	U		6900
3-Methylcholanthrene	U		3800	U		3400
3-Nitroaniline	U		19000	U		17000
4-Methylphenol	U		3800	U		3400
4,6-Dinitro-2-methylphenol	U		19000	U		17000
4-Bromophenyl phenyl ether	U		3800	U		3400
4-Chloro-3-methylphenol	U		3800	U		3400
4-Chloroaniline	U		3800	U		3400
4-Chlorophenyl phenyl ether	U		3800	U		3400
4-Nitroaniline	U		19000	U		17000
4-Nitrophenol	U		19000	U		17000
1-Chloronaphthalene	U		19000	U		17000
7,12-Dimethylbenz(a)anthracene	U		3800	U		3400
a,a-Dimethylphenethylamine	U		7500	U		6900
Acenaphthene	U		3800	U		3400
Acenaphthylene	U		3800	U		3400
Acetophenone	U		3800	U		3400
Aniline	U		3800	U		3400
Anthracene	U		3800	U		3400
Benzidine	U		3800	U		3400
Benzo(a)anthracene	U		3800	U		3400
Benzo(a)pyrene	U		3800	U		3400
Benzo(b)fluoranthene	U		3800	U		3400
Benzo(ghi)perylene	U		3800	U		3400
Benzo(k)fluoranthene	U		3800	U		3400
Benzoic Acid	U		3800	U		3400
Benzyl alcohol	U		3800	U		3400
Bis(2-chloroethoxy) methane	U		3800	U		3400
Bis(2-chloroethyl) ether	U		3800	U		3400
Bis(2-chloroisopropyl) ether	U		3800	U		3400
Bis(2-ethylhexyl) phthalate	450	J	3800	520	J	3400
Butyl benzyl phthalate	U		3800	U		3400
Chrysene	U		3800	U		3400
Di-n-butyl phthalate	1500	J	3800	U		3400
Di-n-octyl phthalate	U		3800	U		3400
Dibenzo(a,h)anthracene	U		3800	U		3400
Dibenzofuran	U		3800	U		3400
Diethylphthalate	U		3800	830	J	3400
Dimethyl phthalate	U		3800	U		3400
p-Dimethylaminoazobenzene	U		3800	U		3400
Ethyl Methanesulfonate	U		7500	U		6900
Fluoranthene	U		3800	U		3400
Fluorene	U		3800	U		3400
Hexachlorobenzene	U		3800	U		3400
Hexachlorobutadiene	U		3800	U		3400
Hexachlorocyclopentadiene	U		3800	U		3400
Hexachloroethane	U		3800	U		3400
Indeno(1,2,3-c d)pyrene	U		3800	U		3400
Isophorone	U		3800	U		3400
Methyl Methanesulfonate	U		7500	U		6900
N-Nitrosodi-n-propylamine	U		3800	U		3400
N-Nitrosodimethylamine	U		3800	U		3400
N-Nitrosodiphenylamine	U		3800	U		3400
N-Nitrosopipendine	U		3800	U		3400
Naphthalene	U		3800	U		3400
Nitrobenzene	U		3800	U		3400
Pentachlorobenzene	U		3800	U		3400
Pentachloronitrobenzene	U		19000	U		17000
Pentachlorophenol	U		19000	U		17000
Phenanthrene	U		3800	U		3400
Phenol	U		3800	U		3400
Pyrene	U		3800	U		3400
Pyridine	U		3800	U		3400

Table 1.5 (Cont) Results of the Analysis for BNA in Tissue
WA # 2-274 Cornell Dubilier Electronics
based on wet weight

Client ID	SBLKA (7/11/97)		B 10222 A3-12		B 10223 A3-13		B 10224 A3-14	
Location	NA		6/18/97		6/18/97		6/18/97	
Collected								
Analyzed	7/16/97		7/16/97		7/16/97		7/17/97	
Dil Factor					1		1	
Compound	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
1,2,4,5-Tetrachlorobenzene	U	4000	U	4900	U	3300	U	2600
1,2,4-Trichlorobenzene	U	4000	U	4900	U	3300	U	2600
1,2-Dichlorobenzene	U	4000	U	4900	U	3300	U	2600
1,2-Diphenylhydrazine	U	4000	U	4900	U	3300	U	2600
1,3-Dichlorobenzene	U	4000	U	4900	U	3300	U	2600
1,4-Dichlorobenzene	U	4000	U	4900	U	3300	U	2600
1-Naphtylamine	U	4000	U	4900	U	3300	U	2600
2,3,4,6-Tetrachlorophenol	U	20000	U	24000	U	16000	U	13000
2,4,5-Trichlorophenol	U	20000	U	24000	U	16000	U	13000
2,4,6-Trichlorophenol	U	4100	U	4100	U	3300	U	2600
2,4-Dichlorophenol	U	4000	U	4900	U	3300	U	2600
2,4-Dimethylphenol	U	4000	U	4900	U	3300	U	2600
2,4-Dinitrophenol	U	20000	U	24000	U	16000	U	13000
2,4-Dinitrotoluene	U	4000	U	4000	U	33000	U	2600
2,6-Dichlorophenol	U	4000	U	4900	U	3300	U	2600
2,6-Dinitrotoluene	U	4000	U	4900	U	3300	U	2600
2-Chloronaphthalene	U	4000	U	4900	U	3300	U	2600
2-Chlorophenol	U	4000	U	4900	U	3300	U	2600
2-Methylnaphthalene	U	4000	U	4900	U	3300	U	2600
2-Methylphenol	U	4000	U	4900	U	3300	U	2600
2-Naphthylamine	U	4000	U	4900	U	3300	U	2600
2-Nitroaniline	U	20000	U	24000	U	16000	U	13000
2-Nitrophenol	U	4000	U	4900	U	3300	U	2600
2-Picoline	U	4000	U	4900	U	3300	U	2600
3,3'-Dichlorobenzidine	U	8000	U	9100	U	6500	U	5200
3-Methylcholanthrene	U	4000	U	4900	U	3300	U	2600
3-Nitroaniline	U	20000	U	24000	U	16000	U	13000
4-Methylphenol	U	4000	U	4900	U	3300	U	2600
4,6-Dinitro-2-methylphenol	U	20000	U	24000	U	16000	U	13000
4-Bromophenyl phenyl ether	U	4000	U	4900	U	3300	U	2600
4-Chloro-3-methylphenol	U	4000	U	4900	U	3300	U	2600
4-Chloroaniline	U	4000	U	4900	U	3300	U	2600
4-Chlorophenyl phenyl ether	U	4000	U	4900	U	3300	U	2600
4-Nitroaniline	U	20000	U	24000	U	16000	U	13000
4-Nitrophenol	U	20000	U	24000	U	16000	U	13000
1-Chloronaphthalene	U	4900	U	4900	U	3300	U	2600
7 12-Dimethylbenz(a)anthracene	U	4000	U	4900	U	3300	U	2600
a,a-Dimethylphenethylamine	U	8000	U	9100	U	6500	U	5200
Acenaphthene	U	4000	U	4900	U	3300	U	2600
Acenaphthylene	U	4000	U	4900	U	3300	U	2600
Acetophenone	U	4000	U	4900	U	3300	U	2600
Aniline	U	4000	U	4900	U	3300	U	2600
Anthracene	U	4000	U	4900	U	3300	U	2600
Benzidine	U	4000	U	4900	U	3300	U	2600
Benzo(a)anthracene	U	4000	U	4900	U	3300	U	2600
Benzo(a)pyrene	U	4000	U	4900	U	3300	U	2600
Benzo(b)fluoranthene	U	4000	U	4900	U	3300	U	2600
Benzo(ghi)perylene	U	4000	U	4900	U	3300	U	2600
Benzo(k)fluoranthene	U	4000	U	4900	U	3300	U	2600
Benzoic Acid	U	4000	U	4900	U	3300	U	2600
Benzyl alcohol	U	4000	U	4900	U	3300	U	2600
Bis(2-chloroethoxy) methane	U	4000	U	4900	U	3300	U	2600
Bis(2-chloroethyl) ether	U	4000	U	4900	U	3300	U	2600
Bis(2-chloroisopropyl) ether	U	4000	U	4900	U	3300	U	2600
Bis(2-ethylhexyl) phthalate		4000	610 J	4900	410 J	3300	380 J	2600
Butyl benzyl phthalate	U	4000	U	4900	U	3300	U	2600
Chrysene	U	4000	U	4900	U	3300	U	2600
Di-n-butyl phthalate		4000	1200 J	4900	1900 J	3300	870 J	2600
Di-n-octyl phthalate	U	4000	U	4900	U	3300	U	2600
Dibenzo(a,h)anthracene	U	4000	U	4900	U	3300	U	2600
Dibenzofuran	U	4000	U	4900	U	3300	U	2600
Diethylphthalate	U	4000	U	4900	U	3300	U	2600
Dimethyl phthalate	U	4000	U	4900	U	3300	U	2600
p-Dimethylaminoazobenzene	U	4000	U	4900	U	3300	U	2600
Ethyl Methanesulfonate	U	8000	U	9800	U	6490	U	5200
Fluoranthene	U	4000	U	4900	U	3300	U	2600
Fluorene	U	4000	U	4900	U	3300	U	2600
Hexachlorobenzene	U	4000	U	4900	U	3300	U	2600
Hexachlorobutadiene	U	4000	U	4900	U	3300	U	2600
Hexachlorocyclopentadiene	U	4000	U	4900	U	3300	U	2600
Hexachloroethane	U	4000	U	4900	U	3300	U	2600
Indeno(1,2,3-c,d)pyrene	U	4000	U	4900	U	3300	U	2600
Isophorone	U	4000	U	4900	U	3300	U	2600
Methyl Methanesulfonate	U	8000	U	9800	U	6490	U	5200
N-Nitrosodi-n-propylamine	U	4000	U	4900	U	3300	U	2600
N-Nitrosodimethylamine	U	4000	U	4900	U	3300	U	2600
N-Nitrosodiphenylamine	U	4000	U	4900	U	3300	U	2600
N-Nitrosopiperidine	U	4000	U	4900	U	3300	U	2600
Naphthalene	U	4000	U	4900	U	3300	U	2600
Nitrobenzene	U	4000	U	4900	U	3300	U	2600
Pentachlorobenzene	U	4000	U	4900	U	3300	U	2600
Pentachloronitrobenzene	U	20000	U	24000	U	16000	U	13000
Pentachlorophenol	U	20000	21000 J	24000	U	16000	U	13000
Phenanthrene	U	4000	U	4900	U	3300	U	2600
Phenol	U	4000	U	4900	U	3300	U	2600
Pyrene	U	4000	U	4900	U	3300	U	2600
Pyridine	U	4000	U	4900	U	3300	U	2600

Table 1.5 (Cont) Results of the Analysis for BNA in Tissue
WA # 2-274 Cornell Dubilier Electronics
based on wet weight

Client ID	B 10233
Location	A2-3
Collected	6/18/97
Analyzed	7/16/97
Dil. Factor	1

Compound	Conc µg/kg		MDL µg/kg
1,2,4,5-Tetrachlorobenzene	U		4400
1,2,4-Trichlorobenzene	U		4400
1,2-Dichlorobenzene	U		4400
1,2-Diphenylhydrazine	U		4400
1,3-Dichlorobenzene	U		4400
1,4-Dichlorobenzene	U		4400
1-Naphthylamine	U		22000
2,3,4,6-Tetrachlorophenol	U		22000
2,4,5-Trichlorophenol	U		4400
2,4,6-Trichlorophenol	U		4400
2,4-Dichlorophenol	U		4400
2,4-Dimethylphenol	U		22000
2,4-Dinitrophenol	U		4400
2,4-Dinitrotoluene	U		4400
2,6-Dichlorophenol	U		4400
2,6-Dinitrotoluene	U		4400
2-Chloronaphthalene	U		4400
2-Chlorophenol	U		4400
2-Methylnaphthalene	U		4400
2-Methylphenol	U		4400
2-Naphthylamine	U		4400
2-Nitroaniline	U		4400
2-Nitrophenol	U		4400
2-Picoline	U		8800
3,3'-Dichlorobenzidine	U		4400
3-Methylcholanthrene	U		22000
3-Nitroaniline	U		22000
4-Methylphenol	U		22000
4,6-Dinitro-2-methylphenol	U		4400
4-Bromophenyl phenyl ether	U		4400
4-Chloro-3-methylphenol	U		4400
4-Chloroaniline	U		4400
4-Chlorophenyl phenyl ether	U		22000
4-Nitroaniline	U		22000
4-Nitrophenol	U		4400
1-Chloronaphthalene	U		4400
7,12-Dimethylbenz(a)anthracene	U		8800
a,a-Dimethylphenethylamine	U		4400
Acenaphthene	U		4400
Acenaphthylene	U		4400
Acetophenone	U		4400
Aniline	U		4400
Anthracene	U		4400
Benzidine	U		4400
Benzo(a)anthracene	U		4400
Benzo(a)pyrene	U		4400
Benzo(b)fluoranthene	U		4400
Benzo(ghi)perylene	U		4400
Benzo(k)fluoranthene	U		4400
Benzoic Acid	U		4400
Benzyl alcohol	U		4400
Bis(2-chloroethoxy) methane	U		4400
Bis(2-chloroethyl) ether	U		4400
Bis(2-chloroisopropyl) ether	U		4400
Bis(2-ethylhexyl) phthalate	580	J	4400
Butyl benzyl phthalate	U		4400
Chrysene	1700	J	4400
Di-n-butyl phthalate	U		4400
Di-n-octyl phthalate	U		4400
Dibenzo(a,h)anthracene	U		4400
Dibenzofuran	U		4400
Diethylphthalate	U		4400
Dimethyl phthalate	U		4400
p-Dimethylaminoazobenzene	U		4400
Ethyl Methanesulfonate	U		8800
Fluoranthene	U		4400
Fluorene	U		4400
Hexachlorobenzene	U		4400
Hexachlorobutadiene	U		4400
Hexachlorocyclopentadiene	U		4400
Hexachloroethane	U		4400
Indeno(1,2,3-c,d)pyrene	U		4400
Isophorone	U		4400
Methyl Methanesulfonate	U		8800
N-Nitrosodi-n-propylamine	U		4400
N-Nitrosodimethylamine	U		4400
N-Nitrosodiphenylamine	U		4400
N-Nitrosopiperidine	U		4400
Naphthalene	U		4400
Nitrobenzene	U		4400
Pentachlorobenzene	U		22000
Pentachloronitrobenzene	U		22000
Pentachlorophenol	U		4400
Phenanthrene	U		4400
Phenol	U		4400
Pyrene	U		4400
Pyridine	U		4400

Table 1.6 Results of the Analysis for Pesticides/PCBs in Water
WA # 2-274 Cornell Dubilier Electronics

Client ID	Method Blank	2000-1001	2000-1002	2000-1003	2000-1004
Location	(7/4/97)	A1	A2	A3	A4
Date Collected	NA	6/27/97	6/27/97	6/27/97	6/27/97
Date Analyzed	7/15/97	7/15/97	7/15/97	7/15/97	7/15/97
Dilution	1	1	1	1	1

Analyte	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L
alpha-BHC	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
beta-BHC	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
delta-BHC	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
gamma-BHC (Lindane)	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Heptachlor	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Aldrin	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Heptachlor epoxide	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Endosulfan I	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Dieldrin	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
4,4'-DDE	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Endrin	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Endosulfan II	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
4,4'-DDD	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Endosulfan sulfate	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
4,4'-DDT	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Methoxychlor	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Endrin ketone	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Endrin aldehyde	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Chlordane	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Toxaphene	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0
Aroclor 1016	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Aroclor 1221	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0
Aroclor 1232	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Aroclor 1242	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Aroclor 1248	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Aroclor 1254	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Aroclor 1260	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0

Table 1.6 (Cont) Results of the Analysis for Pesticides/PCBs in Water
WA # 2-274 Cornell Dubilier Electronics

Client ID	2000-1005	2000-1006	2000-1007	2000-1008	2000-1010
Location	A5	A6	A7	A9	Laboratory Blank
Date Collected	6/27/97	6/27/97	6/27/97	6/27/97	6/27/97
Date Analyzed	7/15/97	7/15/97	7/15/97	7/15/97	7/15/97
Dilution	1	1	1	1	1

Analyte	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L
alpha-BHC	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
beta-BHC	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
delta-BHC	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
gamma-BHC (Lindane)	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Heptachlor	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Aldrin	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Heptachlor epoxide	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Endosulfan I	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Dieldrin	U	0.1	U	0.1	U	0.1	U	0.11	U	0.1
4,4'-DDE	U	0.1	U	0.1	U	0.1	U	0.11	U	0.1
Endrin	U	0.1	U	0.1	U	0.1	U	0.11	U	0.1
Endosulfan II	U	0.1	U	0.1	U	0.1	U	0.11	U	0.1
4,4'-DDD	U	0.1	U	0.1	U	0.1	U	0.11	U	0.1
Endosulfan sulfate	U	0.1	U	0.1	U	0.1	U	0.11	U	0.1
4,4'-DDT	U	0.1	U	0.1	U	0.1	U	0.11	U	0.1
Methoxychlor	U	0.5	U	0.5	U	0.5	U	0.54	U	0.5
Endrin ketone	U	0.1	U	0.1	U	0.1	U	0.11	U	0.1
Endrin aldehyde	U	0.1	U	0.1	U	0.1	U	0.11	U	0.1
Chlordane	U	0.5	U	0.5	U	0.5	U	0.54	U	0.5
Toxaphene	U	5.0	U	5.0	U	5.0	U	5.4	U	5.0
Aroclor 1016	U	1.0	U	1.0	U	1.0	U	1.1	U	1.0
Aroclor 1221	U	2.0	U	2.0	U	2.0	U	2.2	U	2.0
Aroclor 1232	U	1.0	U	1.0	U	1.0	U	1.1	U	1.0
Aroclor 1242	U	1.0	U	1.0	U	1.0	U	1.1	U	1.0
Aroclor 1248	U	1.0	U	1.0	U	1.0	U	1.1	U	1.0
Aroclor 1254	U	1.0	U	1.0	U	1.0	U	1.1	U	1.0
Aroclor 1260	U	1.0	U	1.0	U	1.0	U	1.1	U	1.0

Table 1.6 (Cont) Results of the Analysis for Pesticides/PCBs in Water
WA # 2-274 Cornell Dubilier Electronics

Client ID	PBLKA	ABCDEF 10216
Location	(6/29/97)	A1
Date Collected	NA	6/18/97
Date Analyzed	7/13/97	7/13/97
Dilution	1	1

Analyte	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L
alpha-BHC	U	0.05	U	0.17
beta-BHC	U	0.05	U	0.17
delta-BHC	U	0.05	U	0.17
gamma-BHC (Lindane)	U	0.05	U	0.17
Heptachlor	U	0.05	U	0.17
Aldrin	U	0.05	U	0.17
Heptachlor epoxide	U	0.05	U	0.17
Endosulfan I	U	0.05	U	0.17
Dieldrin	U	0.1	U	0.33
4,4'-DDE	U	0.1	U	0.33
Endrin	U	0.1	U	0.33
Endosulfan II	U	0.1	U	0.33
4,4'-DDD	U	0.1	U	0.33
Endosulfan sulfate	U	0.1	U	0.33
4,4'-DDT	U	0.1	U	0.33
Methoxychlor	U	0.5	U	1.7
Endrin ketone	U	0.1	U	0.33
Endrin aldehyde	U	0.1	U	0.33
Chlordane	U	0.5	U	1.7
Toxaphene	U	5.0	U	17
Aroclor 1016	U	1.0	U	3.3
Aroclor 1221	U	2.0	U	6.7
Aroclor 1232	U	1.0	U	3.3
Aroclor 1242	U	1.0	U	3.3
Aroclor 1248	U	1.0	U	3.3
Aroclor 1254	U	1.0	U	3.3
Aroclor 1260	U	1.0	U	3.3

Table 1.7 Results of the Analysis for Pesticides/PCBs in Soil
WA # 2-274 Comet Dubilier Electronics
Based on dry weight

Client ID	PBLKA	ABCDEF 10371	ABCDEF 10372	ABCDEF 10373
Location	(6/23/97)	T2-12-5	T2-7-1	T2-6-7
Date Collected	NA	6/18/97	6/18/97	6/18/97
Date Analyzed	7/13/97	7/13/97	7/13/97	7/13/97
Percent Solids	NA	58	57	65
Dilution	1	1	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	5	U	8.6	U	8.6	U	7.7
gamma-BHC (Lindane)	U	5	U	8.6	U	8.6	U	7.7
Heptachlor	U	5	U	8.6	U	8.6	U	7.7
Aldrin	U	5	U	8.6	U	8.6	U	7.7
beta-BHC	U	5	U	8.6	U	8.6	U	7.7
delta-BHC	U	5	U	8.6	U	8.6	U	7.7
Heptachlor epoxide	U	5	U	8.6	U	8.6	U	7.7
Endosulfan I	U	5	U	8.6	U	8.6	U	7.7
4,4'-DDE	U	10	U	17	U	17	U	15
Dieldrin	U	10	U	17	U	17	U	15
Endrin	U	10	U	17	U	17	U	15
Endosulfan II	U	10	U	17	U	17	U	15
4,4'-DDD	U	10	U	17	U	17	U	15
4,4'-DDT	U	10	U	17	U	17	U	15
Endrin aldehyde	U	10	U	17	U	17	U	15
Endosulfan sulfate	U	10	U	17	U	17	U	15
Methoxychlor	U	50	U	86	U	86	U	77
Endrin ketone	U	10	U	17	U	17	U	15
Aroclor 1016	U	100	U	170	U	170	U	150
Aroclor 1221	U	200	U	340	U	340	U	310
Aroclor 1232	U	100	U	170	U	170	U	150
Aroclor 1242	U	100	U	170	U	170	U	150
Aroclor 1248	U	100	U	170	U	170	U	150
Aroclor 1254	U	100	23000 E	170	25000 E	170	51000 E	150
Aroclor 1260	U	100	U	170	U	170	U	150
Toxaphene	U	500	U	860	U	860	U	770
Chlordane	U	50	U	86	U	86	U	77

Table 1.7 (Cont) Results of the Analysis for Pesticides/PCBs in Soil
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	ABCDEF 10374		ABCDEF 10375		ABCDEF 10380		ABCDEF 10381		ABCDEF 10382	
Location	T2-2-1		T2-5-6		T2-1-3		T1-1-4		T1-4-5	
Date Collected	6/18/97		6/18/97		6/18/97		6/18/97		6/18/97	
Date Analyzed	7/13/97		7/14/97		7/13/97		7/13/97		7/13/97	
Percent Solids	63		68		77		87		89	
Dilution	1		1		1		1		1	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	7.9	U	7.3	U	6.4	U	5.7	U	5.5
gamma-BHC (Lindane)	U	7.9	U	7.3	U	6.4	U	5.7	U	5.5
Heptachlor	U	7.9	U	7.3	U	6.4	U	5.7	U	5.5
Aldrin	U	7.9	U	7.3	U	6.4	U	5.7	U	5.5
beta-BHC	U	7.9	U	7.3	U	6.4	U	5.7	U	5.5
delta-BHC	U	7.9	U	7.3	U	6.4	U	5.7	U	5.5
Heptachlor epoxide	U	7.9	U	7.3	U	6.4	U	5.7	U	5.5
Endosulfan I	U	7.9	U	7.3	U	6.4	U	5.7	U	5.5
4,4'-DDE	U	16	U	15	U	13	U	11	U	11
Dieldrin	U	16	U	15	U	13	U	11	U	11
Endrin	U	16	U	15	U	13	U	11	U	11
Endosulfan II	U	16	U	15	U	13	U	11	U	11
4 4'-DDD	U	16	U	15	U	13	U	11	U	11
4,4'-DDT	U	16	U	15	U	13	U	11	U	11
Endrin aldehyde	U	16	U	15	U	13	U	11	U	11
Endosulfan sulfate	U	16	U	15	U	13	U	11	U	11
Methoxychlor	U	79	U	73	U	64	U	57	U	55
Endrin ketone	U	16	U	15	U	13	U	11	U	11
Aroclor 1016	U	160	U	150	U	130	U	110	U	110
Aroclor 1221	U	320	U	290	U	260	U	230	U	220
Aroclor 1232	U	160	U	150	U	130	U	110	U	110
Aroclor 1242	U	160	U	150	U	130	U	110	U	110
Aroclor 1248	U	160	U	150	U	130	U	110	U	110
Aroclor 1254	38000	160	33000	150	64000	130	26000	110	56000	110
Aroclor 1260	U	160	U	150	U	130	U	110	U	110
Toxaphene	U	790	U	730	U	640	U	570	U	550
Chlordane	U	79	U	73	U	64	U	57	U	55

Table 1.7 (Cont) Results of the Analysis for Pesticides/PCBs in Soil
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	ABCDEF 10383	ABCDEF 10384	ABCDEF 10385	ABCDEF 10386	ABCDEF 10387
Location	T1-7-2	T1-3-7	T1-5-6	T1-10-2	T1-11-9
Date Collected	6/18/97	6/18/97	6/18/97	6/18/97	6/18/97
Date Analyzed	7/13/97	7/13/97	7/13/97	7/13/97	7/13/97
Percent Solids	81	82	78	80	78
Dilution	1	1	1	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	6.2	U	6.0	U	6.5	U	6.2	U	6.3
gamma-BHC (Lindane)	U	6.2	U	6.0	U	6.5	U	6.2	U	6.3
Heptachlor	U	6.2	U	6.0	U	6.5	U	6.2	U	6.3
Aldrin	U	6.2	U	6.0	U	6.5	U	6.2	U	6.3
beta-BHC	U	6.2	U	6.0	U	6.5	U	6.2	U	6.3
delta-BHC	U	6.2	U	6.0	U	6.5	U	6.2	U	6.3
Heptachlor epoxide	U	6.2	U	6.0	U	6.5	U	6.2	U	6.3
Endosulfan I	U	6.2	U	6.0	U	6.5	U	6.2	U	6.3
4,4'-DDE	U	12	U	12	U	13	U	12	U	13
Dieldrin	U	12	U	12	U	13	U	12	U	13
Endrin	U	12	U	12	U	13	U	12	U	13
Endosulfan II	U	12	U	12	U	13	U	12	U	13
4,4'-DDD	U	12	U	12	U	13	U	12	U	13
4,4'-DDT	U	12	U	12	U	13	U	12	U	13
Endrin aldehyde	U	12	U	12	U	13	U	12	U	13
Endosulfan sulfate	U	12	U	12	U	13	U	12	U	13
Methoxychlor	U	62	U	60	U	65	U	62	U	63
Endrin ketone	U	12	U	12	U	13	U	12	U	13
Aroclor 1016	U	120	U	120	U	130	U	120	U	130
Aroclor 1221	U	250	U	240	U	260	U	250	U	250
Aroclor 1232	U	120	U	120	U	130	U	120	U	130
Aroclor 1242	U	120	U	120	U	130	U	120	U	130
Aroclor 1248	U	120	U	120	U	130	U	120	U	130
Aroclor 1254	580000	120	7300 E	120	62000	130	310000 E	120	290000 E	130
Aroclor 1260	U	120	U	120	U	130	U	120	U	130
Toxaphene	U	620	U	600	U	650	U	620	U	630
Chlordane	U	62	U	60	U	65	U	62	U	63

Table 1.7 (Cont) Results of the Analysis for Pesticides/PCBs in Soil
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	ABCDEF 10388		ABCDEF 10389		ABCDEF 10390		ABCDEF 10391		ABCDEF 10392	
Location	T1-14-3		T3-1-7		T3-1-13		T3-2-11		T3-3-10	
Date Collected	6/18/97		6/18/97		6/18/97		6/18/97		6/18/97	
Date Analyzed	7/13/97		7/13/97		7/25/97		7/25/97		7/13/97	
Percent Solids	70		70		72		79		66	
Dilution	1		1		1		1		1	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	7.1	U	7.1	U	7.0	U	6.3	U	7.5
gamma-BHC (Lindane)	U	7.1	U	7.1	U	7.0	U	6.3	U	7.5
Heptachlor	U	7.1	U	7.1	20	7.0	U	6.3	U	7.5
Aldrin	U	7.1	U	7.1	U	7.0	U	6.3	U	7.5
beta-BHC	U	7.1	U	7.1	U	7.0	U	6.3	U	7.5
delta-BHC	U	7.1	U	7.1	U	7.0	U	6.3	U	7.5
Heptachlor epoxide	U	7.1	U	7.1	U	7.0	U	6.3	U	7.5
Endosulfan I	U	7.1	U	7.1	U	7.0	U	6.3	U	7.5
4,4'-DDE	U	14	U	14	34	14	31	13	U	15
Dieldrin	U	14	U	14	U	14	U	13	U	15
Endrin	U	14	U	14	U	14	U	13	U	15
Endosulfan II	U	14	U	14	U	14	U	13	U	15
4,4'-DDD	U	14	U	14	U	14	U	13	U	15
4,4'-DDT	U	14	U	14	U	14	U	13	U	15
Endrin aldehyde	U	14	U	14	U	14	U	13	U	15
Endosulfan sulfate	U	14	U	14	U	14	U	13	U	15
Methoxychlor	U	71	U	71	U	70	U	63	U	75
Endrin ketone	U	14	U	14	U	14	U	13	U	15
Aroclor 1016	U	140	U	140	U	140	U	130	U	150
Aroclor 1221	U	280	U	280	U	280	U	250	U	300
Aroclor 1232	U	140	U	140	U	140	U	130	U	150
Aroclor 1242	U	140	U	140	U	140	U	130	U	150
Aroclor 1248	U	140	U	140	U	140	U	130	U	150
Aroclor 1254	6900	140	U	140	U	140	U	130	U	150
Aroclor 1260	U	140	U	140	U	140	U	130	U	150
Toxaphene	U	710	U	710	U	700	U	630	U	750
Chlordane	U	71	U	71	U	70	U	63	U	75

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Table 1.7 (Cont) Results of the Analysis for Pesticides/PCBs in Soil
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	ABCDEF 10393		ABCDEF 10394	
Location	T3-3-16		T3-4-6	
Date Collected	6/18/97		6/18/97	
Date Analyzed	7/13/97		7/14/97	
Percent Solids	62		58	
Dilution	1		1	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	8.0	U	8.5
gamma-BHC (Lindane)	U	8.0	U	8.5
Heptachlor	U	8.0	U	8.5
Aldrin	U	8.0	U	8.5
beta-BHC	U	8.0	U	8.5
delta-BHC	U	8.0	U	8.5
Heptachlor epoxide	U	8.0	U	8.5
Endosulfan I	U	8.0	U	8.5
4,4'-DDE	U	16	U	17
Dieldrin	U	16	U	17
Endrin	U	16	U	17
Endosulfan II	U	16	U	17
4,4'-DDD	U	16	U	17
4,4'-DDT	U	16	U	17
Endrin aldehyde	U	16	U	17
Endosulfan sulfate	U	16	U	17
Methoxychlor	U	80	U	85
Endrin ketone	U	16	U	17
Aroclor 1016	U	160	U	170
Aroclor 1221	U	320	U	340
Aroclor 1232	U	160	U	170
Aroclor 1242	U	160	U	170
Aroclor 1248	U	160	U	170
Aroclor 1254	U	160	U	170
Aroclor 1260	U	160	U	170
Toxaphene	U	800	U	850
Chlordane	U	80	U	85

Table 1.7 (Cont) Results of the Analysis for Pesticides/PCBs in Soil
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	PBLKA	ABCDEF 10395	ABCDEF 10396	ABCDEF 10397	ABCDEF 10398
Location	7/2/97	T4-1-4	T4-1-10	T4-2-19	T4-3-3
Date Collected	NA	6/18/97	6/18/97	6/18/97	6/18/97
Date Analyzed	7/14/97	7/15/97	7/15/97	7/15/97	7/15/97
Percent Solids	NA	64	69	75	64
Dilution	1	1	1	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	5.0	U	7.9	U	7.1	U	6.7	U	8.5
beta-BHC	U	5.0	U	7.9	U	7.1	U	6.7	U	8.5
delta-BHC	U	5.0	U	7.9	U	7.1	U	6.7	U	8.5
gamma-BHC (Lindane)	U	5.0	U	7.9	U	7.1	U	6.7	U	8.5
Heptachlor	U	5.0	U	7.9	U	7.1	U	6.7	U	8.5
Aldrin	U	5.0	U	7.9	U	7.1	U	6.7	U	8.5
Heptachlor epoxide	U	5.0	U	7.9	U	7.1	U	6.7	U	8.5
Endosulfan I	U	5.0	U	7.9	U	7.1	U	6.7	U	8.5
Dieldrin	U	10	U	16	U	14	U	13	U	17
4,4'-DDE	U	10	U	16	U	14	U	13	U	17
Endrin	U	10	U	16	U	14	U	13	U	17
Endosulfan II	U	10	U	16	U	14	U	13	U	17
4,4'-DDD	U	10	U	16	U	14	U	13	U	17
Endosulfan sulfate	U	10	U	16	U	14	U	13	U	17
4,4'-DDT	U	10	U	16	U	14	U	13	U	17
Methoxychlor	U	50	U	79	U	71	U	67	U	85
Endrin ketone	U	10	U	16	U	14	U	13	U	17
Endrin aldehyde	U	10	U	16	U	14	U	13	U	17
Chlordane	U	50	U	79	U	71	U	67	U	85
Toxaphene	U	500	U	790	U	710	U	670	U	850
Aroclor 1016	U	100	U	160	U	140	U	130	U	170
Aroclor 1221	U	200	U	310	U	290	U	270	U	340
Aroclor 1232	U	100	U	160	U	140	U	130	U	170
Aroclor 1242	U	100	U	160	U	140	U	130	U	170
Aroclor 1248	U	100	U	160	U	140	U	130	U	170
Aroclor 1254	U	100	4100 E	160	3600 E	140	1000	130	11000 E	170
Aroclor 1260	U	100	U	160	U	140	U	130	U	170

Table 1.7 (Cont) Results of the Analysis for Pesticides/PCBs in Soil
WA # 2-274 Comell Dubilier Electronics
Based on dry weight

Client ID	ABCDEF 10399	ABCDEF 10400	ABCDEF 10486	ABCDEF 10487	ABCDEF 10488
Location	T4-4-1	T4-5-6	A1-1	A1-2	A1-3
Date Collected	6/18/97	6/18/97	6/18/97	6/18/97	6/18/97
Date Analyzed	7/16/97	7/15/97	7/16/97	7/16/97	7/15/97
Percent Solids	60	69	42	33	27
Dilution	1	1	1	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	8.0	U	7.2	U	12	U	15	U	18
beta-BHC	U	8.0	U	7.2	U	12	U	15	U	18
delta-BHC	U	8.0	U	7.2	U	12	U	15	U	18
gamma-BHC (Lindane)	U	8.0	U	7.2	U	12	U	15	U	18
Heptachlor	U	8.0	U	7.2	U	12	U	15	U	18
Aldrin	U	8.0	U	7.2	U	12	U	15	U	18
Heptachlor epoxide	U	8.0	U	7.2	U	12	U	15	U	18
Endosulfan I	U	8.0	U	7.2	U	12	U	15	U	18
Dieldrin	U	16	U	14	U	23	U	29	U	35
4,4'-DDE	U	16	U	14	U	23	U	29	U	35
Endrin	U	16	U	14	U	23	U	29	U	35
Endosulfan II	U	16	U	14	U	23	U	29	U	35
4,4'-DDD	U	16	U	14	U	23	U	29	U	35
Endosulfan sulfate	U	16	U	14	U	23	U	29	U	35
4,4'-DDT	U	16	U	14	U	23	U	29	U	35
Methoxychlor	U	80	U	72	U	120	U	150	U	180
Endrin ketone	U	16	U	14	U	23	U	29	U	35
Endrin aldehyde	U	16	U	14	U	23	U	29	U	35
Chlordane	U	80	U	72	U	120	U	150	U	180
Toxaphene	U	800	U	720	U	1200	U	1500	U	1800
Aroclor 1016	U	160	U	140	U	230	U	290	U	350
Aroclor 1221	U	320	U	290	U	470	U	590	U	710
Aroclor 1232	U	160	U	140	U	230	U	290	U	350
Aroclor 1242	U	160	U	140	U	230	U	290	U	350
Aroclor 1248	U	160	U	140	U	230	U	290	U	350
Aroclor 1254	11000 E	160	14000 E	140	4500	230	2100	290	3100	350
Aroclor 1260	U	160	U	140	U	230	U	290	U	350

Table 1.7 (Cont) Results of the Analysis for Pesticides/PCBs in Soil
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	ABCDEF 10489		ABCDEF 10490		ABCDEF 10491		ABCDEF 10492		ABCDEF 10493	
Location	A1-4		A1-5		A1-6		A2-1		A2-2	
Date Collected	6/18/97		6/18/97		6/18/97		6/19/97		6/19/97	
Date Analyzed	7/26/97		7/14/97		7/16/97		7/15/97		7/15/97	
Percent Solids	40		39		46		47		32	
Dilution	1		1		1		1		1	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	13	U	12	U	11	U	10	U	15
beta-BHC	U	13	U	12	U	11	U	10	U	15
delta-BHC	U	13	U	12	U	11	U	10	U	15
gamma-BHC (Lindane)	U	13	U	12	U	11	U	10	U	15
Heptachlor	U	13	U	12	U	11	U	10	U	15
Aldrin	U	13	U	12	U	11	U	10	U	15
Heptachlor epoxide	U	13	U	12	U	11	U	10	U	15
Endosulfan I	U	13	U	12	U	11	U	10	U	15
Dieldrin	U	25	U	24	U	22	U	20	U	30
4,4'-DDE	U	25	U	24	U	22	U	20	U	30
Endrin	U	25	U	24	U	22	U	20	U	30
Endosulfan II	U	25	U	24	U	22	U	20	U	30
4,4'-DDD	U	25	U	24	U	22	U	20	U	30
Endosulfan sulfate	U	25	U	24	U	22	U	20	U	30
4,4'-DDT	U	25	U	24	U	22	U	20	U	30
Methoxychlor	U	130	U	120	U	110	U	100	U	150
Endrin ketone	U	25	U	24	U	22	U	20	U	30
Endrin aldehyde	U	25	U	24	U	22	U	20	U	30
Chlordane	U	130	U	120	U	110	U	100	U	150
Toxaphene	U	1300	U	1200	U	1100	U	1000	U	1500
Aroclor 1016	U	250	U	240	U	220	U	200	U	300
Aroclor 1221	U	510	U	490	U	430	U	410	U	600
Aroclor 1232	U	250	U	240	U	220	U	200	U	300
Aroclor 1242	U	250	U	240	U	220	U	200	U	300
Aroclor 1248	U	250	U	240	U	220	U	200	U	300
Aroclor 1254	2400	250	U	240	1300	220	14000 E	200	14000	300
Aroclor 1260	U	250	U	240	U	220	U	200	U	300

Table 1.7 (Cont) Results of the Analysis for Pesticides/PCBs in Soil
WA # 2-274 Comell Dubilier Electronics
Based on dry weight

Client ID	ABCDEF 10494	ABCDEF 10495	ABCDEF 10496
Location	A4-1	A4-2	A5-1
Date Collected	6/18/97	6/19/97	6/19/97
Date Analyzed	7/14/97	7/14/97	7/16/97
Percent Solids	42	69	64
Dilution	1	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	11	U	7.0	U	7.9
beta-BHC	U	11	U	7.0	U	7.9
delta-BHC	U	11	U	7.0	U	7.9
gamma-BHC (Lindane)	U	11	U	7.0	U	7.9
Heptachlor	U	11	U	7.0	U	7.9
Aldrin	U	11	U	7.0	U	7.9
Heptachlor epoxide	U	11	U	7.0	U	7.9
Endosulfan I	U	11	U	7.0	U	7.9
Dieldrin	U	23	U	14	U	16
4,4'-DDE	U	23	U	14	U	16
Endrin	U	23	U	14	U	16
Endosulfan II	U	23	U	14	U	16
4,4'-DDD	U	23	U	14	U	16
Endosulfan sulfate	U	23	U	14	U	16
4,4'-DDT	U	23	U	14	U	16
Methoxychlor	U	110	U	70	U	79
Endrin ketone	U	23	U	14	U	16
Endrin aldehyde	U	23	U	14	U	16
Chlordane	U	110	U	70	U	79
Toxaphene	U	1100	U	700	U	790
Aroclor 1016	U	230	U	140	U	160
Aroclor 1221	U	460	U	280	U	310
Aroclor 1232	U	230	U	140	U	160
Aroclor 1242	U	230	U	140	U	160
Aroclor 1248	U	230	U	140	U	160
Aroclor 1254	U	230	U	140	5100 E	160
Aroclor 1260	U	230	U	140	U	160

Table 1.7 (Cont) Results of the Analysis for Pesticides/PCBs in Soil
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	ABCDEF 10497		ABCDEF 10498		ABCDEF 10262	
Location	A5-2		A6-1		A6-2	
Date Collected	6/19/97		6/19/97		6/19/97	
Date Analyzed	7/14/97		7/16/97		7/26/97	
Percent Solids	75		25		20	
Dilution	1		1		1	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	6.3	U	20	U	24
beta-BHC	U	6.3	U	20	U	24
delta-BHC	U	6.3	U	20	U	24
gamma-BHC (Lindane)	U	6.3	U	20	U	24
Heptachlor	U	6.3	U	20	U	24
Aldrin	U	6.3	U	20	U	24
Heptachlor epoxide	U	6.3	U	20	U	24
Endosulfan I	U	6.3	U	20	U	24
Dieldrin	U	13	U	40	U	48
4,4'-DDE	U	13	U	40	U	48
Endrin	U	13	U	40	U	48
Endosulfan II	U	13	U	40	U	48
4,4'-DDD	U	13	U	40	U	48
Endosulfan sulfate	U	13	U	40	U	48
4,4'-DDT	U	13	U	40	U	48
Methoxychlor	U	63	U	200	U	240
Endrin ketone	U	13	U	40	U	48
Endrin aldehyde	U	13	U	40	U	48
Chlordane	U	63	U	200	U	240
Toxaphene	U	630	U	2000	U	2400
Aroclor 1016	U	130	U	400	U	480
Aroclor 1221	U	250	U	800	U	950
Aroclor 1232	U	130	U	2000	U	480
Aroclor 1242	U	130	U	400	U	480
Aroclor 1248	U	130	U	400	U	480
Aroclor 1254	550	130	2100	400	4700	480
Aroclor 1260	U	130	U	400	U	480

Table 1.7 (Cont) Results of the Analysis for Pesticides/PCBs in Soil
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	PBLKC	ABCDEF 10263	ABCDEF 10264	ABCDEF 10265	ABCDEF 10266
Location	7/3/97	A7-1	A3-1	A9-1	A9-2
Date Collected	NA	6/19/97	6/20/97	6/20/97	6/20/97
Date Analyzed	7/16/97	7/16/97	7/16/97	7/16/97	7/16/97
Percent Solids	NA	68	24	46	39
Dilution	1	1	1	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	5	U	7.3	U	21	U	11	U	12
beta-BHC	U	5	U	7.3	U	21	U	11	U	12
delta-BHC	U	5	U	7.3	U	21	U	11	U	12
gamma-BHC (Lindane)	U	5	U	7.3	U	21	U	11	U	12
Heptachlor	U	5	U	7.3	U	21	U	11	U	12
Aldrin	U	5	U	7.3	U	21	U	11	U	12
Heptachlor epoxide	U	5	U	7.3	U	21	U	11	U	12
Endosulfan I	U	5	U	7.3	U	21	U	11	U	12
Dieldrin	U	10	21	15	300	42	U	22	U	25
4,4'-DDE	U	10	U	15	U	42	U	22	U	25
Endrin	U	10	U	15	U	42	U	22	U	25
Endosulfan II	U	10	U	15	U	42	U	22	U	25
4,4'-DDD	U	10	25	15	U	42	U	22	U	25
Endosulfan sulfate	U	10	U	15	U	42	U	22	U	25
4,4'-DDT	U	10	U	15	U	42	U	22	U	25
Methoxychlor	U	10	U	73	U	210	U	110	U	120
Endrin ketone	U	50	U	15	U	42	U	22	U	25
Endrin aldehyde	U	10	U	15	U	42	U	22	U	25
Chlordane	U	50	U	73	U	210	U	110	U	120
Toxaphene	U	500	U	730	U	2100	U	1100	U	1200
Aroclor 1016	U	100	U	150	U	420	U	220	U	250
Aroclor 1221	U	200	U	290	U	830	U	430	U	500
Aroclor 1232	U	100	U	150	U	420	U	220	U	250
Aroclor 1242	U	100	U	150	U	420	U	220	U	250
Aroclor 1248	U	100	U	150	U	420	U	220	U	250
Aroclor 1254	U	100	U	150	U	420	U	220	U	250
Aroclor 1260	U	100	U	150	U	420	U	220	U	250

Table 1.7 (Cont) Results of the Analysis for Pesticides/PCBs in Soil
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	ABCDEF 10267		A 10379	
Location	A3-2		Field Blank	
Date Collected	6/20/97		6/20/97	
Date Analyzed	7/16/97		7/16/97	
Percent Solids	29		100	
Dilution	1		1	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	17	U	5
beta-BHC	U	17	U	5
delta-BHC	U	17	U	5
gamma-BHC (Lindane)	U	17	U	5
Heptachlor	U	17	U	5
Aldrin	U	17	U	5
Heptachlor epoxide	U	17	U	5
Endosulfan I	U	17	U	5
Dieldrin	190	35	U	10
4,4'-DDE	U	35	U	10
Endrin	U	35	U	10
Endosulfan II	U	35	U	10
4,4'-DDD	U	35	U	10
Endosulfan sulfate	U	35	U	10
4,4'-DDT	U	35	U	10
Methoxychlor	U	170	U	10
Endrin ketone	U	35	U	50
Endrin aldehyde	U	35	U	10
Chlordane	U	170	U	50
Toxaphene	U	1700	U	500
Aroclor 1016	U	350	U	100
Aroclor 1221	U	700	U	200
Aroclor 1232	U	350	U	100
Aroclor 1242	U	350	U	100
Aroclor 1248	U	350	U	100
Aroclor 1254	U	350	U	100
Aroclor 1260	U	350	U	100

Table 1.8 Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	PBLKA	B 08634	B 08635
Location	7/14/97	A5-2	A5-3
Date Collected	NA	6/20/97	6/20/97
Date Analyzed	7/18/97	7/19/97	7/19/97
Percent Lipids	NA	4.0	2.3
Dilution	1	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	5.0	U	16	U	9.1
beta-BHC	U	5.0	U	16	U	9.1
delta-BHC	U	5.0	U	16	U	9.1
gamma-BHC (Lindane)	U	5.0	U	16	U	9.1
Heptachlor	U	5.0	U	16	U	9.1
Aldrin	U	5.0	U	16	U	9.1
Heptachlor epoxide	U	5.0	U	16	U	9.1
Endosulfan I	U	5.0	U	16	U	9.1
Dieldrin	U	10	U	31	U	18
4,4'-DDE	U	10	U	31	U	18
Endrin	U	10	U	31	U	18
Endosulfan II	U	10	U	31	U	18
4,4'-DDD	U	10	U	31	U	18
Endosulfan sulfate	U	10	U	31	U	18
4,4'-DDT	U	10	U	31	U	18
Methoxychlor	U	50	U	160	U	91
Endrin ketone	U	10	U	31	U	18
Endrin aldehyde	U	10	U	31	U	18
Chlordane	U	50	U	160	U	91
Toxaphene	U	500	U	1600	U	910
Aroclor 1016	U	100	U	310	U	180
Aroclor 1221	U	100	U	630	U	360
Aroclor 1232	U	100	U	310	U	180
Aroclor 1242	U	100	U	310	U	180
Aroclor 1248	U	100	U	310	U	180
Aroclor 1254	U	100	1100	310	550	180
Aroclor 1260	U	100	U	310	U	180

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	PBLKA	B 10401	B 10402	B 10403	B 10404
Location	6/27/97	T1-14-2	T1-14-9	T1-8-3	T1-10-6
Date Collected	NA	6/17/97	6/17/97	6/17/97	6/17/97
Date Analyzed	7/6/97	7/6/97	7/6/97	7/6/97	7/6/97
Percent Lipids	NA	3.3	2.7	4.4	2.6
Dilution	1	1	1	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	5.0	U	4.9	U	9.3	U	9.3	U	10
beta-BHC	U	5.0	U	4.9	U	9.3	U	9.3	U	10
delta-BHC	U	5.0	U	4.9	U	9.3	U	9.3	U	10
gamma-BHC (Lindane)	U	5.0	U	4.9	U	9.3	U	9.3	U	10
Heptachlor	U	5.0	U	4.9	U	9.3	U	9.3	U	10
Aldrin	U	5.0	U	4.9	U	9.3	U	9.3	U	10
Heptachlor epoxide	U	5.0	U	4.9	U	9.3	U	9.3	U	10
Endosulfan I	U	5.0	U	4.9	U	9.3	U	9.3	U	10
Dieldrin	U	10	U	9.8	U	19	U	19	15 J	20
4,4'-DDE	U	10	U	9.8	U	19	U	19	U	20
Endrin	U	10	U	9.8	U	19	U	19	U	20
Endosulfan II	U	10	U	9.8	U	19	U	19	U	20
4,4'-DDD	U	10	U	9.8	U	19	U	19	U	20
Endosulfan sulfate	U	10	U	9.8	U	19	U	19	U	20
4,4'-DDT	U	10	U	9.8	U	19	U	19	U	20
Methoxychlor	U	50	U	49	U	93	U	93	U	100
Endrin ketone	U	10	U	9.9	U	19	U	19	U	20
Endrin aldehyde	U	10	U	9.9	U	19	U	19	U	20
Chlordane	U	50	U	49	U	93	U	93	U	100
Toxaphene	U	500	U	490	U	930	U	930	U	1000
Aroclor 1016	U	100	U	98	U	190	U	190	U	200
Aroclor 1221	U	200	U	200	U	370	U	370	U	400
Aroclor 1232	U	100	U	98	U	190	U	190	U	200
Aroclor 1242	U	100	U	98	U	190	U	190	U	200
Aroclor 1248	U	100	U	98	U	190	U	190	U	200
Aroclor 1254	U	100	4000 W	98	3800 W	190	3800 W	190	1300 W	200
Aroclor 1260	U	100	U	98	U	190	U	190	U	200

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-Z74 Cornell Dubilier Electronics
Based on wet weight

Client ID	B 10405	B 10406	B 10407	B 10408	B 10409
Location	T1-3-4	T1-14-10	T1-5-5	T1-13-10	T1-9-7
Date Collected	6/17/97	6/17/97	6/17/97	6/18/97	6/17/97
Date Analyzed	7/6/97	7/6/97	7/7/97	7/7/97	7/7/97
Percent Lipids	2.3	2.7	3.5	2.6	3.3
Dilution	1	1	1	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	9.6	U	9.8	U	4.9	U	5.0	U	4.9
beta-BHC	U	9.6	U	9.8	U	4.9	U	5.0	U	4.9
delta-BHC	U	9.6	U	9.8	U	4.9	U	5.0	U	4.9
gamma-BHC (Lindane)	U	9.6	U	9.8	U	4.9	U	5.0	U	4.9
Heptachlor	U	9.6	U	9.8	U	4.9	U	5.0	U	4.9
Aldrin	U	9.6	U	9.8	U	4.9	U	5.0	U	4.9
Heptachlor epoxide	U	9.6	U	9.8	U	4.9	U	5.0	U	4.9
Endosulfan I	U	9.6	U	9.8	U	4.9	U	5.0	U	4.9
Dieldrin	63	19	U	20	33	9.8	31	10	55	9.8
4,4'-DDE	U	19	U	20	U	9.8	U	10	60	9.8
Endrin	U	19	U	20	U	9.8	U	10	U	9.8
Endosulfan II	U	19	U	20	U	9.8	U	10	U	9.8
4,4'-DDD	U	19	U	20	U	9.8	U	10	U	9.8
Endosulfan sulfate	U	19	U	20	U	9.8	U	10	U	9.8
4,4'-DDT	U	19	U	20	U	9.8	U	10	U	9.8
Methoxychlor	U	96	U	98	U	9.8	U	50	U	9.8
Endrin ketone	U	19	U	20	U	9.8	U	10	U	9.8
Endrin aldehyde	U	19	U	20	U	9.8	U	10	U	9.8
Chlordane	U	96	U	98	U	49	U	50	U	49
Toxaphene	U	960	U	980	U	490	U	500	U	490
Aroclor 1016	U	190	U	200	U	98	U	100	U	98
Aroclor 1221	U	380	U	390	U	200	U	200	U	200
Aroclor 1232	U	190	U	200	U	98	U	100	U	98
Aroclor 1242	U	190	U	200	U	98	U	100	U	98
Aroclor 1248	U	190	U	200	U	98	U	100	U	98
Aroclor 1254	5100 W	190	5400 W	200	2000 W	98	2000 W	100	4700 W	98
Aroclor 1260	U	190	U	200	U	98	U	100	U	98

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	B 10410	B 10411	B 10412	B 10413	B 10414
Location	T1-14-6	T2-12-8	T2-4-5	T2-2-7	T2-3-5
Date Collected	6/17/97	6/18/97	6/18/97	6/17/97	6/17/97
Date Analyzed	7/7/97	7/7/97	7/7/97	7/7/97	7/15/97
Percent Lipids	2.3	4.2	8.8	3.1	2.9
Dilution	1	1	1	1	1

Analyte	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg
alpha-BHC	U		5.0	U		7.4	U		5.4	U		5.1	U		5.0
beta-BHC	U		5.0	U		7.4	U		5.4	U		5.1	U		5.0
delta-BHC	U		5.0	U		7.4	U		5.4	U		5.1	U		5.0
gamma-BHC (Lindane)	U		5.0	U		7.4	U		5.4	U		5.1	U		5.0
Heptachlor	U		5.0	U		7.4	U		5.4	U		5.1	U		5.0
Aldrin	U		5.0	U		7.4	U		5.4	U		5.1	U		5.0
Heptachlor epoxide	U		5.0	U		7.4	U		5.4	U		5.1	U		5.0
Endosulfan I	U		5.0	U		7.4	U		5.4	U		5.1	U		5.0
Dieldrin	7	J	10	14	J	15	21		11	6	J	10	U		10
4,4'-DDE	U		10	U		15	U		11	U		10	U		10
Endrin	U		10	U		15	U		11	U		10	U		10
Endosulfan II	U		10	U		15	U		11	U		10	U		10
4,4'-DDD	U		10	U		15	U		11	U		10	U		10
Endosulfan sulfate	U		10	U		15	U		11	U		10	U		10
4,4'-DDT	U		10	U		15	U		11	U		10	U		10
Methoxychlor	U		50	U		74	U		54	U		51	U		50
Endrin ketone	U		10	U		15	U		11	U		10	U		10
Endrin aldehyde	U		10	U		15	U		11	U		10	U		10
Chlordane	U		50	U		74	U		54	U		51	U		50
Toxaphene	U		500	U		740	U		540	U		510	U		500
Aroclor 1016	U		100	U		150	U		110	U		100	U		100
Aroclor 1221	U		200	U		290	U		220	U		200	U		200
Aroclor 1232	U		100	U		150	U		110	U		100	U		100
Aroclor 1242	U		100	U		150	U		110	U		100	U		100
Aroclor 1248	U		100	U		150	U		110	U		100	U		100
Aroclor 1254	630	W	100	840	W	150	1800	W	110	240	W	100	860	W	100
Aroclor 1260	U		100	U		150	U		110	U		100	U		100

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	B 10415	B 10416	B 10418	B 10419	B 10420
Location	T2-12-3	T2-12-10	T3-4-5	T3-4-2	T3-1-8
Date Collected	6/17/97	6/17/97	6/17/97	6/18/97	6/17/97
Date Analyzed	7/15/97	7/15/97	7/15/97	7/15/97	7/15/97
Percent Lipids	4.0	3.6	4.3	7.1	4.2
Dilution	1	1	1	1	1

Analyte	Conc µg/kg		MDL µg/kg	Conc µg/kg		MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U		4.7	U		5.1	U	5.2	U	5.2	U	5.0
beta-BHC	U		4.7	U		5.1	U	5.2	U	5.2	U	5.0
delta-BHC	U		4.7	U		5.1	U	5.2	U	5.2	U	5.0
gamma-BHC (Lindane)	U		4.7	U		5.1	U	5.2	U	5.2	U	5.0
Heptachlor	U		4.7	U		5.1	U	5.2	U	5.2	U	5.0
Aldrin	U		4.7	U		5.1	U	5.2	U	5.2	U	5.0
Heptachlor epoxide	U		4.7	U		5.1	U	5.2	U	5.2	U	5.0
Endosulfan I	U		4.7	U		5.1	U	5.2	U	5.2	U	5.0
Dieldrin	U		9.4	U		10	U	10	U	10	U	9.9
4,4'-DDE	U		9.4	U		10	U	10	U	10	U	9.9
Endrin	U		9.4	U		10	U	10	U	10	U	9.9
Endosulfan II	U		9.4	U		10	U	10	U	10	U	9.9
4,4'-DDD	U		9.4	U		10	U	10	U	10	U	9.9
Endosulfan sulfate	U		9.4	U		10	U	10	U	10	U	9.9
4,4'-DDT	U		9.4	U		10	U	10	U	10	U	9.9
Methoxychlor	U		47	U		51	U	52	U	52	U	50
Endrin ketone	U		9.4	U		10	U	10	U	10	U	9.9
Endrin aldehyde	U		9.4	U		10	U	10	U	10	U	9.9
Chlordane	U		47	U		51	U	52	U	52	U	50
Toxaphene	U		470	U		510	U	520	U	520	U	500
Aroclor 1016	U		94	U		100	U	100	U	100	U	99
Aroclor 1221	U		190	U		200	U	210	U	210	U	200
Aroclor 1232	U		94	U		100	U	100	U	100	U	99
Aroclor 1242	U		94	U		100	U	100	U	100	U	99
Aroclor 1248	U		94	U		100	U	100	U	100	U	99
Aroclor 1254	720	W	94	340	W	100	U	100	U	100	U	99
Aroclor 1260	U		94	U		100	U	100	U	100	U	99

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	PBLKA	10474	10475	10476	10477
Location	6/26/97	A2-PS-5	Ref-PS-1	Ref-PS-2	Ref-PS-3
Date Collected	NA	6/17/97	6/18/97	6/18/97	6/18/97
Date Analyzed	7/4/97	7/2/97	7/2/97	7/2/97	7/2/97
Percent Lipids	NA	3.7	3.3	4.6	4.3
Dilution	1	10	1	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	5.0	U	85	U	8.3	U	10	U	9.4
beta-BHC	U	5.0	U	85	U	8.3	U	10	U	9.4
delta-BHC	U	5.0	U	85	U	8.3	U	10	U	9.4
gamma-BHC (Lindane)	U	5.0	U	85	U	8.3	U	10	U	9.4
Heptachlor	U	5.0	U	85	U	8.3	U	10	U	9.4
Aldrin	U	5.0	U	85	U	8.3	U	10	U	9.4
Heptachlor epoxide	U	5.0	U	85	U	8.3	U	10	U	9.4
Endosulfan I	U	5.0	U	85	U	8.3	U	10	U	9.4
Dieldrin	U	10	U	170	U	17	U	20	U	19
4,4'-DDE	U	10	U	170	U	17	U	20	U	19
Endrin	U	10	U	170	U	17	U	20	U	19
Endosulfan II	U	10	U	170	U	17	U	20	U	19
4,4'-DDD	U	10	U	170	U	17	U	20	U	19
Endosulfan sulfate	U	10	U	170	U	17	U	20	U	19
4,4'-DDT	U	10	U	170	U	17	U	20	U	19
Methoxychlor	U	50	U	850	U	83	U	100	U	94
Endrin ketone	U	10	U	170	U	17	U	20	U	19
Endrin aldehyde	U	10	U	170	U	17	U	20	U	19
Chlordane	U	50	U	850	U	83	U	100	U	94
Toxaphene	U	500	U	8500	U	830	U	1000	U	940
Aroclor 1016	U	100	U	1700	U	170	U	200	U	190
Aroclor 1221	U	200	U	3400	U	330	U	400	U	380
Aroclor 1232	U	100	U	1700	U	170	U	200	U	190
Aroclor 1242	U	100	U	1700	U	170	U	200	U	190
Aroclor 1248	U	100	U	1700	U	170	U	200	U	190
Aroclor 1254	U	100	7100	1700	230	170	470	200	210	190
Aroclor 1260	U	100	U	1700	U	170	U	200	U	190

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	10478	10479
Location	Ref-PS-4	Ref-PS-5
Date Collected	6/18/97	6/18/97
Date Analyzed	7/2/97	7/2/97
Percent Lipids	3.2	5.1
Dilution	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	11	U	5.0
beta-BHC	U	11	U	5.0
delta-BHC	U	11	U	5.0
gamma-BHC (Lindane)	U	11	U	5.0
Heptachlor	U	11	U	5.0
Aldrin	U	11	U	5.0
Heptachlor epoxide	U	11	U	5.0
Endosulfan I	U	11	U	5.0
Dieldrin	U	22	U	10
4,4'-DDE	U	22	U	10
Endrin	U	22	U	10
Endosulfan II	U	22	U	10
4,4'-DDD	U	22	U	10
Endosulfan sulfate	U	22	U	10
4,4'-DDT	U	22	U	10
Methoxychlor	U	110	U	50
Endrin ketone	U	22	U	10
Endrin aldehyde	U	22	U	10
Chlordane	U	110	U	50
Toxaphene	U	1100	U	500
Aroclor 1016	U	220	U	100
Aroclor 1221	U	430	U	200
Aroclor 1232	U	220	U	100
Aroclor 1242	U	220	U	100
Aroclor 1248	U	220	U	100
Aroclor 1254	640	220	330	100
Aroclor 1260	U	220	U	100

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	PBLKA	B 10219	B 10220	B 10221	B 10222
Location	7/10/97	A3-1	A3-2	A3-3	A3-12
Percent Lipids	NA	2.7	1.7	2.2	1.9
Date Collected	NA	06/18/97	06/18/97	06/18/97	06/18/97
Date Analyzed	7/16/97	7/16/97	7/16/97	7/16/97	7/16/97
Dilution Factor	1	1	1	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	5.0	U	12	U	12	U	16	U	17
gamma-BHC (Lindane)	U	5.0	U	12	U	12	U	16	U	17
Heptachlor	U	5.0	U	12	U	12	U	16	U	17
Aldrin	U	5.0	U	12	U	12	U	16	U	17
beta-BHC	U	5.0	U	12	U	12	U	16	U	17
delta-BHC	U	5.0	U	12	U	12	U	16	U	17
Heptachlor epoxide	U	5.0	U	12	U	12	U	16	U	17
Endosulfan I	U	5.0	U	12	U	12	U	16	U	17
4,4'-DDE	U	10	U	23	U	23	U	31	U	33
Dieldrin	U	10	U	23	U	23	U	31	U	33
Endrin	U	10	U	23	U	23	U	31	U	33
Endosulfan II	U	10	U	23	U	23	U	31	U	33
4 4'-DDD	U	10	U	23	U	23	U	31	U	33
4,4'-DDT	U	10	U	23	U	23	U	31	U	33
Endrin aldehyde	U	10	U	23	U	23	U	31	U	33
Endosulfan sulfate	U	10	U	23	U	23	U	31	U	33
Methoxychlor	U	50	U	120	U	120	U	160	U	170
Endrin ketone	U	10	U	23	U	23	U	31	U	33
Aroclor 1016	U	100	U	230	U	230	U	310	U	330
Aroclor 1221	U	200	U	470	U	470	U	620	U	670
Aroclor 1232	U	100	U	230	U	230	U	310	U	330
Aroclor 1242	U	100	U	230	U	230	U	310	U	330
Aroclor 1248	U	100	U	230	U	230	U	310	U	330
Aroclor 1254	U	100	1700	230	1700	230	940	310	1000	330
Aroclor 1260	U	100	U	230	U	230	U	310	U	330
Toxaphene	U	500	U	1200	U	1200	U	1600	U	1700
Chlordane	U	50	U	120	U	120	U	160	U	170

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	B 10223	B 10224	B 10225	B 10226	B 10227
Location	A3-13	A3-14	A3-15	A3-16	A3-17
Percent Lipids	2.3	2.2	2.0	1.8	2.3
Date Collected	06/18/97	06/18/97	06/18/97	06/18/97	06/18/97
Date Analyzed	7/16/97	7/16/97	7/17/97	7/17/97	7/17/97
Dilution Factor	1	1	1	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	4.9	U	5.1	U	16	U	12	U	11
gamma-BHC (Lindane)	U	4.9	U	5.1	U	16	U	12	U	11
Heptachlor	U	4.9	U	5.1	U	16	U	12	U	11
Aldrin	U	4.9	U	5.1	U	16	U	12	U	11
beta-BHC	U	4.9	U	5.1	U	16	U	12	U	11
delta-BHC	U	4.9	U	5.1	U	16	U	12	U	11
Heptachlor epoxide	U	4.9	U	5.1	U	16	U	12	U	11
Endosulfan I	U	4.9	U	5.1	U	16	U	12	U	11
4,4'-DDE	U	9.8	U	10	U	31	U	24	U	21
Dieldrin	U	9.8	U	10	U	31	U	24	U	21
Endrin	U	9.8	U	10	U	31	U	24	U	21
Endosulfan II	U	9.8	U	10	U	31	U	24	U	21
4,4'-DDD	U	9.8	U	10	U	31	U	24	U	21
4,4'-DDT	U	9.8	U	10	U	31	U	24	U	21
Endrin aldehyde	U	9.8	U	10	U	31	U	24	U	21
Endosulfan sulfate	U	9.8	U	10	U	31	U	24	U	21
Methoxychlor	U	49	U	51	U	160	U	120	U	110
Endrin ketone	U	9.8	U	10	U	31	U	24	U	21
Aroclor 1016	U	98	U	100	U	310	U	240	U	210
Aroclor 1221	U	200	U	200	U	620	U	480	U	430
Aroclor 1232	U	98	U	100	U	310	U	240	U	210
Aroclor 1242	U	98	U	100	U	310	U	240	U	210
Aroclor 1248	U	98	U	100	U	310	U	240	U	210
Aroclor 1254	980	98	880	100	1100	310	1100	240	1100	210
Aroclor 1260	U	98	U	100	U	310	U	240	U	210
Toxaphene	U	490	U	500	U	1600	U	1200	U	1100
Chlordane	U	49	U	51	U	160	U	120	U	110

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	B 10228		B 10229		B 10230		B 10231		B 10232	
Location	A3-18		A3-19		A3-Comp		A2-10		A2-2	
Percent Lipids	3.2		1.6		0.75		2.1		1.1	
Date Collected	06/18/97		06/18/97		06/18/97		06/18/97		06/18/97	
Date Analyzed	7/17/97		7/17/97		7/17/97		7/17/97		7/17/97	
Dilution Factor	1		1		1		1		1	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	11	U	33	U	14	U	16	U	14
gamma-BHC (Lindane)	U	11	U	33	U	14	U	16	U	14
Heptachlor	U	11	U	33	U	14	U	16	U	14
Aldrin	U	11	U	33	U	14	U	16	U	14
beta-BHC	U	11	U	33	U	14	U	16	U	14
delta-BHC	U	11	U	33	U	14	U	16	U	14
Heptachlor epoxide	U	11	U	33	U	14	U	16	U	14
Endosulfan I	U	11	U	33	U	14	U	16	U	14
4,4'-DDE	U	22	U	67	U	27	U	32	U	29
Dieldrin	U	22	U	67	U	27	U	32	U	29
Endrin	U	22	U	67	U	27	U	32	U	29
Endosulfan II	U	22	U	67	U	27	U	32	U	29
4,4'-DDD	U	22	U	67	U	27	U	32	U	29
4,4'-DDT	U	22	U	67	U	27	U	32	U	29
Endrin aldehyde	U	22	U	67	U	27	U	32	U	29
Endosulfan sulfate	U	22	U	67	U	27	U	32	U	29
Methoxychlor	U	110	U	330	U	140	U	160	U	140
Endrin ketone	U	22	U	67	U	27	U	32	U	29
Aroclor 1016	U	220	U	670	U	270	U	320	U	290
Aroclor 1221	U	440	U	1300	U	540	U	650	U	570
Aroclor 1232	U	220	U	670	U	270	U	320	U	290
Aroclor 1242	U	220	U	670	U	270	U	320	U	290
Aroclor 1248	U	220	U	670	U	270	U	320	U	290
Aroclor 1254	1800	220	1800	670	670	270	1800	320	1600	290
Aroclor 1260	U	220	U	670	U	270	U	320	U	290
Toxaphene	U	1100	U	3300	U	1400	U	1600	U	1400
Chlordane	U	110	U	330	U	140	U	160	U	140

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Comell Dubilier Electronics
Based on wet weight

Client ID	B 10233	B 10234	B 10235	B 10236	B 10237
Location	A2-3	A2-4	A2-5	A2-11	A2-Comp
Percent Lipids	3.0	1.3	1.7	1.3	1.9
Date Collected	06/18/97	06/18/97	06/18/97	06/18/97	06/18/97
Date Analyzed	7/17/97	7/17/97	7/17/97	7/17/97	7/17/97
Dilution Factor	1	1	1	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	15	U	17	U	17	U	16	U	15
gamma-BHC (Lindane)	U	15	U	17	U	17	U	16	U	15
Heptachlor	U	15	U	17	U	17	U	16	U	15
Aldrin	U	15	U	17	U	17	U	16	U	15
beta-BHC	U	15	U	17	U	17	U	16	U	15
delta-BHC	U	15	U	17	U	17	U	16	U	15
Heptachlor epoxide	U	15	U	17	U	17	U	16	U	15
Endosulfan I	U	15	U	17	U	17	U	16	U	15
4,4'-DDE	U	30	U	33	U	34	U	31	U	30
Dieldrin	U	30	U	33	U	34	U	31	U	30
Endrin	U	30	U	33	U	34	U	31	U	30
Endosulfan II	U	30	U	33	U	34	U	31	U	30
4 4'-DDD	U	30	U	33	U	34	U	31	U	30
4 4'-DDT	U	30	U	33	U	34	U	31	U	30
Endrin aldehyde	U	30	U	33	U	34	U	31	U	30
Endosulfan sulfate	U	30	U	33	U	34	U	31	U	30
Methoxychlor	U	150	U	170	U	170	U	160	U	150
Endrin ketone	U	30	U	33	U	34	U	31	U	30
Aroclor 1016	U	300	U	330	U	340	U	310	U	300
Aroclor 1221	U	610	U	670	U	690	U	620	U	610
Aroclor 1232	U	300	U	330	U	340	U	310	U	300
Aroclor 1242	U	300	U	330	U	340	U	310	U	300
Aroclor 1248	U	300	U	330	U	340	U	310	U	300
Aroclor 1254	2400	300	1400	330	1100	340	2300	310	1600	300
Aroclor 1260	U	300	U	330	U	340	U	310	U	300
Toxaphene	U	1500	U	1700	U	1700	U	1600	U	1500
Chlordane	U	150	U	170	U	170	U	160	U	150

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	B 10238
Location	A2-12
Percent Lipids	1.9
Date Collected	06/18/97
Date Analyzed	7/17/97
Dilution Factor	1

Analyte	Conc µg/kg	MDL µg/kg
alpha-BHC	U	12
gamma-BHC (Lindane)	U	12
Heptachlor	U	12
Aldrin	U	12
beta-BHC	U	12
delta-BHC	U	12
Heptachlor epoxide	U	12
Endosulfan I	U	12
4,4'-DDE	U	24
Dieldrin	U	24
Endrin	U	24
Endosulfan II	U	24
4 4'-DDD	U	24
4,4'-DDT	U	24
Endrin aldehyde	U	24
Endosulfan sulfate	U	24
Methoxychlor	U	240
Endrin ketone	U	24
Aroclor 1016	U	240
Aroclor 1221	U	480
Aroclor 1232	U	240
Aroclor 1242	U	240
Aroclor 1248	U	240
Aroclor 1254	1900	240
Aroclor 1260	U	240
Toxaphene	U	1200
Chlordane	U	120

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	PBLKA	10434	10435	10436
Location	6/24/97	A4-PS-1	A4-PS-2	A4-PS-3
Percent Lipids	NA	8.5	4.8	4.4
Date Collected	NA	6/18/97	6/18/97	6/18/97
Date Analyzed	6/29/97	6/29/97	6/29/97	6/29/97
Dilution Factor	1	5	10	20

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	5.0	U	25	U	50	U	98
gamma-BHC (Lindane)	U	5.0	U	25	U	50	U	98
Heptachlor	U	5.0	U	25	U	50	U	98
Aldrin	U	5.0	U	25	U	50	U	98
beta-BHC	U	5.0	U	25	U	50	U	98
delta-BHC	U	5.0	U	25	U	50	U	98
Heptachlor epoxide	U	5.0	U	25	U	50	U	98
Endosulfan I	U	5.0	U	25	U	50	U	98
4,4'-DDE	U	10	U	50	U	99	U	200
Dieldrin	U	10	U	50	U	99	U	200
Endrin	U	10	U	50	U	99	U	200
Endosulfan II	U	10	U	50	U	99	U	200
4,4'-DDD	U	10	U	50	U	99	U	200
4,4'-DDT	U	10	U	50	U	99	U	200
Endrin aldehyde	U	10	U	50	U	99	U	200
Endosulfan sulfate	U	10	U	50	U	99	U	200
Methoxychlor	U	50	U	250	U	500	U	980
Endrin ketone	U	10	U	50	U	99	U	200
Aroclor 1016	U	100	U	500	U	990	U	2000
Aroclor 1221	U	200	U	1000	U	2000	U	3900
Aroclor 1232	U	100	U	500	U	990	U	2000
Aroclor 1242	U	100	U	500	U	990	U	2000
Aroclor 1248	U	100	U	500	U	990	U	2000
Aroclor 1254	U	100	1800	500	5800	990	24000	2000
Aroclor 1260	U	100	U	500	U	990	U	2000
Toxaphene	U	500	U	2500	U	5000	U	9800
Chlordane	U	50	U	250	U	500	U	980

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	10437		10438		10439		10440		10441	
Location	A4-PS-4		A4-PS-5		A4-PS-6		A4-PS-7		A6-PS-4	
Percent Lipids	4.5		4.5		3.9		3.1		1.2	
Date Collected	6/18/97		6/18/97		6/18/97		6/18/97		6/17/97	
Date Analyzed	6/29/97		6/29/97		6/29/97		6/29/97		6/29/97	
Dilution Factor	10		5		5		10		10	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	50	U	46	U	45	U	49	U	50
gamma-BHC (Lindane)	U	50	U	46	U	45	U	49	U	50
Heptachlor	U	50	U	46	U	45	U	49	U	50
Aldrin	U	50	U	46	U	45	U	49	U	50
beta-BHC	U	50	U	46	U	45	U	49	U	50
delta-BHC	U	50	U	46	U	45	U	49	U	50
Heptachlor epoxide	U	50	U	46	U	45	U	49	U	50
Endosulfan I	U	50	U	46	U	45	U	49	U	50
4,4'-DDE	U	99	U	93	U	91	U	97	U	100
Dieldrin	U	99	U	93	U	91	U	97	U	100
Endrin	U	99	U	93	U	91	U	97	U	100
Endosulfan II	U	99	U	93	U	91	U	97	U	100
4 4'-DDD	U	99	U	93	U	91	U	97	U	100
4,4-DDT	U	99	U	93	U	91	U	97	U	100
Endrin aldehyde	U	99	U	93	U	91	U	97	U	100
Endosulfan sulfate	U	99	U	93	U	91	U	97	U	100
Methoxychlor	U	500	U	460	U	450	U	490	U	500
Endrin ketone	U	99	U	93	U	91	U	97	U	100
Aroclor 1016	U	990	U	930	U	910	U	970	U	1000
Aroclor 1221	U	2000	U	1900	U	1800	U	1900	U	2000
Aroclor 1232	U	990	U	930	U	910	U	970	U	1000
Aroclor 1242	U	990	U	930	U	910	U	970	U	1000
Aroclor 1248	U	990	U	930	U	910	U	970	U	1000
Aroclor 1254	5100	990	5500	930	6000	910	5400	970	7600	1000
Aroclor 1260	U	990	U	930	U	910	U	970	U	1000
Toxaphene	U	5000	U	4600	U	4500	U	4900	U	5000
Chlordane	U	500	U	460	U	450	U	490	U	500

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	10442		10443		10444		10445		10446	
Location	A6-PS-5		A6-PS-6		A6-PS-7		A6-PS-8		A6-PS-9	
Percent Lipids	1.6		1.3		0.98		1.6		1.0	
Date Collected	6/17/97		6/17/97		6/17/97		6/17/97		6/17/97	
Date Analyzed	6/29/97		6/29/97		6/29/97		6/30/97		6/30/97	
Dilution Factor	1		5		5		2		10	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	9.6	U	25	U	25	U	10	U	50
gamma-BHC (Lindane)	U	9.6	U	25	U	25	U	10	U	50
Heptachlor	U	9.6	U	25	U	25	U	10	U	50
Aldrin	U	9.6	U	25	U	25	U	10	U	50
beta-BHC	U	9.6	U	25	U	25	U	10	U	50
delta-BHC	U	9.6	U	25	U	25	U	10	U	50
Heptachlor epoxide	U	9.6	U	25	U	25	U	10	U	50
Endosulfan I	U	9.6	U	25	U	25	U	10	U	50
4,4'-DDE	U	19	U	50	U	49	U	20	U	100
Dieldrin	U	19	U	50	U	49	U	20	U	100
Endrin	U	19	U	50	U	49	U	20	U	100
Endosulfan II	U	19	U	50	U	49	U	20	U	100
4,4'-DDD	U	19	U	50	U	49	U	20	U	100
4,4'-DDT	U	19	U	50	U	49	U	20	U	100
Endrin aldehyde	U	19	U	50	U	49	U	20	U	100
Endosulfan sulfate	U	19	U	50	U	49	U	20	U	100
Methoxychlor	U	96	U	250	U	250	U	100	U	500
Endrin ketone	U	19	U	50	U	49	U	20	U	100
Aroclor 1016	U	190	U	500	U	490	U	200	U	1000
Aroclor 1221	U	380	U	990	U	980	U	400	U	2000
Aroclor 1232	U	190	U	500	U	490	U	200	U	1000
Aroclor 1242	U	190	U	500	U	490	U	200	U	1000
Aroclor 1248	U	190	U	500	U	490	U	200	U	1000
Aroclor 1254	1500	190	4100	500	1900	490	900	200	6300	1000
Aroclor 1260	U	190	U	500	U	490	U	200	U	1000
Toxaphene	U	960	U	2500	U	2500	U	1000	U	5000
Chlordane	U	96	U	250	U	250	U	100	U	500

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	10447		10448		10449		10450		10451	
Location	A6-PS-10		A6-PS-11		A5-PS-4		A5-PS-5		A5-PS-6	
Percent Lipids	0.82		2.2		4.2		2.4		1.6	
Date Collected	6/17/97		6/17/97		6/17/97		6/17/97		6/17/97	
Date Analyzed	6/30/97		6/30/97		6/30/97		6/30/97		6/30/97	
Dilution Factor	5		5		5		5		5	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	25	U	24	U	25	U	24	U	25
gamma-BHC (Lindane)	U	25	U	24	U	25	U	24	U	25
Heptachlor	U	25	U	24	U	25	U	24	U	25
Aldrin	U	25	U	24	U	25	U	24	U	25
beta-BHC	U	25	U	24	U	25	U	24	U	25
delta-BHC	U	25	U	24	U	25	U	24	U	25
Heptachlor epoxide	U	25	U	24	U	25	U	24	U	25
Endosulfan I	U	25	U	24	U	25	U	24	U	25
4,4'-DDE	U	50	U	49	U	50	U	48	U	49
Dieldrin	U	50	U	49	U	50	U	48	U	49
Endrin	U	50	U	49	U	50	U	48	U	49
Endosulfan II	U	50	U	49	U	50	U	48	U	49
4,4'-DDD	U	50	U	49	U	50	U	48	U	49
4,4'-DDT	U	50	U	49	U	50	U	48	U	49
Endrin aldehyde	U	50	U	49	U	50	U	48	U	49
Endosulfan sulfate	U	50	U	49	U	50	U	48	U	49
Methoxychlor	U	250	U	240	U	250	U	240	U	250
Endrin ketone	U	50	U	49	U	50	U	48	U	49
Aroclor 1016	U	500	U	490	U	500	U	480	U	490
Aroclor 1221	U	1000	U	970	U	1000	U	960	U	980
Aroclor 1232	U	500	U	490	U	500	U	480	U	490
Aroclor 1242	U	500	U	490	U	500	U	480	U	490
Aroclor 1248	U	500	U	490	U	500	U	480	U	490
Aroclor 1254	2800	500	2900	490	2700	500	11000	480	11000	490
Aroclor 1260	U	500	U	490	U	500	U	480	U	490
Toxaphene	U	2500	U	2400	U	2500	U	2400	U	2500
Chlordane	U	250	U	240	U	250	U	240	U	250

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Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-Z74 Cornell Dubilier Electronics
Based on wet weight

Client ID	10452	10453
Location	A5-PS-7	A5-PS-8
Percent Lipids	1.9	1.8
Date Collected	6/17/97	6/17/97
Date Analyzed	6/30/97	6/30/97
Dilution Factor	5	5

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	25	U	25
gamma-BHC (Lindane)	U	25	U	25
Heptachlor	U	25	U	25
Aldrin	U	25	U	25
beta-BHC	U	25	U	25
delta-BHC	U	25	U	25
Heptachlor epoxide	U	25	U	25
Endosulfan I	U	25	U	25
4,4'-DDE	U	50	U	50
Dieldrin	U	50	U	50
Endrin	U	50	U	50
Endosulfan II	U	50	U	50
4 4'-DDD	U	50	U	50
4 4'-DDT	U	50	U	50
Endrin aldehyde	U	50	U	50
Endosulfan sulfate	U	50	U	50
Methoxychlor	U	250	U	250
Endrin ketone	U	50	U	50
Aroclor 1016	U	500	U	500
Aroclor 1221	U	1000	U	990
Aroclor 1232	U	500	U	500
Aroclor 1242	U	500	U	500
Aroclor 1248	U	500	U	500
Aroclor 1254	2100	500	3500	500
Aroclor 1260	U	500	U	500
Toxaphene	U	2500	U	2500
Chlordane	U	250	U	250

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	PBLKB	B 10421	B 10422	B 10423	B 10424
Location	6/28/97	T3-1-11	T3-4-20	T3-4-1	T3-3-15
Percent Lipids	NA	5.8	6.0	5.1	9.5
Date Collected	NA	6/17/97	6/17/97	6/18/97	6/17/97
Date Analyzed	7/24/97	7/24/97	7/24/97	7/25/97	7/25/97
Dilution Factor	1	1	1	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	5.0	U	12	U	5.0	U	5.0	U	5.0
gamma-BHC (Lindane)	U	5.0	U	12	U	5.0	U	5.0	U	5.0
Heptachlor	U	5.0	U	12	U	5.0	U	5.0	U	5.0
Aldrin	U	5.0	U	12	U	5.0	U	5.0	U	5.0
beta-BHC	U	5.0	U	12	U	5.0	U	5.0	U	5.0
delta-BHC	U	5.0	U	12	U	5.0	U	5.0	U	5.0
Heptachlor epoxide	U	5.0	U	12	U	5.0	U	5.0	U	5.0
Endosulfan I	U	5.0	U	12	U	5.0	U	5.0	U	5.0
4,4'-DDE	U	10	U	24	U	9.9	U	9.9	U	9.9
Dieldrin	U	10	U	24	U	9.9	U	9.9	U	9.9
Endrin	U	10	U	24	U	9.9	U	9.9	U	9.9
Endosulfan II	U	10	U	24	U	9.9	U	9.9	U	9.9
4 4'-DDD	U	10	U	24	U	9.9	U	9.9	U	9.9
4 4'-DDT	U	10	U	24	U	9.9	U	9.9	U	9.9
Endrin aldehyde	U	10	U	24	U	9.9	U	9.9	U	9.9
Endosulfan sulfate	U	10	U	24	U	9.9	U	9.9	U	9.9
Methoxychlor	U	50	U	120	U	50	U	50	U	50
Endrin ketone	U	10	U	24	U	9.9	U	9.9	U	9.9
Aroclor 1016	U	100	U	240	U	99	U	99	U	99
Aroclor 1221	U	200	U	490	U	200	U	200	U	200
Aroclor 1232	U	100	U	240	U	99	U	99	U	99
Aroclor 1242	U	100	U	240	U	99	U	99	U	99
Aroclor 1248	U	100	U	240	U	99	U	99	U	99
Aroclor 1254	U	100	440 W	240	220 W	99	U	99	150 W	99
Aroclor 1260	U	100	U	240	U	99	U	99	U	99
Toxaphene	U	500	U	1200	U	500	U	500	U	500
Chlordane	U	50	U	120	U	50	U	50	U	50

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	B 10425	B 10426	B 10427	B 10428	B 10429
Location	T3-1-5	T4-2-23	T4-1-1	T4-1-27	T4-5-3
Percent Lipids	7.5	4.8	5.8	2.9	6.8
Date Collected	6/17/97	6/18/97	6/18/97	6/18/97	6/18/97
Date Analyzed	7/25/97	7/25/97	7/25/97	7/25/97	7/25/97
Dilution Factor	1	1	1	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	5.0	U	4.9	U	4.9	U	4.9	U	5.0
gamma-BHC (Lindane)	U	5.0	U	4.9	U	4.9	U	4.9	U	5.0
Heptachlor	U	5.0	U	4.9	U	4.9	U	4.9	U	5.0
Aldrin	U	5.0	U	4.9	U	4.9	U	4.9	U	5.0
beta-BHC	U	5.0	U	4.9	U	4.9	U	4.9	U	5.0
delta-BHC	U	5.0	U	4.9	U	4.9	U	4.9	U	5.0
Heptachlor epoxide	U	5.0	23	4.9	U	4.9	69	4.9	U	5.0
Endosulfan I	U	5.0	U	4.9	U	4.9	U	4.9	U	5.0
4,4'-DDE	U	9.9	U	9.7	U	9.7	U	9.8	U	9.9
Dieldrin	U	9.9	18	9.7	17	9.7	20	9.8	U	9.9
Endrin	U	9.9	U	9.7	U	9.7	U	9.8	U	9.9
Endosulfan II	U	9.9	U	9.7	U	9.7	U	9.8	U	9.9
4,4'-DDD	U	9.9	U	9.7	U	9.7	U	9.8	U	9.9
4,4'-DDT	U	9.9	U	9.7	U	9.7	U	9.8	U	9.9
Endrin aldehyde	U	9.9	U	9.7	U	9.7	U	9.8	U	9.9
Endosulfan sulfate	U	9.9	U	9.7	U	9.7	U	9.8	U	9.9
Methoxychlor	U	50	U	49	U	49	U	49	U	50
Endrin ketone	U	9.9	U	9.7	U	9.7	U	9.8	U	9.9
Aroclor 1016	U	99	U	97	U	97	U	98	U	99
Aroclor 1221	U	200	U	190	U	190	U	200	U	200
Aroclor 1232	U	99	U	97	U	97	U	98	U	99
Aroclor 1242	U	99	U	97	U	97	U	98	U	99
Aroclor 1248	U	99	U	97	U	97	U	98	U	99
Aroclor 1254	300 W	99	470 W	97	540 W	97	1300 W	98	750 W	99
Aroclor 1260	U	99	U	97	U	97	U	98	U	99
Toxaphene	U	500	U	490	U	490	U	490	U	500
Chlordane	U	50	U	49	U	49	U	49	U	50

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	B 10430	B 10431	B 10432	B 10433
Location	T4-2-24	T4-2-2	T4-3-5	T4-2-7
Percent Lipids	5.6	6.8	4.1	4.1
Date Collected	6/18/97	6/18/97	6/17/97	6/17/97
Date Analyzed	7/25/97	7/25/97	7/25/97	7/25/97
Dilution Factor	1	1	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	5.0	U	5.0	U	5.0	U	4.9
gamma-BHC (Lindane)	U	5.0	U	5.0	U	5.0	U	4.9
Heptachlor	U	5.0	U	5.0	U	5.0	U	4.9
Aldrin	U	5.0	U	5.0	U	5.0	U	4.9
beta-BHC	U	5.0	U	5.0	U	5.0	U	4.9
delta-BHC	U	5.0	U	5.0	U	5.0	U	4.9
Heptachlor epoxide	U	5.0	U	5.0	U	5.0	U	4.9
Endosulfan I	U	5.0	U	5.0	U	5.0	U	4.9
4,4'-DDE	U	9.9	U	10	U	9.9	U	9.8
Dieldrin	U	9.9	U	10	U	9.9	U	9.8
Endrin	U	9.9	U	10	U	9.9	U	9.8
Endosulfan II	U	9.9	U	10	U	9.9	U	9.8
4,4'-DDD	U	9.9	U	10	U	9.9	U	9.8
4,4'-DDT	U	9.9	U	10	U	9.9	U	9.8
Endrin aldehyde	U	9.9	U	10	U	9.9	U	9.8
Endosulfan sulfate	U	9.9	U	10	U	9.9	U	9.8
Methoxychlor	U	50	U	50	U	50	U	49
Endrin ketone	U	9.9	U	10	U	9.9	U	9.8
Aroclor 1016	U	99	U	100	U	99	U	98
Aroclor 1221	U	200	U	200	U	200	U	200
Aroclor 1232	U	99	U	100	U	99	U	98
Aroclor 1242	U	99	U	100	U	99	U	98
Aroclor 1248	U	99	U	100	U	99	U	98
Aroclor 1254	1400 W	99	310 W	100	400 W	99	590 W	98
Aroclor 1260	U	99	U	100	U	99	U	98
Toxaphene	U	500	U	500	U	500	U	490
Chlordane	U	50	U	50	U	50	U	49

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	PBLKA	10454	10455	10456	10457
Location	6/25/97	A5-PS-9	A5-PS-10	A1-PS-1	A1-PS-2
Percent Lipids	NA	4.4	1.7	7.6	6.9
Date Collected	NA	06/17/97	06/17/97	6/18/97	6/18/97
Date Analyzed	7/01/97	7/01/97	7/01/97	7/01/97	7/01/97
Dilution Factor	1	5	5	5	5

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	5.0	U	25	U	25	U	25	U	250
gamma-BHC (Lindane)	U	5.0	U	25	U	25	U	25	U	250
Heptachlor	U	5.0	U	25	U	25	U	25	U	250
Aldrin	U	5.0	U	25	U	25	U	25	U	250
beta-BHC	U	5.0	U	25	U	25	U	25	U	250
delta-BHC	U	5.0	U	25	U	25	U	25	U	250
Heptachlor epoxide	U	5.0	U	25	U	25	U	25	U	250
Endosulfan I	U	5.0	U	25	U	25	U	25	U	250
4,4'-DDE	U	10	U	50	U	50	U	50	U	500
Dieldrin	U	10	U	50	U	50	U	50	U	500
Endrin	U	10	U	50	U	50	U	50	U	500
Endosulfan II	U	10	U	50	U	50	U	50	U	500
4,4'-DDD	U	10	U	50	U	50	U	50	U	500
4,4'-DDT	U	10	U	50	U	50	U	50	U	500
Endrin aldehyde	U	10	U	50	U	50	U	50	U	500
Endosulfan sulfate	U	10	U	50	U	50	U	50	U	500
Methoxychlor	U	50	U	250	U	250	U	250	U	2500
Endrin ketone	U	10	U	50	U	50	U	50	U	500
Aroclor 1016	U	100	U	500	U	500	U	500	U	5000
Aroclor 1221	U	200	U	1000	U	1000	U	1000	U	10000
Aroclor 1232	U	100	U	500	U	500	U	500	U	5000
Aroclor 1242	U	100	U	500	U	500	U	500	U	5000
Aroclor 1248	U	100	U	500	U	500	U	500	U	5000
Aroclor 1254	U	100	3800	500	4500	500	3000	500	22000	5000
Aroclor 1260	U	100	U	500	U	500	U	500	U	5000
Toxaphene	U	500	U	2500	U	2500	U	2500	U	25000
Chlordane	U	50	U	250	U	250	U	250	U	2500

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	10458	10459	10460	10461	10462
Location	A1-PS-3	A1-PS-4	A1-PS-5	A1-PS-6	A3-PS-1
Percent Lipids	4.7	4.5	2.5	3.5	9.0
Date Collected	6/18/97	6/18/97	6/18/97	6/18/97	6/18/97
Date Analyzed	7/01/97	7/01/97	7/01/97	7/01/97	7/01/97
Dilution Factor	5	5	5	5	5

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	50	U	50	U	25	U	25	U	25
gamma-BHC (Lindane)	U	50	U	50	U	25	U	25	U	25
Heptachlor	U	50	U	50	U	25	U	25	U	25
Aldrin	U	50	U	50	U	25	U	25	U	25
beta-BHC	U	50	U	50	U	25	U	25	U	25
delta-BHC	U	50	U	50	U	25	U	25	U	25
Heptachlor epoxide	U	50	U	50	U	25	U	25	U	25
Endosulfan I	U	50	U	50	U	25	U	25	U	25
4,4'-DDE	U	100	U	100	U	50	U	50	U	50
Dieldrin	U	100	U	100	U	50	U	50	U	50
Endrin	U	100	U	100	U	50	U	50	U	50
Endosulfan II	U	100	U	100	U	50	U	50	U	50
4 4'-DDD	U	100	U	100	U	50	U	50	U	50
4 4'-DDT	U	100	U	100	U	50	U	50	U	50
Endrin aldehyde	U	100	U	100	U	50	U	50	U	50
Endosulfan sulfate	U	100	U	100	U	50	U	50	U	50
Methoxychlor	U	500	U	500	U	250	U	250	U	250
Endrin ketone	U	100	U	100	U	50	U	50	U	50
Aroclor 1016	U	1000	U	1000	U	500	U	500	U	500
Aroclor 1221	U	2000	U	2000	U	1000	U	1000	U	1000
Aroclor 1232	U	1000	U	1000	U	500	U	500	U	500
Aroclor 1242	U	1000	U	1000	U	500	U	500	U	500
Aroclor 1248	U	1000	U	1000	U	500	U	500	U	500
Aroclor 1254	2200	1000	1100	1000	1300	500	2500	500	17000	500
Aroclor 1260	U	1000	U	1000	U	500	U	500	U	500
Toxaphene	U	5000	U	5000	U	2500	U	2500	U	2500
Chlordane	U	500	U	500	U	250	U	250	U	250

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	10463		10464		10465		10466		10467	
Location	A3-PS-2		A3-PS-3		A3-PS-4		A3-PS-5		A3-PS-6	
Percent Lipids	5.1		7.4		3.0		4.6		3.3	
Date Collected	6/18/97		6/18/97		6/18/97		6/18/97		6/18/97	
Date Analyzed	7/01/97		7/01/97		7/01/97		7/01/97		7/01/97	
Dilution Factor	5		5		5		5		5	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	25	U	49	U	25	U	50	U	50
gamma-BHC (Lindane)	U	25	U	49	U	25	U	50	U	50
Heptachlor	U	25	U	49	U	25	U	50	U	50
Aldrin	U	25	U	49	U	25	U	50	U	50
beta-BHC	U	25	U	49	U	25	U	50	U	50
delta-BHC	U	25	U	49	U	25	U	50	U	50
Heptachlor epoxide	U	25	U	49	U	25	U	50	U	50
Endosulfan I	U	25	U	49	U	25	U	50	U	50
4,4'-DDE	U	50	U	98	U	50	U	100	U	100
Dieldrin	U	50	U	98	U	50	U	100	U	100
Endrin	U	50	U	98	U	50	U	100	U	100
Endosulfan II	U	50	U	98	U	50	U	100	U	100
4,4'-DDD	U	50	U	98	U	50	U	100	U	100
4,4'-DDT	U	50	U	98	U	50	U	100	U	100
Endrin aldehyde	U	50	U	98	U	50	U	100	U	100
Endosulfan sulfate	U	50	U	98	U	50	U	100	U	100
Methoxychlor	U	250	U	490	U	250	U	500	U	500
Endrin ketone	U	50	U	98	U	50	U	100	U	100
Aroclor 1016	U	500	U	980	U	500	U	1000	U	1000
Aroclor 1221	U	1000	U	2000	U	1000	U	2000	U	2000
Aroclor 1232	U	500	U	980	U	500	U	1000	U	1000
Aroclor 1242	U	500	U	980	U	500	U	1000	U	1000
Aroclor 1248	U	500	U	980	U	500	U	1000	U	1000
Aroclor 1254	13000	500	23000	980	4000	500	6100	1000	3600	1000
Aroclor 1260	U	500	U	980	U	500	U	1000	U	1000
Toxaphene	U	2500	U	4900	U	2500	U	5000	U	5000
Chlordane	U	250	U	490	U	250	U	500	U	500

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	10468		10469		10470		10471		10472	
Location	A3-PS-7		A3-PS-8		A2-PS-1		A2-PS-2		A2-PS-3	
Percent Lipids	3.3		3.5		8.6		10		3.4	
Date Collected	6/18/97		6/18/97		6/17/97		6/17/97		6/17/97	
Date Analyzed	7/01/97		7/01/97		7/01/97		7/01/97		7/01/97	
Dilution Factor	5		5		5		5		5	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	50	U	50	U	25	U	49	U	50
gamma-BHC (Lindane)	U	50	U	50	U	25	U	49	U	50
Heptachlor	U	50	U	50	U	25	U	49	U	50
Aldrin	U	50	U	50	U	25	U	49	U	50
beta-BHC	U	50	U	50	U	25	U	49	U	50
delta-BHC	U	50	U	50	U	25	U	49	U	50
Heptachlor epoxide	U	50	U	50	U	25	U	49	U	50
Endosulfan I	U	50	U	50	U	25	U	49	U	50
4,4'-DDE	U	100	U	100	U	50	U	98	U	100
Dieldrin	U	100	U	100	U	50	U	98	U	100
Endrin	U	100	U	100	U	50	U	98	U	100
Endosulfan II	U	100	U	100	U	50	U	98	U	100
4,4'-DDD	U	100	U	100	U	50	U	98	U	100
4,4-DDT	U	100	U	100	U	50	U	98	U	100
Endrin aldehyde	U	100	U	100	U	50	U	98	U	100
Endosulfan sulfate	U	100	U	100	U	50	U	98	U	100
Methoxychlor	U	500	U	500	U	250	U	490	U	500
Endrin ketone	U	100	U	100	U	50	U	98	U	100
Aroclor 1016	U	1000	U	1000	U	500	U	980	U	1000
Aroclor 1221	U	2000	U	2000	U	1000	U	2000	U	2000
Aroclor 1232	U	1000	U	1000	U	500	U	980	U	1000
Aroclor 1242	U	1000	U	1000	U	500	U	980	U	1000
Aroclor 1248	U	1000	U	1000	U	500	U	980	U	1000
Aroclor 1254	3300	1000	5400	1000	28000	500	23000	980	8400	1000
Aroclor 1260	U	1000	U	1000	U	500	U	980	U	1000
Toxaphene	U	5000	U	5000	U	2500	U	4900	U	5000
Chlordane	U	500	U	500	U	250	U	490	U	500

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	10473
Location	A2-PS-4
Percent Lipids	3.3
Date Collected	6/17/97
Date Analyzed	7/01/97
Dilution Factor	5

Analyte	Conc µg/kg	MDL µg/kg
alpha-BHC	U	50
gamma-BHC (Lindane)	U	50
Heptachlor	U	50
Aldrin	U	50
beta-BHC	U	50
delta-BHC	U	50
Heptachlor epoxide	U	50
Endosulfan I	U	50
4,4'-DDE	U	100
Dieldrin	U	100
Endrin	U	100
Endosulfan II	U	100
4,4'-DDD	U	100
4,4'-DDT	U	100
Endrin aldehyde	U	100
Endosulfan sulfate	U	100
Methoxychlor	U	500
Endrin ketone	U	100
Aroclor 1016	U	1000
Aroclor 1221	U	2000
Aroclor 1232	U	1000
Aroclor 1242	U	1000
Aroclor 1248	U	1000
Aroclor 1254	9400	1000
Aroclor 1260	U	1000
Toxaphene	U	5000
Chlordane	U	500

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	PBLKA	B 10239	B 10240	B 10241	B 10242
Location	7/12/97	A2-13	A9-1	A9-2	A9-3
Percent Lipids	NA	2.4	2.5	0.94	5.9
Date Collected	NA	6/18/97	6/18/97	6/18/97	6/18/97
Date Analyzed	7/18/97	7/18/97	7/18/97	7/18/97	7/18/97
Dilution Factor	1	1	1	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	5	U	15	U	19	U	7.4	U	6.4
gamma-BHC (Lindane)	U	5	U	15	U	19	U	7.4	U	6.4
Heptachlor	U	5	U	15	U	19	U	7.4	U	6.4
Aldrin	U	5	U	15	U	19	U	7.4	U	6.4
beta-BHC	U	5	U	15	U	19	U	7.4	U	6.4
delta-BHC	U	5	U	15	U	19	U	7.4	U	6.4
Heptachlor epoxide	U	5	U	15	U	19	U	7.4	U	6.4
Endosulfan I	U	5	U	15	U	19	U	7.4	U	6.4
4,4'-DDE	U	10	U	30	U	37	U	15	U	13
Dieldrin	U	10	U	30	U	37	U	15	U	13
Endrin	U	10	U	30	U	37	U	15	U	13
Endosulfan II	U	10	U	30	U	37	U	15	U	13
4,4'-DDD	U	10	U	30	U	37	U	15	U	13
4,4-DDT	U	10	U	30	U	37	U	15	U	13
Endrin aldehyde	U	10	U	30	U	37	U	15	U	13
Endosulfan sulfate	U	10	U	30	U	37	U	15	U	13
Methoxychlor	U	50	U	150	U	190	U	74	U	64
Endrin ketone	U	10	U	30	U	37	U	15	U	13
Aroclor 1016	U	100	U	300	U	370	U	150	U	130
Aroclor 1221	U	200	U	610	U	740	U	290	U	260
Aroclor 1232	U	100	U	300	U	370	U	150	U	130
Aroclor 1242	U	100	U	300	U	370	U	150	U	130
Aroclor 1248	U	100	U	300	U	370	U	150	U	130
Aroclor 1254	U	100	1600	300	U	370	U	150	U	130
Aroclor 1260	U	100	U	300	U	370	U	150	U	130
Toxaphene	U	500	U	1500	U	1900	U	740	U	640
Chlordane	U	50	U	150	U	190	U	74	U	64

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	B 10243	B 10244	B 10245	B 10246	B 10247
Location	A9-4	A9-5	A9-6	A9-7	A9-9
Percent Lipids	2.2	2.0	2.2	5.4	2.5
Date Collected	6/18/97	6/18/97	6/18/97	6/18/97	6/18/97
Date Analyzed	7/18/97	7/18/97	7/18/97	7/18/97	7/18/97
Dilution Factor	1	1	1	1	1

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	13	U	18	U	20	U	16	U	15
gamma-BHC (Lindane)	U	13	U	18	U	20	U	16	U	15
Heptachlor	U	13	U	18	U	20	U	16	U	15
Aldrin	U	13	U	18	U	20	U	16	U	15
beta-BHC	U	13	U	18	U	20	U	16	U	15
delta-BHC	U	13	U	18	U	20	U	16	U	15
Heptachlor epoxide	U	13	U	18	U	20	U	16	U	15
Endosulfan I	U	13	U	18	U	20	U	16	U	15
4,4'-DDE	U	25	U	36	U	40	U	31	U	30
Dieldrin	U	25	U	36	U	40	U	31	U	30
Endrin	U	25	U	36	U	40	U	31	U	30
Endosulfan II	U	25	U	36	U	40	U	31	U	30
4,4'-DDD	U	25	U	36	U	40	U	31	U	30
4,4-DDT	U	25	U	36	U	40	U	31	U	30
Endrin aldehyde	U	25	U	36	U	40	U	31	U	30
Endosulfan sulfate	U	25	U	36	U	40	U	31	U	30
Methoxychlor	U	130	U	180	U	200	U	160	U	150
Endrin ketone	U	25	U	36	U	40	U	31	U	30
Aroclor 1016	U	250	U	360	U	400	U	310	U	300
Aroclor 1221	U	500	U	710	U	800	U	620	U	610
Aroclor 1232	U	250	U	360	U	400	U	310	U	300
Aroclor 1242	U	250	U	360	U	400	U	310	U	300
Aroclor 1248	U	250	U	360	U	400	U	310	U	300
Aroclor 1254	2200	250	U	360	U	400	U	310	U	300
Aroclor 1260	U	250	U	360	U	400	U	310	U	300
Toxaphene	U	1300	U	1800	U	2000	U	1600	U	1500
Chlordane	U	130	U	180	U	200	U	160	U	150

Table 1.8 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Client ID	B 10248		B 10249		B 10250		B 10268		B 10269	
Location	A9-13		A9-14		A9-Comp		A4-1		A4-2	
Percent Lipids	2.2		2.9		2.9		1.5		2.9	
Date Collected	6/20/97		6/20/97		6/18/97		6/18/97		6/18/97	
Date Analyzed	7/18/97		7/18/97		7/19/97		7/19/97		7/19/97	
Dilution Factor	1		1		1		1		1	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
alpha-BHC	U	6.7	U	7.8	U	31	U	8.3	U	8.2
gamma-BHC (Lindane)	U	6.7	U	7.8	U	31	U	8.3	U	8.2
Heptachlor	U	6.7	U	7.8	U	31	U	8.3	U	8.2
Aldrin	U	6.7	U	7.8	U	31	U	8.3	U	8.2
beta-BHC	U	6.7	U	7.8	U	31	U	8.3	U	8.2
delta-BHC	U	6.7	U	7.8	U	31	U	8.3	U	8.2
Heptachlor epoxide	U	6.7	U	7.8	U	31	U	8.3	U	8.2
Endosulfan I	U	6.7	U	7.8	U	31	U	8.3	U	8.2
4,4'-DDE	U	13	U	16	U	63	U	17	U	16
Dieldrin	U	13	U	16	U	63	U	17	U	16
Endrin	U	13	U	16	U	63	U	17	U	16
Endosulfan II	U	13	U	16	U	63	U	17	U	16
4,4'-DDD	U	13	U	16	U	63	U	17	U	16
4,4'-DDT	U	13	U	16	U	63	U	17	U	16
Endrin aldehyde	U	13	U	16	U	63	U	17	U	16
Endosulfan sulfate	U	13	U	16	U	63	U	17	U	16
Methoxychlor	U	67	U	78	U	310	U	83	U	82
Endrin ketone	U	13	U	16	U	63	U	17	U	16
Aroclor 1016	U	130	U	160	U	630	U	170	U	160
Aroclor 1221	U	270	U	310	U	1300	U	330	U	330
Aroclor 1232	U	130	U	160	U	630	U	170	U	160
Aroclor 1242	U	130	U	160	U	630	U	170	U	160
Aroclor 1248	U	130	U	160	U	630	U	170	U	160
Aroclor 1254	U	130	U	160	U	630	990	170	810	160
Aroclor 1260	U	130	U	160	U	630	U	170	U	160
Toxaphene	U	670	U	780	U	3100	U	830	U	820
Chlordane	U	67	U	78	U	310	U	83	U	82

Table 1.9 Results of the Analysis for Pesticides/PCBs in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	MBLK 061997		A5-PS-1		A5-PS-2		A5-PS-3		A5-LB-1	
Location	N/A		Area 5		Area 5		Area 5		Area 5	
Date Collected	NA		6/17/97		6/17/97		6/17/97		6/17/97	
Date Extracted	6/19/97		6/19/97		6/19/97		6/19/97		6/19/97	
Percent Solid	100		20		20		21		18	
Percent Lipids	NA		3		2		5		2	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
a-BHC	U	4.0	U	20	U	19	U	18	U	21
g-BHC	U	4.0	U	20	U	19	U	18	U	21
b-BHC	U	4.0	U	20	U	19	U	18	U	21
Heptachlor	U	4.0	U	20	U	19	U	18	U	21
d-BHC	U	4.0	U	20	U	19	U	18	U	21
Aldrin	U	4.0	U	20	U	19	U	18	U	21
Heptachlor Epoxide	U	4.0	100	20	67	19	130	18	32	21
g-Chlordane	U	4.0	U	20	U	19	U	18	U	21
a-Chlordane	U	4.0	U	20	U	19	U	18	U	21
Endosulfan (I)	U	4.0	U	20	U	19	U	18	U	21
p,p'-D D E	U	4.0	U	20	U	19	U	18	U	21
Dieldrin	U	4.0	U	20	U	19	U	18	U	21
Endrin	U	4.0	U	20	U	19	U	18	U	21
p p'-D D D	U	4.0	U	20	U	19	U	18	U	21
Endosulfan (II)	U	4.0	U	20	U	19	U	18	U	21
p,p'-D D T	U	4.0	U	20	U	19	U	18	U	21
Endrin Aldehyde	U	4.0	U	20	41	19	51	18	31	21
Endosulfan Sulfate	U	4.0	U	20	U	19	U	18	U	21
Methoxychlor	1 J	4.0	20 B	20	U	19	U	18	U	21
Endrin Ketone	U	4.0	U	20	U	19	U	18	U	21
Toxaphene	U	40	U	200	U	190	U	180	U	210
Aroclor 1016	U	20	U	100	U	93	U	91	U	100
Aroclor 1221	U	40	U	200	U	190	U	180	U	210
Aroclor 1232	U	20	U	100	U	93	U	91	U	100
Aroclor 1242	U	20	U	100	U	93	U	91	U	100
Aroclor 1248	U	20	4300 W	100	3100 W	93	5700 W	91	1700 W	100
Aroclor 1254	U	20	8700 W	100	7600 W	93	11000 W	91	4100 W	100
Aroclor 1260	U	20	U	100	U	93	U	91	U	100

Table 1.9 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	A5-LB-2	A5-LB-3	A5-WS-1	A5-WS-2	A5-WS-3
Location	Area 5	Area 5	Area 5	Area 5	Area 5
Date Collected	6/17/97	6/17/97	6/17/97	6/17/97	6/17/97
Date Extracted	6/19/97	6/19/97	6/19/97	6/19/97	6/19/97
Percent Solid	19	20	16	22	20
Percent Lipids	1	2	16	14	5

Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
a-BHC	U	20	U	19	U	24	U	18	U	19
g-BHC	U	20	U	19	U	24	U	18	U	19
b-BHC	U	20	U	19	U	24	U	18	U	19
Heptachlor	U	20	U	19	U	24	U	18	U	19
d-BHC	U	20	U	19	U	24	U	18	U	19
Aldrin	U	20	U	19	U	24	U	18	U	19
Heptachlor Epoxide	U	20	U	19	U	24	250	18	130	19
g-Chlordane	U	20	U	19	U	24	U	18	U	19
a-Chlordane	U	20	U	19	U	24	U	18	U	19
Endosulfan (I)	U	20	U	19	U	24	U	18	U	19
p,p'-D D E	U	20	U	19	U	24	U	18	U	19
Dieldrin	U	20	U	19	U	24	U	18	U	19
Endrin	U	20	U	19	U	24	U	18	U	19
p,p'-D D D	U	20	U	19	U	24	U	18	U	19
Endosulfan (II)	U	20	U	19	U	24	U	18	U	19
p,p'-D D T	U	20	U	19	U	24	U	18	U	19
Endrin Aldehyde	32	20	35	19	U	24	270	18	U	19
Endosulfan Sulfate	U	20	U	19	U	24	U	18	U	19
Methoxychlor	U	20	U	19	U	24	U	18	U	19
Endrin Ketone	U	20	U	19	U	24	U	18	U	19
Toxaphene	U	200	U	190	U	240	U	180	U	190
Aroclor 1016	U	100	U	96	U	120	U	90	U	96
Aroclor 1221	U	200	U	190	U	240	U	180	U	190
Aroclor 1232	U	100	U	96	U	120	U	90	U	96
Aroclor 1242	U	100	U	96	U	120	U	90	U	96
Aroclor 1248	1800 W	100	2200 W	96	22000 W	120	16000 W	90	7500 W	96
Aroclor 1254	4300 W	100	5700 W	96	74000 W	120	43000 W	90	28000 W	96
Aroclor 1260	U	100	U	96	U	120	U	90	U	96

Table 1.9 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	A5-CC-1		A6-LB-1		A6-LB-2		A6-LB-3		A6-PS-1	
Location	Area 5		Area 6		Area 6		Area 6		Area 6	
Date Collected	6/17/97		6/17/97		6/17/97		6/17/97		6/17/97	
Date Extracted	6/19/97		6/19/97		6/19/97		6/19/97		6/19/97	
Percent Solid	21		18		19		20		18	
Percent Lipids	6		2		2		1		3	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
a-BHC	U	18	U	22	U	20	U	19	U	21
g-BHC	U	18	U	22	U	20	U	19	U	21
b-BHC	U	18	U	22	U	20	U	19	U	21
Heptachlor	U	18	U	22	U	20	U	19	U	21
d-BHC	U	18	U	22	U	20	U	19	U	21
Aldrin	U	18	U	22	U	20	U	19	U	21
Heptachlor Epoxide	U	18	U	22	25	20	36	19	50	21
g-Chlordane	U	18	U	22	U	20	U	19	U	21
a-Chlordane	U	18	U	22	U	20	U	19	U	21
Endosulfan (I)	U	18	U	22	U	20	U	19	U	21
p,p'-D D E	U	18	U	22	59	20	98	19	70	21
Dieldrin	U	18	U	22	U	20	U	19	U	21
Endrin	U	18	U	22	U	20	U	19	U	21
p p'-D D D	U	18	U	22	U	20	U	19	U	21
Endosulfan (II)	U	18	U	22	U	20	U	19	U	21
p,p'-D D T	U	18	U	22	U	20	U	19	U	21
Endrin Aldehyde	510 E	18	26	22	U	20	U	19	U	21
Endosulfan Sulfate	U	18	U	22	U	20	U	19	U	21
Methoxychlor	U	18	U	22	U	20	U	19	U	21
Endrin Ketone	U	18	U	22	U	20	U	19	U	21
Toxaphene	U	180	U	220	U	200	U	190	U	210
Aroclor 1016	U	92	U	110	U	100	U	95	U	110
Aroclor 1221	U	180	U	220	U	200	U	190	U	210
Aroclor 1232	U	92	U	110	U	100	U	95	U	110
Aroclor 1242	U	92	U	110	U	100	U	95	U	110
Aroclor 1248	29000 W	92	1400 W	110	1800 W	100	3100 W	95	3000 W	110
Aroclor 1254	78000 W	92	3300 W	110	5900 W	100	8300 W	95	8000 W	110
Aroclor 1260	U	92	U	110	U	100	U	95	U	110

Table 1.9 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	A6-PS-2		A6-PS-3		A6-CC-1		A6-CC-2		A6-CC-3	
Location	Area 6		Area 6		Area 6		Area 6		Area 6	
Date Collected	6/17/97		6/17/97		6/17/97		6/17/97		6/17/97	
Date Extracted	6/19/97		6/19/97		6/19/97		6/19/97		6/19/97	
Percent Solid	18		18		19		26		24	
Percent Lipids	2		6		13		37		33	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
a-BHC	U	22	U	22	U	20	U	15	U	15
g-BHC	U	22	U	22	U	20	U	15	U	15
b-BHC	U	22	U	22	U	20	U	15	U	15
Heptachlor	U	22	U	22	U	20	U	15	U	15
d-BHC	U	22	U	22	U	20	U	15	U	15
Aldrin	U	22	U	22	U	20	U	15	U	15
Heptachlor Epoxide	35	22	53	22	120	20	410 E	15	350 E	15
g-Chlordane	U	22	U	22	U	20	U	15	U	15
a-Chlordane	U	22	U	22	U	20	U	15	U	15
Endosulfan (I)	U	22	U	22	U	20	U	15	U	15
p,p'-D D E	50	22	74	22	430 E	20	1200 E	15	U	15
Dieldrin	U	22	U	22	U	20	U	15	U	15
Endrin	U	22	U	22	U	20	U	15	U	15
p,p'-D D D	U	22	U	22	U	20	U	15	U	15
Endosulfan (II)	U	22	U	22	U	20	U	15	U	15
p,p'-D D T	U	22	U	22	U	20	U	15	U	15
Endrin Aldehyde	U	22	U	22	U	20	U	15	U	15
Endosulfan Sulfate	U	22	U	22	U	20	U	15	U	15
Methoxychlor	U	22	U	22	U	20	U	15	U	15
Endrin Ketone	U	22	U	22	U	20	U	15	U	15
Toxaphene	U	220	U	220	U	200	U	150	U	150
Aroclor 1016	U	110	U	110	U	100	U	74	U	77
Aroclor 1221	U	220	U	220	U	200	U	150	U	150
Aroclor 1232	U	110	U	110	U	100	U	74	U	77
Aroclor 1242	U	110	U	110	U	100	U	74	U	77
Aroclor 1248	2600 W	110	3300 W	110	14000 W	100	39000 W	74	37000 W	77
Aroclor 1254	6600 W	110	7800 W	110	43000 W	100	1E+05 W	74	69000 W	77
Aroclor 1260	U	110	U	110	U	100	U	74	U	77

Table 1.9 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	MBLK 062097		A1-CC-1		A1-CC-2		A1-CC-3		A1-WS-1	
Location	N/A		Area 1		Area 1		Area 1		Area 1	
Date Collected	NA		6/17/97		6/17/97		6/17/97		6/17/97	
Date Extracted	6/19/97		6/20/97		6/20/97		6/20/97		6/20/97	
Percent Solid	100		26		27		30		20	
Percent Lipids	NA		26		32		40		12	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
a-BHC	U	4.0	U	15	U	15	U	13	U	20
g-BHC	U	4.0	U	15	U	15	U	13	U	20
b-BHC	U	4.0	U	15	U	15	U	13	U	20
Heptachlor	U	4.0	U	15	U	15	U	13	U	20
d-BHC	U	4.0	U	15	U	15	U	13	U	20
Aldrin	U	4.0	U	15	U	15	U	13	U	20
Heptachlor Epoxide	U	4.0	110	15	170	15	110	13	U	20
g-Chlordane	U	4.0	500 E	15	630 E	15	770 E	13	U	20
a-Chlordane	U	4.0	1200	15	U	15	U	13	U	20
Endosulfan (I)	U	4.0	U	15	U	15	U	13	U	20
p,p'-D D E	U	4.0	510 E	15	570 E	15	480 E	13	250	20
Dieldrin	U	4.0	U	15	U	15	U	13	U	20
Endrin	U	4.0	U	15	U	15	U	13	U	20
p p'-D D D	U	4.0	470	15	500 E	15	750	13	U	20
Endosulfan (II)	U	4.0	U	15	U	15	U	13	U	20
p,p'-D D T	U	4.0	U	15	U	15	U	13	U	20
Endrin Aldehyde	U	4.0	U	15	U	15	U	13	U	20
Endosulfan Sulfate	U	4.0	U	15	U	15	U	13	U	20
Methoxychlor	U	4.0	U	15	U	15	U	13	U	20
Endrin Ketone	U	4.0	U	15	U	15	U	13	U	20
Toxaphene	U	40	U	150	U	150	U	130	U	200
Aroclor 1016	U	20	U	76	U	73	U	67	U	100
Aroclor 1221	U	40	U	150	U	150	U	130	U	200
Aroclor 1232	U	20	U	76	U	73	U	67	U	100
Aroclor 1242	U	20	U	76	U	73	U	67	U	100
Aroclor 1248	U	20	5000 W	76	4600 W	73	5800 W	67	7900 W	100
Aroclor 1254	U	20	24000 W	76	27000 W	73	27000 W	67	18000 W	100
Aroclor 1260	U	20	U	76	U	73	U	67	U	100

Table 1.9 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	A1-WS-2		A1-WS-3		A1-PS-1		A1-PS-2		A1-PS-3	
Location	Area 1		Area 1		Area 1		Area 1		Area 1	
Date Collected	6/17/97		6/17/97		6/17/97		6/17/97		6/17/97	
Date Extracted	6/20/97		6/20/97		6/20/97		6/20/97		6/20/97	
Percent Solid	18		20		21		22		21	
Percent Lipids	11		8		5		7		5	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
a-BHC	U	22	U	19	U	18	U	18	U	19
g-BHC	U	22	U	19	U	18	U	18	U	19
b-BHC	U	22	U	19	U	18	U	18	U	19
Heptachlor	U	22	U	19	U	18	U	18	U	19
d-BHC	U	22	U	19	U	18	U	18	U	19
Aldrin	U	22	U	19	U	18	U	18	U	19
Heptachlor Epoxide	26	22	U	19	23	18	200	18	17 J	19
g-Chlordane	89	22	U	19	U	18	U	18	U	19
a-Chlordane	160	22	U	19	U	18	U	18	U	19
Endosulfan (I)	U	22	U	19	U	18	U	18	U	19
p p'-D D E	86	22	270	19	38	18	250	18	51	19
Dieldrin	U	22	U	19	U	18	U	18	U	19
Endrin	U	22	U	19	U	18	U	18	U	19
p,p'-D D D	U	22	U	19	17 J	18	U	18	U	19
Endosulfan (II)	U	22	U	19	U	18	U	18	U	19
p p'-D D T	U	22	U	19	U	18	U	18	U	19
Endrin Aldehyde	U	22	U	19	U	18	U	18	U	19
Endosulfan Sulfate	U	22	U	19	U	18	U	18	U	19
Methoxychlor	U	22	U	19	U	18	U	18	U	19
Endrin Ketone	U	22	U	19	U	18	U	18	U	19
Toxaphene	U	220	U	190	U	180	U	180	U	190
Aroclor 1016	U	110	U	97	U	92	U	88	U	95
Aroclor 1221	U	220	U	190	U	180	U	180	U	190
Aroclor 1232	U	110	U	97	U	92	U	88	U	95
Aroclor 1242	U	110	U	97	U	92	U	88	U	95
Aroclor 1248	800 W	110	3800 W	97	920 W	92	7500 W	88	540 W	95
Aroclor 1254	5600 W	110	29000 W	97	2500 W	92	22000 W	88	2400 W	95
Aroclor 1260	U	110	U	97	U	92	U	88	U	95

Table 1.9 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	A2-WS-1		A2-WS-2		A2-WS-3		A2-PS-1		A2-PS-2	
Location	Area 2		Area 2		Area 2		Area 2		Area 2	
Date Collected	6/17/97		6/17/97		6/17/97		6/17/97		6/17/97	
Date Extracted	6/20/97		6/20/97		6/20/97		6/20/97		6/20/97	
Percent Solid	20		19		21		21		25	
Percent Lipids	8		7		12		9		9	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
a-BHC	U	20	U	21	U	19	U	18	U	18
g-BHC	U	20	U	21	U	19	U	18	U	18
b-BHC	U	20	U	21	U	19	U	18	U	18
Heptachlor	U	20	U	21	U	19	U	18	U	18
d-BHC	U	20	U	21	U	19	U	18	U	18
Aldrin	U	20	U	21	U	19	U	18	U	18
Heptachlor Epoxide	170	20	100	21	250	19	92	18	130	18
g-Chlordane	U	20	U	21	U	19	U	18	U	18
a-Chlordane	U	20	U	21	U	19	U	18	U	18
Endosulfan (I)	U	20	U	21	U	19	U	18	U	18
p,p'-D D E	290	20	220	21	420 E	19	130	18	200	18
Dieldrin	U	20	U	21	U	19	U	18	U	18
Endrin	U	20	U	21	U	19	U	18	U	18
p,p'-D D D	U	20	U	21	U	19	U	18	U	18
Endosulfan (II)	U	20	U	21	U	19	U	18	U	18
p,p'-D D T	U	20	U	21	U	19	U	18	U	18
Endrin Aldehyde	U	20	U	21	U	19	U	18	U	18
Endosulfan Sulfate	U	20	U	21	U	19	U	18	U	18
Methoxychlor	U	20	U	21	U	19	U	18	U	18
Endrin Ketone	U	20	U	21	U	19	U	18	U	18
Toxaphene	U	200	U	210	U	190	U	180	U	180
Aroclor 1016	U	99	U	100	U	94	U	92	U	91
Aroclor 1221	U	200	U	210	U	190	U	180	U	180
Aroclor 1232	U	99	U	100	U	94	U	92	U	91
Aroclor 1242	U	99	U	100	U	94	U	92	U	91
Aroclor 1248	12000 W	99	7100 W	100	18000 W	94	6400 W	92	8100 W	91
Aroclor 1254	28000 W	99	17000 W	100	40000 W	94	13000 W	92	20000 W	91
Aroclor 1260	U	99	U	100	U	94	U	92	U	91

Table 1.9 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	A3-WS-1		A3-WS-2		A3-WS-3		A3-PS-1		A3-PS-2	
Location	Area 3		Area 3		Area 3		Area 3		Area 3	
Date Collected	6/18/97		6/18/97		6/18/97		6/18/97		6/18/97	
Date Extracted	6/20/97		6/20/97		6/20/97		6/20/97		6/20/97	
Percent Solid	22		20		20		18		21	
Percent Lipids	11		6		12		4		4	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
a-BHC	U	18	U	20	U	19	U	22	U	18
g-BHC	U	18	U	20	U	19	U	22	U	18
b-BHC	U	18	U	20	U	19	U	22	U	18
Heptachlor	U	18	U	20	U	19	U	22	U	18
d-BHC	U	18	U	20	U	19	U	22	U	18
Aldrin	U	18	U	20	U	19	U	22	U	18
Heptachlor Epoxide	240	18	98	20	200	19	68	22	54	18
g-Chlordane	U	18	U	20	U	19	U	22	U	18
a-Chlordane	U	18	U	20	U	19	U	22	U	18
Endosulfan (I)	U	18	U	20	U	19	U	22	U	18
p,p'-D D E	370 E	18	300	20	410 E	19	90	22	71	18
Dieldrin	U	18	U	20	U	19	U	22	U	18
Endrin	U	18	U	20	U	19	U	22	U	18
p,p'-D D D	U	18	U	20	U	19	U	22	U	18
Endosulfan (II)	U	18	U	20	U	19	U	22	U	18
p p'-D D T	U	18	U	20	U	19	U	22	U	18
Endrin Aldehyde	U	18	U	20	U	19	U	22	U	18
Endosulfan Sulfate	U	18	U	20	U	19	U	22	U	18
Methoxychlor	U	18	U	20	U	19	U	22	U	18
Endrin Ketone	U	18	U	20	U	19	U	22	U	18
Toxaphene	U	180	U	200	U	190	U	220	U	180
Aroclor 1016	U	90	U	99	U	95	U	110	U	90
Aroclor 1221	U	180	U	200	U	190	U	220	U	180
Aroclor 1232	U	90	U	99	U	95	U	110	U	90
Aroclor 1242	U	90	U	99	U	95	U	110	U	90
Aroclor 1248	15000 W	90	11000 W	99	13000 W	95	4000 W	110	3300 W	90
Aroclor 1254	35000 W	90	30000 W	99	29000 W	95	9000 W	110	6800 W	90
Aroclor 1260	U	90	U	99	U	95	U	110	U	90

Table 1.9 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	A3-PS-3		A4-PS-1		A4-PS-2		A4-PS-3		MBLK 062197	
Location	Area 3		Area 4		Area 4		Area 4		NA	
Date Collected	6/18/97		6/18/97		6/18/97		6/18/97		NA	
Date Extracted	6/20/97		6/20/97		6/20/97		6/20/97		6/20/97	
Percent Solid	20		23		20		19		100	
Percent Lipids	5		5		3		8		NA	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
a-BHC	U	19	U	17	U	20	U	21	U	4.0
g-BHC	U	19	U	17	U	20	U	21	U	4.0
b-BHC	U	19	U	17	U	20	U	21	U	4.0
Heptachlor	U	19	U	17	U	20	U	21	U	4.0
d-BHC	U	19	U	17	U	20	U	21	U	4.0
Aldrin	U	19	U	17	U	20	U	21	U	4.0
Heptachlor Epoxide	97	19	14 J	17	77	20	120	21	U	4.0
g-Chlordane	U	19	U	17	U	20	U	21	U	4.0
a-Chlordane	U	19	U	17	U	20	U	21	U	4.0
Endosulfan (I)	U	19	U	17	U	20	U	21	U	4.0
p,p'-D D E	130	19	50	17	110	20	170	21	U	4.0
Dieldrin	U	19	U	17	U	20	U	21	U	4.0
Endrin	U	19	U	17	U	20	U	21	U	4.0
p,p'-D D D	U	19	45	17	U	20	U	21	U	4.0
Endosulfan (II)	U	19	U	17	U	20	U	21	U	4.0
p,p'-D D T	U	19	U	17	U	20	U	21	U	4.0
Endrin Aldehyde	U	19	U	17	U	20	U	21	U	4.0
Endosulfan Sulfate	U	19	U	17	U	20	U	21	U	4.0
Methoxychlor	U	19	U	17	U	20	U	21	U	4.0
Endrin Ketone	U	19	U	17	U	20	U	21	U	4.0
Toxaphene	U	190	U	170	U	200	U	210	U	40
Aroclor 1016	U	94	U	87	U	98	U	100	U	20
Aroclor 1221	U	190	U	170	U	200	U	210	U	40
Aroclor 1232	U	94	U	87	U	98	U	100	U	20
Aroclor 1242	U	94	U	87	U	98	U	100	U	20
Aroclor 1248	5800 W	94	890 W	87	2500 W	98	8000 W	100	U	20
Aroclor 1254	11000 W	94	970 W	87	10000 W	98	11000 W	100	U	20
Aroclor 1260	U	94	U	87	U	98	U	100	U	20

Table 1.9 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	R-WS-1		R-WS-2		R-WS-3		R-CC-1		R-CC-2	
Location	Reference		Reference		Reference		Reference		Reference	
Date Collected	6/18/97		6/18/97		6/18/97		6/18/97		6/18/97	
Date Extracted	6/21/97		6/21/97		6/21/97		6/21/97		6/21/97	
Percent Solid	22		21		21		19		21	
Percent Lipids	13		11		8		9		14	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
a-BHC	U	18	U	19	U	19	U	21	U	18
g-BHC	U	18	U	19	U	19	U	21	U	18
b-BHC	U	18	U	19	U	19	U	21	U	18
Heptachlor	U	18	U	19	U	19	U	21	U	18
d-BHC	U	18	U	19	U	19	U	21	U	18
Aldrin	U	18	U	19	U	19	U	21	U	18
Heptachlor Epoxide	68	18	100	19	8.3 J	19	7.5 J	21	17 J	18
g-Chlordane	U	18	U	19	26	19	42	21	130	18
a-Chlordane	U	18	U	19	52	19	85	21	370	18
Endosulfan (I)	U	18	U	19	U	19	U	21	U	18
p,p'-D D E	180	18	230	19	24	19	U	21	72	18
Dieldrin	U	18	U	19	U	19	U	21	U	18
Endrin	U	18	U	19	U	19	U	21	U	18
p,p'-D D D	U	18	U	19	9.5 J	19	15 J	21	36	18
Endosulfan (II)	U	18	U	19	U	19	U	21	U	18
p,p'-D D T	U	18	U	19	U	19	U	21	U	18
Endrin Aldehyde	U	18	U	19	U	19	U	21	U	18
Endosulfan Sulfate	U	18	U	19	U	19	U	21	U	18
Methoxychlor	U	18	U	19	U	19	U	21	U	18
Endrin Ketone	U	18	U	19	U	19	U	21	U	18
Toxaphene	U	180	U	190	U	190	U	210	U	180
Aroclor 1016	U	90	U	93	U	94	U	110	U	92
Aroclor 1221	U	180	U	190	U	190	U	210	U	180
Aroclor 1232	U	90	U	93	U	94	U	110	U	92
Aroclor 1242	U	90	U	93	U	94	U	110	U	92
Aroclor 1248	2300 W	90	7000 W	93	230 W	94	240 W	110	370 W	92
Aroclor 1254	14000 W	90	30000 W	93	1200 W	94	950 W	110	1400 W	92
Aroclor 1260	U	90	U	93	U	94	U	110	U	92

Table 1.9 (Cont) Results of the Analysis for Pesticides/PCBs in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Client ID	R-CC-3
Location	Reference
Date Collected	6/18/97
Date Extracted	6/21/97
Percent Solid	23
Percent Lipids	12

Analyte	Conc µg/kg	MDL µg/kg
a-BHC	U	21
g-BHC	U	21
b-BHC	U	21
Heptachlor	U	21
d-BHC	U	21
Aldrin	U	21
Heptachlor Epoxide	12 J	21
g-Chlordane	83	21
a-Chlordane	150	21
Endosulfan (I)	U	21
p,p'-D D E	39	21
Dieldrin	U	21
Endrin	U	21
p,p'-D D D	25	21
Endosulfan (II)	U	21
p,p'-D D T	U	21
Endrin Aldehyde	U	21
Endosulfan Sulfate	U	21
Methoxychlor	U	21
Endrin Ketone	U	21
Toxaphene	U	210
Aroclor 1016	U	110
Aroclor 1221	U	210
Aroclor 1232	U	110
Aroclor 1242	U	110
Aroclor 1248	370 W	110
Aroclor 1254	1600 W	110
Aroclor 1260	U	110

Table 1.10 Results of the Analysis for Metals in Water
WA # 2-274 Cornell Dubilier Electronics

Client ID	Method Blank	C 10216
Location		A1

Parameter	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L
Mercury	U	0.1	U	0.70
Silver	U	0.7	140	63
Aluminum	U	63	U	1.9
Arsenic	U	1.9	140	1.9
Barium	U	1.9	U	0.20
Beryllium	0.3	0.2	59000	230
Calcium	U	230	U	1.3
Cadmium	U	1.3	U	0.70
Cobalt	U	0.7	U	2.0
Chromium	U	2.0	5.4	3.3
Copper	U	3.3	1300	14
Iron	38	14	U	0.10
Potassium	U	55	2800	55
Magnesium	U	120	11000	120
Manganese	0.62	0.6	500	0.60
Sodium	U	250	26000	250
Nickel	3.4	1.1	9.6	1.1
Lead	U	1.3	5.8	1.3
Antimony	U	2.3	U	2.3
Selenium	U	2.5	U	2.5
Thallium	U	2.5	U	2.5
Vanadium	U	0.7	U	0.70
Zinc	U	2.5	16	2.5

Table 1.11 (Cont) Results of the Analysis for Metals in Unfiltered Water
WA # 2-274 Cornell Dubilier Electronics

Client ID	2000-1006		2000-1007		2000-1008		2000-1010	
Location	A6		A7		A9		Laboratory Blank	
Parameter	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L
Silver	U	0.70	U	0.70	U	0.70	U	0.70
Aluminum	110	63	140	63	430	63	U	63
Arsenic	U	1.9	U	1.9	U	1.9	U	1.9
Barium	87	1.9	79	1.9	150	1.9	U	1.9
Beryllium	U	0.20	U	0.20	U	0.20	U	0.20
Calcium	48000	230	44000	230	61000	230	U	230
Cadmium	U	1.3	U	1.3	U	1.3	U	1.3
Cobalt	U	0.70	U	0.70	U	0.70	U	0.70
Chromium	U	2.0	U	2.0	2.0	2.0	U	2.0
Copper	4.2	3.3	3.9	3.3	15	3.3	U	3.3
Iron	310	14	340	14	700	14	31	14
Mercury	U	0.10	U	0.10	U	0.10	U	0.10
Potassium	2500	55	2300	55	2700	55	U	55
Magnesium	8800	120	8000	120	12000	120	U	120
Manganese	220	0.60	210	0.60	220	0.60	1.1	0.60
Sodium	22000	250	20000	250	28000	250	U	250
Nickel	U	1.1	1.3	1.1	2.2	1.1	U	1.1
Lead	3.3	1.3	3.4	1.3	8.5	1.3	2.7	1.3
Antimony	U	2.3	U	2.3	U	2.3	U	2.3
Selenium	U	2.5	U	2.5	U	2.5	U	2.5
Thallium	U	2.5	U	2.5	U	2.5	U	2.5
Vanadium	3.3	0.70	3.0	0.70	3.5	0.70	U	0.70
Zinc	17	2.5	22	2.5	28	2.5	18	2.5

Table 1.12 Results of the Analysis for Metals in Filtered Water
WA # 2-274 Cornell Dubilier Electronics

Client ID	Method Blank		2000-1001		2000-1002		2000-1003		2000-1004		2000-1005	
Location	-		A1		A2		A3		A4		A5	
Parameter	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L
Silver	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70
Aluminum	U	63	81	63	U	63	U	63	U	63	U	63
Arsenic	U	1.9	U	1.9	U	1.9	U	1.9	U	1.9	U	1.9
Barium	U	1.9	120	1.9	110	1.9	110	1.9	110	1.9	110	1.9
Beryllium	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20
Calcium	U	230	53000	230	86000	230	79000	230	72000	230	66000	230
Cadmium	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3
Cobalt	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70	U	0.70
Chromium	U	2.0	U	2.0	U	2.0	2.4	2.0	U	2.0	U	2.0
Copper	U	3.3	U	3.3	3.5	3.3	U	3.3	U	3.3	U	3.3
Iron	U	14	100	14	60	14	96	14	63	14	76	14
Mercury	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10
Potassium	U	55	2500	55	2600	55	2500	55	2600	55	2500	55
Magnesium	U	120	10000	120	14000	120	13000	120	12000	120	11000	120
Manganese	U	0.60	260	0.60	180	0.60	210	0.60	320	0.60	280	0.60
Sodium	U	250	26000	250	28000	250	26000	250	25000	250	24000	250
Nickel	U	1.1	17	1.1	17	1.1	16	1.1	17	1.1	11	1.1
Lead	U	1.3	3.1	1.3	2.0	1.3	1.5	1.3	1.8	1.3	U	1.3
Antimony	U	2.3	U	2.3	U	2.3	U	2.3	U	2.3	U	2.3
Selenium	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5
Thallium	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5
Vanadium	U	0.70	2.0	0.70	3.1	0.70	2.6	0.70	2.3	0.70	2.3	0.70
Zinc	4.3	2.5	32	2.5	11	2.5	13	2.5	17	2.5	34	2.5

Table 1 12 (Cont) Results of the Analysis for Metals in Filtered Water
WA # 2-274 Cornell Dubilier Electronics

Client ID	2000-1006		2000-1007		2000-1008		2000-1010	
Location	A6		A7		A9		Laboratory Blank	
Parameter	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L	Conc µg/L	MDL µg/L
Silver	U	0.70	U	0.70	U	0.70	U	0.70
Aluminum	U	63	U	63	U	63	U	63
Arsenic	U	1 9	U	1.9	U	1.9	U	1 9
Barium	82	1.9	77	1.9	140	1.9	3 4	1.9
Beryllium	U	0.20	U	0.20	U	0.20	U	0.20
Calcium	48000	230	46000	230	58000	230	U	230
Cadmium	U	1.3	U	1.3	U	1.3	U	1.3
Cobalt	U	0.70	U	0.70	U	0.70	U	0.70
Chromium	U	2.0	U	2 0	U	2.0	U	2.0
Copper	U	3 3	3.4	3.3	3.6	3.3	U	3.3
Iron	45	14	67	14	56	14	38	14
Mercury	U	0.10	U	0.10	U	0.10	U	0.10
Potassium	2500	55	2400	55	2600	55	U	55
Magnesium	8700	120	8400	120	11000	120	U	120
Manganese	8.0	0.60	5.8	0.60	180	0.60	1 6	0.60
Sodium	22000	250	21000	250	27000	250	U	250
Nickel	19	1 1	19	1 1	33	1 1	54	1 1
Lead	U	1 3	1 5	1 3	3 5	1 3	3 3	1 3
Antimony	U	2 3	U	2 3	U	2 3	U	2 3
Selenium	U	2 5	U	2 5	U	2 5	U	2 5
Thallium	U	2 5	U	2 5	U	2 5	U	2 5
Vanadium	3 1	0.70	2 6	0.70	2 2	0.70	U	0.70
Zinc	14	2 5	8 6	2 5	26	2 5	29	2 5

Table 1.13 Results of the Analysis for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics
Results are based on Dry Weight

Client ID	Method Blank		B 10371		B 10372		B 10373		B 10374		B 10375	
Location	Lab		T2-12-5		T2-7-1		T2-6-7		T2-2-1		T2-5-6	
% Solids	NA		58		57		65		63		68	
TOC**	NA		17.1		15.9		18.5		14.9		22.4	
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	U	0.05	0.8	0.032	0.61	0.025	1.1	0.025	0.64	0.024	0.80	0.026
Silver	U	0.07	9.1	0.12	8.2	0.13	16	0.11	7.9	0.12	12	0.095
Aluminum	U	6.3	18000	11	17000	11	30000	9.8	14000	10	19000	8.6
Arsenic	0.19	0.19	16	0.33	14	0.34	21	0.30	13	0.31	16	0.26
Barium	0.29	0.19	330	0.33	270	0.34	460	0.30	250	0.31	340	0.26
Beryllium	U	0.02	1.1	0.035	1.0	0.035	1.5	0.031	0.95	0.032	1.1	0.027
Calcium	U	23	5000	40	4900	41	5600	36	4800	37	6200	32
Cadmium	U	0.13	24	0.23	17	0.23	38	0.21	18	0.21	30	0.18
Cobalt	U	0.07	16	0.13	15	0.13	24	0.11	13	0.12	17	0.095
Chromium	U	0.2	58	0.35	57	0.35	280	0.31	47	0.32	120	0.28
Copper	0.48	0.33	150	0.58	130	0.58	520	0.51	110	0.53	280	0.45
Iron	3.0	1.4	30000	2.5	29000	2.5	35000	2.2	24000	2.3	28000	1.9
Potassium	U	5.5	1500	9.6	1500	9.6	1700	8.5	1000	8.8	1300	7.5
Magnesium	U	12	5200	21	4700	21	5200	19	4200	20	4600	17
Manganese	0.060	0.06	1700	0.11	1400	0.11	1800	0.093	1300	0.096	1300	0.082
Sodium	U	25	340	44	310	44	300	39	290	40	290	34
Nickel	0.36	0.11	47	0.20	41	0.20	72	0.17	36	0.18	55	0.15
Lead	U	0.13	370	0.23	310	0.23	460	0.21	280	0.21	350	0.18
Antimony	U	0.23	1.8	0.40	1.8	0.41	2.6	0.36	1.2	0.37	1.6	0.32
Selenium	U	0.25	3.3	0.44	3.3	0.44	4.0	0.39	2.9	0.40	3.4	0.34
Thallium	U	0.25	U	0.44	U	0.44	0.60	0.39	U	0.40	U	0.34
Vanadium	U	0.07	56	0.13	52	0.13	76	0.11	43	0.12	56	0.095
Zinc	0.61	0.25	480	0.44	440	0.44	570	0.39	410	0.40	500	0.34

** TOC denotes Total Organic Carbon

Table 1.13 (Cont) Results of the Analysis for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics
Results are based on Dry Weight

Client ID	B 10380		B 10381		B 10382		B 10383		B 10384		B 10385	
Location	T2-1-3		T1-1-4		T1-4-5		T1-7-2		T1-3-7		T1-5-6	
% Solids	77		87		89		81		82		78	
TOC**	11.5		7.0		10.6		9.3		8.7		14.4	
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	0.81	0.022	0.37	0.018	0.34	0.013	1.1	0.025	0.38	0.023	1.5	0.037
Silver	13	0.088	4.5	0.080	3.7	0.078	5.7	0.082	2.2	0.083	8.9	0.18
Aluminum	14000	8.0	2400	7.2	3500	7.0	12000	7.4	2200	7.5	7900	16
Arsenic	14	0.24	17	0.22	13	0.22	13	0.23	35	0.23	26	0.49
Barium	260	0.24	230	0.22	480	0.22	1400	0.23	420	0.23	1500	0.49
Beryllium	0.95	0.025	0.41	0.023	0.34	0.022	0.49	0.023	0.46	0.024	0.35	0.06
Calcium	3300	29	600	27	1600	26	8600	27	1700	28	3700	59
Cadmium	20	0.17	1.7	0.15	2.7	0.15	20	0.16	1.5	0.16	5.3	0.33
Cobalt	12	0.088	2.9	0.080	5.4	0.078	17	0.082	2.1	0.083	8.0	0.18
Chromium	67	0.26	11	0.23	22	0.23	67	0.24	9.0	0.24	43	0.51
Copper	130	0.42	51	0.38	110	0.37	960	0.39	28	0.40	150	0.84
Iron	20000	1.8	16000	1.6	36000	1.6	38000	1.7	14000	1.7	88000	3.6
Potassium	930	7.0	540	6.3	480	6.1	950	6.5	610	6.6	560	14
Magnesium	3300	16	250	14	810	14	2700	15	360	15	1200	31
Manganese	850	0.076	41	0.068	370	0.066	420	0.070	43	0.071	770	0.16
Sodium	180	32	130	29	130	28	430	30	120	30	150	64
Nickel	38	0.14	12	0.13	35	0.13	57	0.13	9.2	0.14	63	0.28
Lead	300	0.17	190	0.15	290	0.15	1000	0.16	44	0.16	880	0.33
Antimony	1.3	0.29	1.8	0.27	2.5	0.26	19	0.27	0.76	0.28	5.8	0.59
Selenium	2.6	0.32	3.1	0.29	3.6	0.28	3.1	0.30	2.8	0.30	7.9	0.64
Thallium	U	0.32	U	0.29	U	0.28	U	0.30	U	0.30	1.2	0.64
Vanadium	40	0.088	62	0.080	41	0.078	52	0.082	23	0.083	70	0.18
Zinc	320	0.32	32	0.29	99	0.28	1000	0.30	31	0.30	250	0.64

** TOC denotes Total Organic Carbon

Table 1.13 (Cont) Results of the Analysis for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics
Results are based on Dry Weight

Client ID	B 10386		B 10387		B 10388		B 10389		B 10390		B 10391	
Location	T1-10-2		T1-11-9		T1-14-3		T3-1-7		T3-1-13		T3-2-11	
% Solids	80		78		70		70		72		79	
TOC**	11.6		13.8		8.8		15.8		16.4		15.5	
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	0.72	0.017	0.63	0.013	0.25	0.018	1.5	0.062	1.9	0.11	1.2	0.046
Silver	8.0	0.084	5.0	0.087	3.8	0.10	3.4	0.096	3.7	0.095	2.6	0.41
Aluminum	9600	7.6	6400	7.8	11000	9.0	7600	8.7	8200	8.6	6600	37
Arsenic	8.7	0.23	5.7	0.24	9.1	0.28	14	0.27	24	0.26	29	1.1
Barium	320	0.23	91	0.24	100	0.28	920	0.27	1200	0.26	700	1.1
Beryllium	0.72	0.024	0.25	0.025	0.61	0.028	0.30	0.028	0.09	0.027	0.17	0.12
Calcium	6400	28	4100	29	1500	33	7600	32	7200	32	5500	140
Cadmium	10	0.16	6.9	0.17	1.4	0.19	8.9	0.18	14	0.18	9.0	0.76
Cobalt	10	0.084	5.6	0.087	4.9	0.10	8.9	0.096	11	0.095	12	0.41
Chromium	28	0.24	29	0.25	14	0.29	64	0.28	70	0.28	90	1.2
Copper	270	0.40	140	0.41	38	0.48	280	0.46	360	0.45	12000	2.0
Iron	23000	1.7	16000	1.8	12000	2.0	36000	2.0	68000	1.9	97000	8.2
Potassium	1300	6.6	570	6.9	610	7.9	760	7.6	770	7.5	620	32
Magnesium	3200	15	1900	15	2000	18	2100	17	1900	17	1700	70
Manganese	420	0.072	250	0.074	500	0.086	600	0.083	950	0.081	500	0.35
Sodium	270	30	120	31	80	36	180	35	250	34	U	150
Nickel	57	0.14	39	0.14	15	0.16	150	0.16	51	0.15	81	0.64
Lead	510	0.16	230	0.17	93	0.19	1700	0.18	3600	0.18	2200	0.76
Antimony	5.7	0.28	2.0	0.29	1.3	0.33	11	0.32	13	0.32	15	1.4
Selenium	2.8	0.30	1.6	0.31	1.9	0.36	5.6	0.35	7.9	0.34	9.2	1.5
Thallium	U	0.30	U	0.31	U	0.36	U	0.35	U	0.34	4.0	1.5
Vanadium	45	0.084	40	0.087	27	0.10	40	0.096	38	0.095	35	0.41
Zinc	880	0.30	240	0.31	76	0.36	920	0.35	2000	0.34	1600	1.5

** TOC denotes Total Organic Carbon

Table 1.13 (Cont) Results of the Analysis for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics
Results are based on Dry Weight

Client ID	B 10392		B 10393		B 10394	
Location	T3-3-10		T3-3-16		T3-4-6	
% Solids	66		61.9		58	
TOC**	20.2		27.2		24.8	
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	0.94	0.024	3.4	0.13	2.5	0.129
Silver	4.2	0.11	15	0.12	2.6	0.12
Aluminum	6600	9.4	4100	10	4600	11
Arsenic	27	0.29	11	0.31	11	0.32
Barium	800	0.29	440	0.31	370	0.32
Beryllium	0.17	0.030	0.17	0.032	0.28	0.033
Calcium	8200	34	9800	37	8700	39
Cadmium	9.4	0.20	8.0	0.21	4.1	0.22
Cobalt	9.6	0.11	5.6	0.12	5.6	0.12
Chromium	61	0.30	49	0.32	32	0.34
Copper	250	0.49	430	0.53	110	0.55
Iron	53000	2.1	22000	2.3	26000	2.4
Potassium	610	8.2	490	8.8	560	9.2
Magnesium	1200	18	1100	19	1200	20
Manganese	540	0.088	300	0.095	260	0.10
Sodium	200	37	130	40	130	42
Nickel	34	0.17	27	0.18	24	0.19
Lead	1400	0.20	1200	0.21	900	0.22
Antimony	42	0.34	13	0.37	12	0.39
Selenium	6.7	0.37	4.7	0.40	4.4	0.42
Thallium	U	0.37	U	0.40	U	0.42
Vanadium	31	0.11	27	0.12	34	0.12
Zinc	1300	0.37	750	0.40	560	0.42

** TOC denotes Total Organic Carbon

Table 1.13 (Cont) Results of the Analysis for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics
Results are based on Dry Weight

Client ID	Method Blank		B 10263		B 10264		B 10265	
Location	-		A7-1		A3-1		A9-1	
% Solids	NA		68		24		46	
TOC**			5.9		22.3		9	
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	U	0.05	0.091	0.016	0.24	0.051	0.34	0.039
Silver	U	0.07	0.38	0.11	11	0.29	5.1	0 15
Aluminum	U	6.3	4100	9.3	12000	26	8900	14
Arsenic	U	0.19	4.1	0.29	12	0 78	6.2	0 40
Barium	U	0.19	110	0.29	230	0.78	220	0.40
Beryllium	U	0.02	0.28	0.030	0.95	0.082	0.68	0.042
Calcium	U	23	3600	34	7200	94	3500	49
Cadmium	U	0.13	2.1	0.20	16	0.53	13	0.28
Cobalt	U	0.07	6.8	0.11	15	0 29	8.9	0 15
Chromium	0.79	0.2	22	0 30	61	0.82	34	0 43
Copper	U	0.33	26	0.49	170	1 4	76	0.70
Iron	4.8	1.4	14000	2 1	25000	5.8	18000	3.0
Potassium	U	5.5	660	8.2	1000	23	840	12
Magnesium	U	12	2500	18	4200	49	2800	26
Manganese	0.21	0.06	430	0.089	490	0.25	680	0.13
Sodium	U	25	220	37	430	110	230	53
Nickel	0.50	0 11	16	0 17	42	0.45	32	0 24
Lead	0.21	0.13	120	0 20	250	0.53	230	0.28
Antimony	U	0.23	1.1	0.34	2.9	0.94	1.5	0 49
Selenium	U	0.25	1.0	0.37	3.3	1.1	1.8	0 53
Thallium	U	0.25	U	0 37	U	1.1	U	0 53
Vanadium	U	0.07	14	0.11	52	0.29	32	0.15
Zinc	0.34	0.25	170	0.37	590	1 1	250	0 53

** TOC denotes Total Organic Carbon

Table 1.13 (Cont) Results of the Analysis for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics
Results are based on Dry Weight

Client ID	B 10266		B 10267		A 10377	
Location	A9-2		A3-2		Field Blank	
% Solids	39		29		100	
TOC**	10 8		18.2			
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	0.26	0.028	0.35	0.057	U	0.015
Silver	2.8	0.17	11	0.24	U	0.069
Aluminum	8700	16	9900	22	24	6.3
Arsenic	5.3	0.47	8.7	0 64	U	0.19
Barium	260	0.47	210	0.64	0.36	0.19
Beryllium	0.70	0 048	0.70	0.067	0 021	0.020
Calcium	3900	56	4800	77	41	23
Cadmium	9.3	0.32	13	0 44	U	0.13
Cobalt	9.1	0.17	11	0.24	U	0.069
Chromium	35	0 49	47	0.67	0 65	0.20
Copper	63	0.81	130	1.1	0.51	0.33
Iron	17000	3.4	21000	4.7	65	1 4
Potassium	790	14	790	19	9.6	5.5
Magnesium	2900	30	3600	41	16	12
Manganese	510	0.15	500	0.21	0.89	0.059
Sodium	240	61	360	84	U	25
Nickel	33	0.27	34	0.37	0.28	0 11
Lead	140	0.32	200	0.44	0.41	0 13
Antimony	1 3	0 56	2.6	0.77	U	0.23
Selenium	1.7	0.61	2.6	0.84	U	0.25
Thallium	U	0.61	U	0.84	U	0.25
Vanadium	32	0.17	40	0 24	0.078	0.069
Zinc	250	0 61	460	0.84	1.1	0.25

** TOC denotes Total Organic Carbon

Table 1.13 (Cont) Results of the Analysis for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics
Results are based on Dry Weight

Client ID	Method Blank		B 10395		B 10396		B 10397		B 10398		B 10399	
Location	-		T4-1-4		T4-1-10		T4-2-19		T4-3-3		T4-4-1	
% Solids	NA		64		69		75		56		60	
TOC**			23.7		15.1		10.7		20.2		45.3	
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	U	0.05	0.059	0.022	0.37	0.027	0.21	0.024	0.67	0.035	0.78	0.032
Silver	U	0.07	7.7	0.11	6.3	0.11	2.8	0.090	11	0.12	11	0.11
Aluminum	U	6.3	13000	9.6	12000	9.1	9900	8.2	21000	11	20000	10
Arsenic	U	0.19	13	0.29	12	0.28	11	0.25	29	0.32	33	0.30
Barium	U	0.19	90	0.29	72	0.28	77	0.25	260	0.32	310	0.30
Beryllium	U	0.02	0.53	0.030	0.51	0.029	0.48	0.026	1.1	0.033	1.1	0.032
Calcium	U	23	1600	36	970	34	1400	30	4200	39	3100	37
Cadmium	U	0.13	3.6	0.20	2.8	0.19	3.5	0.17	16	0.22	8.8	0.21
Cobalt	U	0.07	5.7	0.11	5.8	0.11	4.2	0.090	23	0.12	17	0.11
Chromium	U	0.2	39	0.31	32	0.29	20	0.26	140	0.34	170	0.32
Copper	U	0.33	86	0.51	66	0.48	46	0.43	170	0.55	190	0.53
Iron	2.1	1.4	17000	2.2	16000	2.1	13000	1.8	36000	2.4	42000	2.3
Potassium	6.5	5.5	500	8.4	480	8.0	240	7.1	1500	9.2	1100	8.7
Magnesium	U	12	2200	19	2000	18	1400	16	5300	20	5100	19
Manganese	0.08	0.06	260	0.092	240	0.086	260	0.077	1600	0.10	1000	0.095
Sodium	U	25	96	39	83	36	63	33	280	42	280	40
Nickel	U	0.11	19	0.17	18	0.16	14	0.15	55	0.19	46	0.18
Lead	U	0.13	230	0.20	230	0.19	150	0.17	690	0.22	720	0.21
Antimony	U	0.23	2.1	0.36	2.4	0.34	1.7	0.30	3.3	0.39	4.0	0.37
Selenium	U	0.25	2.7	0.39	2.6	0.36	2.0	0.33	4.1	0.42	5.0	0.40
Thallium	U	0.25	U	0.39	U	0.36	U	0.33	U	0.42	U	0.40
Vanadium	U	0.07	57	0.11	46	0.11	36	0.090	90	0.12	95	0.11
Zinc	0.31	0.25	110	0.39	93	0.36	88	0.33	360	0.42	280	0.40

** TOC denotes Total Organic Carbon

Table 1.13 (Cont) Results of the Analysis for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics
Results are based on Dry Weight

Client ID	B 10400		B 10486		B 10487		B 10488		B 10489		B 10490	
Location	T4-5-6		A1-1		A1-2		A1-3		A1-4		A1-5	
% Solids	69		42		33		27		40		39	
TOC**	15		16.8		18		18.2		16		17.4	
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	0.61	0.028	0.30	0.047	0.39	0.038	0.284	0.068	0.22	0.035	0.33	0.034
Silver	7.3	0.11	3.8	0.17	5.9	0.22	5.4	0.25	2.7	0.18	4.7	0.18
Aluminum	20000	9.2	14000	15	17000	19	14000	23	6900	16	13000	17
Arsenic	18	0.28	10	0.45	11	0.58	13	0.67	6.8	0.47	13	0.49
Barium	200	0.28	290	0.45	370	0.58	420	0.67	180	0.47	350	0.49
Beryllium	0.80	0.029	0.99	0.046	1.2	0.060	1.1	0.070	0.66	0.049	0.94	0.06
Calcium	2100	34	6100	54	6300	70	7200	81	4700	57	5900	60
Cadmium	5.5	0.19	20	0.31	23	0.40	21	0.46	15	0.32	20	0.34
Cobalt	10	0.11	13	0.17	15	0.22	15	0.25	8.1	0.18	13	0.18
Chromium	120	0.30	43	0.47	56	0.61	49	0.71	26	0.49	45	0.52
Copper	160	0.48	110	0.77	150	1.0	130	1.2	77	0.81	120	0.85
Iron	23000	2.1	27000	3.3	34000	4.3	36000	5.0	16000	3.5	32000	3.6
Potassium	700	8.0	1200	13	1300	17	1200	20	530	14	920	15
Magnesium	3600	18	4500	28	5600	37	5400	43	2700	30	4700	31
Manganese	570	0.087	770	0.14	420	0.19	1100	0.22	540	0.15	570	0.16
Sodium	180	37	360	59	430	76	480	88	270	62	420	65
Nickel	34	0.16	41	0.26	52	0.34	49	0.39	26	0.27	43	0.29
Lead	410	0.19	250	0.30	340	0.40	270	0.46	170	0.32	280	0.34
Antimony	2.7	0.34	2.5	0.54	3.2	0.70	3.5	0.81	1.7	0.57	2.3	0.60
Selenium	2.9	0.37	3.3	0.59	3.7	0.76	3.8	0.88	1.9	0.62	3.6	0.65
Thallium	U	0.37	U	0.59	U	0.76	U	0.88	U	0.62	U	0.65
Vanadium	66	0.11	45	0.17	58	0.22	56	0.25	27	0.18	49	0.18
Zinc	220	0.37	450	0.59	580	0.76	630	0.88	330	0.62	560	0.65

** TOC denotes Total Organic Carbon

Table 1.13 (Cont) Results of the Analysis for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics
Results are based on Dry Weight

Client ID	B 10491		B 10492		B 10493		B 10494		B 10495		B 10496	
Location	A1-6		A2-1		A2-2		A4-1		A4-2		A5-1	
% Solids	46		47		32		42		69		64	
TOC**	9.4		10.3		17.6		12.7		6.0		6.6	
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	0.070	0.038	0.25	0.036	0.35	0.032	0.38	0.035	U	0.024	0.19	0.019
Silver	1.8	0.15	5.2	0.15	4.2	0.22	4.4	0.16	0.13	0.092	0.54	0.11
Aluminum	6400	14	7400	13	11000	20	8200	15	2400	8.3	3900	9.4
Arsenic	5.7	0.40	5.6	0.39	12	0.58	6.7	0.44	1.2	0.25	1.7	0.29
Barium	160	0.40	140	0.39	260	0.58	140	0.44	23	0.25	45	0.29
Beryllium	0.75	0.043	0.53	0.041	0.84	0.061	0.55	0.045	0.20	0.026	0.30	0.030
Calcium	3000	49	3200	47	6100	70	3400	53	740	31	920	35
Cadmium	9.6	0.28	7.4	0.27	12	0.40	6.5	0.30	0.67	0.17	2.2	0.20
Cobalt	7.0	0.15	7.1	0.15	12	0.22	6.4	0.16	2.0	0.092	4.8	0.11
Chromium	21	0.42	37	0.41	53	0.61	36	0.46	6.4	0.27	14	0.30
Copper	56	0.69	78	0.68	130	1.0	100	0.75	10	0.44	18	0.49
Iron	13000	3.0	14000	2.9	25000	4.3	15000	3.2	7300	1.9	8400	2.1
Potassium	510	12	520	12	800	17	450	13	260	7.2	440	8.2
Magnesium	2100	26	2300	25	3900	37	2500	28	910	16	1600	18
Manganese	370	0.13	460	0.13	1000	0.19	450	0.14	66	0.078	120	0.089
Sodium	230	53	220	51	430	77	280	57	82	33	81	38
Nickel	20	0.23	22	0.23	37	0.34	22	0.25	6.8	0.15	11	0.17
Lead	140	0.28	160	0.27	250	0.40	350	0.30	37	0.17	42	0.20
Antimony	1.8	0.49	1.1	0.47	1.9	0.70	1.8	0.53	0.38	0.31	0.62	0.35
Selenium	1.6	0.53	1.7	0.51	3.3	0.77	1.8	0.57	0.63	0.33	0.71	0.38
Thallium	U	0.53	U	0.51	U	0.77	U	0.57	U	0.33	U	0.38
Vanadium	23	0.15	25	0.15	46	0.22	31	0.16	8.9	0.092	10	0.11
Zinc	240	0.53	270	0.51	460	0.77	300	0.57	63	0.33	99	0.38

** TOC denotes Total Organic Carbon

Table 1.13 (Cont) Results of the Analysis for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics
Results are based on Dry Weight

Client ID	B 10497		B 10498		B 10262	
Location	A5-2		A6-1		A6-2	
% Solids	75		25		20	
TOC**	3.1		19.2		22.4	
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	0.29	0.019	0.91	0.071	0.29	0.052
Silver	U	0.089	11	0.28	4.6	0.34
Aluminum	9400	8.1	15000	25	11000	31
Arsenic	1.3	0.25	13	0.75	11	0.92
Barium	51	0.25	250	0.75	200	0.92
Beryllium	0.35	0.026	1.1	0.078	0.78	0.096
Calcium	1300	30	6600	90	4700	110
Cadmium	0.89	0.17	17	0.51	12	0.63
Cobalt	5.0	0.089	16	0.28	21	0.34
Chromium	19	0.26	68	0.79	78	0.97
Copper	6.4	0.43	220	1.3	140	1.6
Iron	17000	1.8	28000	5.5	22000	6.8
Potassium	730	7.1	1100	22	980	27
Magnesium	2600	16	5100	47	3300	58
Manganese	120	0.076	500	0.24	390	0.29
Sodium	120	32	430	98	410	120
Nickel	14	0.14	51	0.43	50	0.53
Lead	13	0.17	290	0.51	200	0.63
Antimony	0.77	0.30	2.7	0.90	2.6	1.1
Selenium	0.98	0.32	3.8	0.98	3.7	1.2
Thallium	U	0.32	U	0.98	U	1.2
Vanadium	28	0.089	51	0.28	39	0.34
Zinc	52	0.32	670	0.98	510	1.2

** TOC denotes Total Organic Carbon

Table 1.14 Results of the Analysis for Metals in Tissue (REAC)
WA # 2-274 Comell Dubilier Electronics
Based on Dry Weight

Client ID		Method Blank		A5-PS-1		A5-PS-2		A5-PS-3		A5-LB-1		A5-LB-2	
Location		Lab		Area 5		Area 5		Area 5		Area 5		Area 5	
% Solids		100		20		20		21		18		19	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	U	5.0	24	13	17	15	U	15	27	15	110	13
Antimony	AA-Fur	U	0.20	U	0.54	U	0.61	U	0.58	U	0.58	U	0.53
Arsenic	AA-Fur	U	0.20	U	0.54	U	0.61	U	0.58	U	0.58	U	0.53
Barium	ICAP	U	0.30	U	0.81	1.5	0.92	U	0.87	U	0.87	U	0.80
Beryllium	ICAP	U	0.20	U	0.54	U	0.61	U	0.58	U	0.58	U	0.53
Cadmium	ICAP	U	0.30	U	0.81	U	0.92	U	0.87	U	0.87	U	0.80
Calcium	ICAP	U	10	4300	27	14000	31	1200	29	1800	29	1700	27
Chromium	ICAP	U	0.50	U	1.3	1.8	1.5	2.1	1.5	4.3	1.5	1.3	1.3
Cobalt	ICAP	U	0.50	U	1.3	U	1.5	U	1.5	U	1.5	U	1.3
Copper	ICAP	U	0.50	9.5	1.3	1.9	1.5	2.5	1.5	3.8	1.5	3.0	1.3
Iron	ICAP	U	2.5	31	6.7	46	7.7	31	7.3	89	7.3	27	6.6
Lead	AA-Fur	U	0.20	0.64	0.54	U	0.61	0.58	0.58	U	0.58	U	0.53
Magnesium	ICAP	U	50	1200	130	1400	150	1000	150	1200	150	1300	130
Manganese	ICAP	U	0.20	1.4	0.54	5.2	0.61	1.2	0.58	1.1	0.58	0.78	0.53
Mercury	Cold Vapor	U	0.04	0.64	0.21	0.32	0.21	0.94	0.19	1.2	0.20	0.35	0.18
Nickel	ICAP	U	1.0	U	2.7	U	3.1	U	2.9	U	2.9	U	2.7
Potassium	ICAP	U	200	15000	540	16000	610	15000	580	18000	580	16000	530
Selenium	AA-Fur	U	0.20	2.5	0.54	2.0	0.61	1.5	0.58	1.6	0.58	1.4	0.53
Silver	ICAP	U	0.50	U	1.3	U	1.5	U	1.5	U	1.5	U	1.3
Sodium	ICAP	U	50	2100	130	2800	150	1600	150	2000	150	1800	130
Thallium	AA-Fur	U	0.20	U	0.54	U	0.61	U	0.58	U	0.58	U	0.53
Vanadium	ICAP	U	0.50	U	1.3	U	1.5	U	1.5	U	1.5	U	1.3
Zinc	ICAP	U	0.50	62	1.3	89	1.5	49	1.5	89	1.5	57	1.3

Table 1.14 (Cont) Results of the Analysis for Metals in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on Dry Weight

Client ID		A5-LB-3		A5-WS-1		A5-WS-2		A5-WS-3		A6-LB-1		A6-LB-2	
Location		Area 5		Area 5		Area 5		Area 5		Area 6		Area 6	
% Solids		20		16		22		20		18		19	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	15	8.8	24	17	12	10	16	12	51	11	900	15
Antimony	AA-Fur	U	0.35	U	0.69	U	0.40	U	0.50	U	0.44	U	0.59
Arsenic	AA-Fur	U	0.35	U	0.69	U	0.40	U	0.50	U	0.44	U	0.59
Barium	ICAP	0.54	0.53	1.3	1.0	1.1	0.61	1.6	0.74	U	0.66	U	0.89
Beryllium	ICAP	U	0.35	U	0.69	U	0.40	U	0.50	U	0.44	U	0.59
Cadmium	ICAP	U	0.53	U	1.0	U	0.61	U	0.74	U	0.66	U	0.89
Calcium	ICAP	2900	18	2100	35	1500	20	2300	25	2300	22	1200	30
Chromium	ICAP	U	0.88	2.1	1.7	U	1.0	5.8	1.2	1.1	1.1	U	1.5
Cobalt	ICAP	U	0.88	U	1.7	U	1.0	U	1.2	U	1.1	U	1.5
Copper	ICAP	1.1	0.88	3.3	1.7	1.7	1.0	2.2	1.2	1.6	1.1	2.8	1.5
Iron	ICAP	16	4.4	38	8.6	29	5.0	56	6.2	36	5.5	49	7.4
Lead	AA-Fur	U	0.35	1.4	0.69	U	0.40	U	0.50	U	0.44	U	0.59
Magnesium	ICAP	1200	88	1300	170	1100	100	1100	120	1200	110	1100	150
Manganese	ICAP	1.1	0.35	1.8	0.69	1.2	0.40	1.7	0.50	0.87	0.44	0.76	0.59
Mercury	Cold Vapor	0.48	0.19	0.49	0.25	0.37	0.15	0.46	0.18	0.63	0.21	1.3	0.16
Nickel	ICAP	U	1.8	U	3.5	U	2.0	3.2	2.5	U	2.2	U	3.0
Potassium	ICAP	16000	350	19000	690	17000	400	17000	500	16000	440	17000	590
Selenium	AA-Fur	2.1	0.35	2.9	0.69	2.1	0.40	2.2	0.50	1.4	0.44	1.2	0.59
Silver	ICAP	U	0.88	U	1.7	U	1.0	U	1.2	U	1.1	U	1.5
Sodium	ICAP	2400	88	1500	170	1500	100	1500	120	2500	110	2100	150
Thallium	AA-Fur	U	0.35	U	0.69	U	0.40	U	0.50	U	0.44	U	0.59
Vanadium	ICAP	U	0.88	U	1.7	U	1.0	U	1.2	U	1.1	U	1.5
Zinc	ICAP	62	0.88	85	1.7	64	1.0	110	1.2	53	1.1	48	1.5

Table 1.14 (Cont) Results of the Analysis for Metals in Tissue (REAC)
WA # 2-274 Cornell Dubilier *Electronics*
Based on Dry Weight

Client ID		A6-LB-3		A6-PS-1		A6-PS-2		A6-PS-3		A6-CC-1		A6-CC-2	
Location		Area 6		Area 6		Area 6		Area 6		Area 6		Area 6	
% Solids		20		18		18		18		19		26	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	17	16	30	14	34	14	43	17	110	11	26	10
Antimony	AA-Fur	U	0.62	U	0.55	U	0.58	U	0.68	U	0.44	U	0.40
Arsenic	AA-Fur	U	0.62	U	0.55	U	0.58	0.79	0.68	U	0.44	U	0.40
Barium	ICAP	U	0.93	U	0.83	U	0.86	U	1.0	0.89	0.66	U	0.60
Beryllium	ICAP	U	0.62	U	0.55	U	0.58	U	0.68	U	0.44	U	0.40
Cadmium	ICAP	U	0.93	U	0.83	U	0.86	U	1.0	U	0.66	U	0.60
Calcium	ICAP	1200	31	6700	28	3000	29	5000	34	2300	22	360	20
Chromium	ICAP	U	1.6	1.4	1.4	3.3	1.4	4.5	1.7	3.3	1.1	1.3	1.0
Cobalt	ICAP	U	1.6	U	1.4	U	1.4	U	1.7	U	1.1	U	1.0
Copper	ICAP	U	1.6	2.1	1.4	2.9	1.4	3.7	1.7	5.2	1.1	2.1	1.0
Iron	ICAP	30	7.8	63	6.9	58	7.2	60	8.5	63	5.5	52	5.0
Lead	AA-Fur	U	0.62	U	0.55	U	0.58	U	0.68	0.9	0.44	U	0.40
Magnesium	ICAP	1200	160	1200	140	1200	140	1300	170	990	110	500	100
Manganese	ICAP	1.1	0.62	1.9	0.55	1.8	0.58	3.3	0.68	1.6	0.44	U	0.40
Mercury	Cold Vapor	0.39	0.20	0.37	0.19	0.35	0.23	0.22	0.22	U	0.23	U	0.15
Nickel	ICAP	U	3.1	U	2.8	U	2.9	U	3.4	U	2.2	U	2.0
Potassium	ICAP	16000	620	16000	550	15000	580	16000	680	14000	440	7800	400
Selenium	AA-Fur	1.7	0.62	2.3	0.55	3.4	0.58	5.3	0.68	3.1	0.44	2.1	0.40
Silver	ICAP	U	1.6	U	1.4	U	1.4	U	1.7	U	1.1	U	1.0
Sodium	ICAP	2100	160	2900	140	2400	140	2700	170	1900	110	1700	100
Thallium	AA-Fur	U	0.62	U	0.55	U	0.58	U	0.68	U	0.44	U	0.40
Vanadium	ICAP	U	1.6	U	1.4	U	1.4	U	1.7	U	1.1	U	1.0
Zinc	ICAP	54	1.6	83	1.4	71	1.4	60	1.7	73	1.1	63	1.0

Table 1.14 (Cont) Results of the Analysis for Metals in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on Dry Weight

Client ID		A6-CC-3		A5-CC-1	
Location		Area 6		Area 5	
% Solids		24		21	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	23	9.2	U	12
Antimony	AA-Fur	U	0.37	U	0.48
Arsenic	AA-Fur	U	0.37	U	0.48
Barium	ICAP	U	0.55	U	0.72
Beryllium	ICAP	U	0.37	U	0.48
Cadmium	ICAP	U	0.55	U	0.72
Calcium	ICAP	1100	18	920	24
Chromium	ICAP	0.97	0.92	1.5	1.2
Cobalt	ICAP	U	0.92	U	1.2
Copper	ICAP	1.9	0.92	6.8	1.2
Iron	ICAP	47	4.6	89	6
Lead	AA-Fur	U	0.37	U	0.48
Magnesium	ICAP	750	92	810	120
Manganese	ICAP	1.1	0.37	1.6	0.48
Mercury	Cold Vapor	U	0.16	0.21	0.21
Nickel	ICAP	U	1.8	U	2.4
Potassium	ICAP	10000	370	12000	480
Selenium	AA-Fur	1.9	0.37	2.2	0.48
Silver	ICAP	U	0.92	U	1.2
Sodium	ICAP	1200	92	1600	120
Thallium	AA-Fur	U	0.37	U	0.48
Vanadium	ICAP	U	0.92	U	1.2
Zinc	ICAP	63	0.92	56	1.2

Table 1.14 (Cont) Results of the Analysis for Metals in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on Dry Weight

Client ID		Method Blank		CO2 Blank (6/18)		CO2 Blank (6/19)		A1-CC-1		A1-CC-2		A1-CC-3	
Location		Lab		Lab		Lab		Area 1		Area 1		Area 1	
% Solids		100		NA		NA		26		27		30	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/ sample	MDL mg/ sample	Conc mg/ sample	MDL mg/ sample	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	U	5.0	U	0.0025	U	0.0025	25	8.3	13	8.2	12	8.6
Antimony	AA-Fur	U	0.20	U	0.00010	U	0.00010	U	0.33	U	0.33	U	0.34
Arsenic	AA-Fur	U	0.20	U	0.00010	U	0.00010	U	0.33	U	0.33	U	0.34
Barium	ICAP	U	0.30	U	0.00015	U	0.00015	U	0.50	U	0.49	U	0.51
Beryllium	ICAP	U	0.20	U	0.0001	U	0.0001	U	0.33	U	0.33	U	0.34
Cadmium	ICAP	U	0.30	U	0.00015	U	0.00015	U	0.50	U	0.49	U	0.51
Calcium	ICAP	U	10	U	0.005	0.024	0.005	630	17	630	16	810	17
Chromium	ICAP	U	0.50	0.0003	0.00025	U	0.00025	1.3	0.83	1.4	0.82	U	0.86
Cobalt	ICAP	U	0.50	U	0.00025	U	0.00025	U	0.83	U	0.82	U	0.86
Copper	ICAP	U	0.50	0.0006	0.00025	0.006	0.00025	4.5	0.83	3.0	0.82	1.4	0.86
Iron	ICAP	U	2.5	U	0.0013	0.005	0.0013	65	4.2	55	4.1	34	4.3
Lead	AA-Fur	U	0.20	U	0.00010	U	0.00010	U	0.33	U	0.33	U	0.34
Magnesium	ICAP	U	50	U	0.025	U	0.025	730	83	750	82	590	86
Manganese	ICAP	U	0.20	U	0.0001	U	0.0001	0.57	0.33	0.65	0.33	0.51	0.34
Mercury	Cold Vapor	U	0.04	U	0.00002	U	0.00002	0.12	0.12	0.20	0.13	0.16	0.11
Nickel	ICAP	U	1.0	U	0.0005	0.016	0.0005	U	1.7	U	1.6	U	1.7
Potassium	ICAP	U	200	U	0.1	U	0.1	11000	330	11000	330	9100	340
Selenium	AA-Fur	U	0.20	U	0.00010	U	0.00010	3.3	0.67	2.8	0.66	2.2	0.68
Silver	ICAP	U	0.50	U	0.00025	U	0.00025	U	0.83	U	0.82	U	0.86
Sodium	ICAP	U	50	U	0.025	0.031	0.025	1200	83	1100	82	1100	86
Thallium	AA-Fur	U	0.20	U	0.00010	U	0.00010	U	0.33	U	0.33	U	0.34
Vanadium	ICAP	U	0.50	U	0.00025	U	0.00025	U	0.83	U	0.82	U	0.86
Zinc	ICAP	U	0.50	U	0.00025	0.005	0.00025	51	0.83	35	0.82	48	0.86

Table 1.14 (Cont) Results of the Analysis for Metals in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on Dry Weight

Client ID		A1-WS-1		A1-WS-2		A1-WS-3		A1-PS-1		A1-PS-2		A1-PS-3	
Location		Area 1		Area 1		Area 1		Area 1		Area 1		Area 1	
% Solids		20		18		20		21		22		21	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	U	13	21	11	460	10	22	13	32	12	57	17
Antimony	AA-Fur	U	0.53	U	0.44	U	0.40	U	0.53	U	0.47	U	0.70
Arsenic	AA-Fur	U	0.53	U	0.44	U	0.40	0.6	0.53	U	0.47	U	0.70
Barium	ICAP	1.6	0.79	1.2	0.66	2.0	0.60	1.1	0.80	0.75	0.71	U	1.0
Beryllium	ICAP	U	0.53	U	0.44	U	0.40	U	0.53	U	0.47	U	0.70
Cadmium	ICAP	U	0.79	U	0.66	U	0.60	U	0.80	U	0.71	U	1.0
Calcium	ICAP	5800	26	2600	22	2400	20	6700	27	4300	24	5300	35
Chromium	ICAP	1.6	1.3	2.5	1.1	1.6	1.0	2.2	1.3	1.7	1.2	U	1.7
Cobalt	ICAP	U	1.3	U	1.1	U	1.0	U	1.3	U	1.2	U	1.7
Copper	ICAP	13	1.3	7.8	1.1	2.4	1.0	3.6	1.3	15	1.2	2.4	1.7
Iron	ICAP	30	6.6	80	5.5	50	5.0	55	6.6	30	5.9	40	8.7
Lead	AA-Fur	U	0.53	U	0.44	U	0.40	U	0.53	U	0.47	U	0.70
Magnesium	ICAP	1200	130	1300	110	1200	100	1200	130	1200	120	1300	170
Manganese	ICAP	5.2	0.53	5.8	0.44	9.2	0.40	3.1	0.53	3.9	0.47	4.2	0.70
Mercury	Cold Vapor	0.25	0.17	U	0.18	0.27	0.14	0.25	0.16	0.23	0.15	0.45	0.22
Nickel	ICAP	U	2.6	U	2.2	U	2.0	U	2.7	U	2.4	U	3.5
Potassium	ICAP	17000	530	17000	440	16000	400	15000	530	15000	470	15000	700
Selenium	AA-Fur	2.3	1.1	2.1	0.88	2.0	0.80	5.2	1.1	2.6	0.95	2.9	1.4
Silver	ICAP	U	1.3	U	1.1	U	1.0	U	1.3	U	1.2	U	1.7
Sodium	ICAP	2100	130	2400	110	2200	100	2700	130	2300	120	2900	170
Thallium	AA-Fur	U	0.53	U	0.44	U	0.40	U	0.53	U	0.47	U	0.70
Vanadium	ICAP	U	1.3	U	1.1	U	1.0	U	1.3	U	1.2	U	1.7
Zinc	ICAP	60	1.3	65	1.1	73	1.0	77	1.3	54	1.2	58	1.7

Table 1.14 (Cont) Results of the Analysis for Metals in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on Dry Weight

Client ID		A2-WS-1		A2-WS-2		A2-WS-3		A2-PS-1		A2-PS-2		A3-WS-1	
Location		Area 2		Area 2		Area 2		Area 2		Area 2		Area 3	
% Solids		20		19		21		21		25		22	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	U	14	14	14	U	12	22	11	U	14	14	11
Antimony	AA-Fur	U	0.57	U	0.57	U	0.47	U	0.46	U	0.55	U	0.45
Arsenic	AA-Fur	U	0.57	U	0.57	U	0.47	U	0.46	U	0.55	U	0.45
Barium	ICAP	U	0.86	1.1	0.86	0.75	0.70	0.77	0.68	1.1	0.82	0.8	0.67
Beryllium	ICAP	U	0.57	U	0.57	U	0.47	U	0.46	U	0.55	U	0.45
Cadmium	ICAP	U	0.86	U	0.86	U	0.70	U	0.68	U	0.82	U	0.67
Calcium	ICAP	2100	29	1000	29	2200	23	3000	23	5900	27	1400	22
Chromium	ICAP	U	1.4	1.6	1.4	1.3	1.2	1.3	1.1	U	1.4	U	1.1
Cobalt	ICAP	U	1.4	U	1.4	U	1.2	U	1.1	U	1.4	U	1.1
Copper	ICAP	2.3	1.4	3.5	1.4	2.5	1.2	2.9	1.1	2.8	1.4	1.8	1.1
Iron	ICAP	30	7.1	24	7.2	28	5.9	37	5.7	27	6.9	24	5.6
Lead	AA-Fur	U	0.57	U	0.57	U	0.47	U	0.46	U	0.55	U	0.45
Magnesium	ICAP	1200	140	1200	140	1200	120	1100	110	1100	140	1200	110
Manganese	ICAP	1.1	0.57	0.93	0.57	1.4	0.47	2.3	0.46	4.7	0.55	1.2	0.45
Mercury	Cold Vapor	1.0	0.17	0.79	0.18	0.52	0.17	0.27	0.18	0.21	0.14	0.51	0.15
Nickel	ICAP	U	2.9	U	2.9	U	2.3	U	2.3	U	2.7	U	2.2
Potassium	ICAP	17000	570	19000	570	17000	470	14000	460	13000	550	18000	450
Selenium	AA-Fur	1.8	1.1	1.6	1.2	1.9	0.94	2.5	0.91	2.2	1.1	2.1	0.89
Silver	ICAP	U	1.4	U	1.4	U	1.2	U	1.1	U	1.4	U	1.1
Sodium	ICAP	2200	140	1800	140	1700	120	2800	110	2600	140	1300	110
Thallium	AA-Fur	U	0.57	U	0.57	U	0.47	U	0.46	U	0.55	U	0.45
Vanadium	ICAP	U	1.4	U	1.4	U	1.2	U	1.1	U	1.4	U	1.1
Zinc	ICAP	50	1.4	66	1.4	49	1.2	41	1.1	48	1.4	44	1.1

Table 1.14 (Cont) Results of the Analysis for Metals in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on Dry Weight

Client ID		A3-WS-2		A3-WS-3		A3-PS-1		A3-PS-2		A3-PS-3		R-WS-1	
Location		Area 3		Area 3		Area 3		Area 3		Area 3		Area 3	
% Solids		21		20		18		21		20		22	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	17	11	16	8.2	17	12	U	12	U	14	17	12
Antimony	AA-Fur	U	0.44	U	0.33	U	0.47	U	0.46	U	0.55	U	0.50
Arsenic	AA-Fur	U	0.44	U	0.33	U	0.47	U	0.46	U	0.55	U	0.50
Barium	ICAP	0.94	0.66	1.0	0.49	1.2	0.70	1.0	0.70	1.2	0.83	1.6	0.74
Beryllium	ICAP	U	0.44	U	0.33	U	0.47	U	0.46	U	0.55	U	0.50
Cadmium	ICAP	U	0.66	U	0.49	U	0.70	U	0.70	U	0.83	U	0.74
Calcium	ICAP	860	22	1900	16	8000	23	6800	23	6500	28	4200	25
Chromium	ICAP	1.4	1.1	0.98	0.82	U	1.2	1.4	1.2	1.5	1.4	1.7	1.2
Cobalt	ICAP	U	1.1	U	0.82	U	1.2	U	1.2	U	1.4	U	1.2
Copper	ICAP	19	1.1	3.5	0.82	3.3	1.2	1.8	1.2	7.1	1.4	14	1.2
Iron	ICAP	53	5.5	29	4.1	19	5.9	17	5.8	20	6.9	31	6.2
Lead	AA-Fur	U	0.44	U	0.33	U	0.47	U	0.46	U	0.55	U	0.50
Magnesium	ICAP	1100	110	1100	82	1300	120	1400	120	1300	140	1100	120
Manganese	ICAP	2.0	0.44	1.8	0.33	4.7	0.47	1.8	0.46	3.2	0.55	1.8	0.50
Mercury	Cold Vapor	0.56	0.16	0.55	0.14	0.61	0.15	0.39	0.20	0.20	0.20	0.20	0.20
Nickel	ICAP	4.1	2.2	U	1.6	U	2.3	U	2.3	U	2.8	U	2.5
Potassium	ICAP	18000	440	18000	330	15000	470	17000	460	16000	550	16000	500
Selenium	AA-Fur	1.8	0.88	1.3	0.66	2.8	0.94	2.7	0.93	1.8	1.1	1.5	0.99
Silver	ICAP	U	1.1	U	0.82	U	1.2	U	1.2	U	1.4	U	1.2
Sodium	ICAP	1800	110	1500	82	2900	120	2700	120	2600	140	1600	120
Thallium	AA-Fur	U	0.44	U	0.33	U	0.47	U	0.46	U	0.55	U	0.50
Vanadium	ICAP	U	1.1	U	0.82	U	1.2	U	1.2	U	1.4	U	1.2
Zinc	ICAP	51	1.1	56	0.82	88	1.2	59	1.2	43	1.4	75	1.2

Table 1.14 (Cont) Results of the Analysis for Metals in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on Dry Weight

Client ID		R-WS-2		R-WS-3		R-CC-1		R-CC-2		R-CC-3		A4-PS-1	
Location		Ref		Ref		Ref		Ref		Ref		Area 4	
% Solids		21		21		19		21		23		23	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	13	12	21	11	26	16	43	14	26	11	U	15
Antimony	AA-Fur	U	0.47	U	0.45	U	0.64	U	0.54	U	0.46	U	0.61
Arsenic	AA-Fur	U	0.47	U	0.45	U	0.64	U	0.54	U	0.46	U	0.61
Barium	ICAP	0.81	0.70	U	0.67	1.9	0.96	2.0	0.81	9.5	0.68	U	0.92
Beryllium	ICAP	U	0.47	U	0.45	U	0.64	U	0.54	U	0.46	U	0.61
Cadmium	ICAP	U	0.70	U	0.67	U	0.96	U	0.81	U	0.68	U	0.92
Calcium	ICAP	1100	23	740	22	2400	32	1700	27	21000	23	3400	31
Chromium	ICAP	1.3	1.2	U	1.1	U	1.6	U	1.4	2.4	1.1	2.3	1.5
Cobalt	ICAP	U	1.2	U	1.1	U	1.6	U	1.4	U	1.1	U	1.5
Copper	ICAP	2.4	1.2	1.1	1.1	7.5	1.6	7.7	1.4	3.2	1.1	8.0	1.5
Iron	ICAP	32	5.8	16	5.6	57	8.0	120	6.8	48	5.7	20	7.6
Lead	AA-Fur	U	0.47	U	0.45	U	0.64	U	0.54	U	0.46	U	0.61
Magnesium	ICAP	1100	120	1200	110	1300	160	1100	140	1300	110	1100	150
Manganese	ICAP	1.1	0.47	0.82	0.45	2.5	0.64	4.1	0.54	11	0.46	1.4	0.61
Mercury	Cold Vapor	0.46	0.19	0.17	0.17	U	0.23	U	0.21	U	0.17	U	0.22
Nickel	ICAP	U	2.3	U	2.2	U	3.2	U	2.7	U	2.3	U	3.1
Potassium	ICAP	16000	470	18000	450	15000	640	14000	540	12000	460	14000	610
Selenium	AA-Fur	1.8	0.94	1.6	0.90	1.7	1.3	1.3	1.1	U	0.91	U	1.2
Silver	ICAP	U	1.2	U	1.1	U	1.6	U	1.4	U	1.1	U	1.5
Sodium	ICAP	1300	120	1300	110	2300	160	1700	140	2400	110	1900	150
Thallium	AA-Fur	U	0.47	U	0.45	U	0.64	U	0.54	U	0.46	U	0.61
Vanadium	ICAP	U	1.2	U	1.1	U	1.6	U	1.4	U	1.1	U	1.5
Zinc	ICAP	60	1.2	36	1.1	37	1.6	72	1.4	110	1.1	51	1.5

Table 1 14 (Cont) Results of the Analysis for Metals in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on Dry Weight

Client ID		A4-PS-2		A4-PS-3	
Location		Area 4		Area 4	
% Solids		20		19	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	22	16	25	17
Antimony	AA-Fur	U	0 62	U	0.68
Arsenic	AA-Fur	U	0.62	U	0 68
Barium	ICAP	1 5	0.93	1 1	1.0
Beryllium	ICAP	U	0 62	U	0.68
Cadmium	ICAP	U	0.93	U	1.0
Calcium	ICAP	13000	31	5900	34
Chromium	ICAP	U	1.6	U	1.7
Cobalt	ICAP	U	1.6	U	1.7
Copper	ICAP	3.7	1.6	6.2	1.7
Iron	ICAP	19	7.8	17	8.5
Lead	AA-Fur	U	0.62	U	0.68
Magnesium	ICAP	1300	160	1300	170
Manganese	ICAP	3.5	0.62	2.2	0.68
Mercury	Cold Vapor	0.64	0.25	U	0.29
Nickel	ICAP	U	3.1	U	3.4
Potassium	ICAP	15000	620	15000	680
Selenium	AA-Fur	1.7	1.2	2.8	1 4
Silver	ICAP	U	1.6	U	1.7
Sodium	ICAP	2800	160	2100	170
Thallium	AA-Fur	U	0.62	U	0 68
Vanadium	ICAP	U	1.6	U	1.7
Zinc	ICAP	85	1.6	62	1 7

Table 1.15 Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	Method Blank		10434		10435		10436		10437		10438	
Location	Lab		A4-PS-1		A4-PS-2		A4-PS-3		A4-PS-4		A4-PS-5	
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	U	0.05	U	0.020	0.08	0.024	0.04	0.023	0.06	0.014	0.03	0.021
Silver	U	0.07	U	0.065	U	0.11	U	0.18	U	0.064	U	0.076
Aluminum	U	6.3	9.9	5.9	U	9.5	U	16	5.9	5.8	U	6.9
Arsenic	U	0.19	U	0.18	U	0.29	U	0.48	0.25	0.18	U	0.21
Barium	U	0.19	2.4	0.18	2.7	0.29	4.9	0.48	1.9	0.18	1.8	0.21
Beryllium	U	0.020	U	0.018	U	0.030	U	0.050	U	0.018	U	0.022
Calcium	U	23	14000	21	18000	35	29000	58	11000	22	13000	25
Cadmium	U	0.13	U	0.12	U	0.20	U	0.33	0.14	0.12	U	0.15
Cobalt	U	0.07	U	0.065	U	0.11	U	0.18	U	0.064	U	0.076
Chromium	U	0.20	0.9	0.19	1.2	0.30	0.57	0.50	2.1	0.19	0.33	0.22
Copper	U	0.33	3.2	0.31	1.3	0.50	1.5	0.83	1.3	0.31	0.82	0.36
Iron	1.8	1.4	28	1.3	44	2.1	30	3.5	27	1.3	14	1.6
Potassium	U	5.5	1900	5.1	2200	8.3	2100	14	2300	5.1	2600	6.0
Magnesium	U	12	350	11	470	18	630	30	360	11	400	13
Manganese	0.06	0.06	6.1	0.056	12	0.090	15	0.15	9.8	0.055	5.3	0.065
Sodium	U	25	1300	23	1400	38	1600	63	1000	23	1100	28
Nickel	U	0.11	0.4	0.102	0.2	0.17	U	0.28	0.31	0.11	U	0.12
Lead	U	0.13	0.4	0.12	0.8	0.20	0.7	0.33	0.26	0.12	0.15	0.15
Antimony	U	0.23	U	0.21	U	0.35	U	0.58	U	0.22	U	0.25
Selenium	U	0.25	0.8	0.23	0.9	0.38	1.3	0.63	1.1	0.23	1.1	0.28
Thallium	U	0.25	U	0.23	U	0.38	U	0.63	U	0.23	U	0.28
Vanadium	U	0.07	0.1	0.065	0.1	0.11	0.4	0.18	0.11	0.064	0.12	0.076
Zinc	U	0.25	25	0.23	28	0.38	29	0.63	17	0.23	19	0.28

Table 1.15 (Cont) Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	10439		10440		10441		10442		10443		10444	
Location	A4-PS-6		A4-PS-7		A6-PS-4		A6-PS-5		A6-PS-6		A6-PS-7	
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	0.049	0.017	0.03	0.013	0.04	0 014	0.06	0.014	U	0.020	0.039	0.015
Silver	U	0.057	U	0.06	U	0.059	U	0.14	U	0.11	U	0.11
Aluminum	6.7	5.1	U	5.4	U	5.4	15	13	U	9.7	11	9.9
Arsenic	U	0.16	U	0.17	U	0.16	U	0.37	U	0.30	0.35	0.30
Barium	1.8	0.16	3.0	0.17	2.0	0.16	2.7	0.37	2.1	0.30	1.8	0.30
Beryllium	U	0.016	U	0 017	U	0.017	U	0.038	U	0 031	U	0.031
Calcium	10000	19	12000	20	15000	20	24000	45	18000	36	19000	36
Cadmium	U	0.11	U	0.12	U	0.11	U	0 25	U	0 20	U	0 21
Cobalt	U	0.057	U	0.060	U	0.059	U	0 14	U	0 11	U	0 11
Chromium	0.33	0.17	0.63	0.18	0 61	0.17	1.1	0.39	0.44	0.31	0.32	0.32
Copper	0.95	0.27	1.3	0.29	0.77	0.28	2.4	0.64	0.69	0.51	0.78	0.52
Iron	19	1.2	15	1.2	16	1.2	33	2.7	12	2.2	14	2.2
Potassium	2400	4.5	2200	4.7	2200	4.7	2200	11	2200	8.5	2300	8.7
Magnesium	340	10	360	11	410	11	550	23	440	19	480	19
Manganese	11	0.049	7.9	0.06	6.2	0 050	16	0.12	9.6	0 092	12	0 094
Sodium	930	21	940	22	910	22	1100	48	2400	39	1100	40
Nickel	0 17	0.089	0.86	0.094	U	0.093	1 1	0.21	U	0 17	U	0.18
Lead	0,25	0.11	0.57	0 12	0.22	0.11	2 9	0 25	0.23	0 20	0.35	0.21
Antimony	U	0.19	U	0.20	U	0.20	U	0 45	U	0 36	U	0.36
Selenium	0.95	0.21	0.89	0 22	0.88	0.22	0.64	0 48	0.75	0 40	0.67	0.40
Thallium	U	0.21	U	0.22	U	0.22	U	0 48	U	0 40	U	0 40
Vanadium	0.72	0.057	0.13	0.060	0.12	0.059	0.38	0 14	U	0 11	0.14	0 11
Zinc	15	0.21	19	0.22	21	0.22	28	0 48	18	0 40	27	0 40

Table 1.15 (Cont) Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	10445		10446		10447		10448		10449		10450	
Location	A6-PS-8		A6-PS-9		A6-PS-10		A6-PS-11		A5-PS-4		A5-PS-5	
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	0.04	0.015	0.05	0.013	0.032	0.018	0.028	0.020	0.063	0.021	0.066	0.019
Silver	U	0.072	U	0.068	U	0.11	U	0.067	U	0.074	U	0.11
Aluminum	U	6.6	U	6.2	U	9.5	U	6.0	U	6.7	U	9.4
Arsenic	U	0.20	U	0.19	0.42	0.29	U	0.19	0.31	0.21	U	0.29
Barium	1.8	0.20	2.1	0.19	1.8	0.29	1.4	0.19	3.4	0.21	2.8	0.29
Beryllium	U	0.021	U	0.019	U	0.030	U	0.019	U	0.021	U	0.030
Calcium	21000	24	16000	23	19000	35	20000	22	20000	25	17000	35
Cadmium	U	0.14	U	0.13	U	0.20	U	0.13	U	0.14	U	0.20
Cobalt	U	0.072	U	0.068	U	0.11	U	0.067	U	0.074	U	0.11
Chromium	0.40	0.21	0.52	0.20	1.4	0.30	0.52	0.19	0.41	0.22	0.30	0.30
Copper	0.63	0.35	0.94	0.32	0.83	0.50	0.72	0.32	0.75	0.36	0.58	0.50
Iron	17	1.5	13	1.4	16	2.1	15	1.4	11	1.5	11	2.1
Potassium	2200	5.7	2100	5.4	2200	8.3	2300	5.3	2000	5.9	2200	8.2
Magnesium	530	13	440	12	480	18	520	12	550	13	500	18
Manganese	11	0.062	5.6	0.058	8.7	0.090	8.5	0.057	3.9	0.064	3.1	0.089
Sodium	1100	26	970	25	1100	38	1400	24	980	27	1000	38
Nickel	U	0.12	0.13	0.11	0.18	0.17	U	0.11	U	0.12	0.20	0.17
Lead	0.35	0.14	0.60	0.13	0.48	0.20	0.33	0.13	0.52	0.14	0.22	0.20
Antimony	U	0.24	U	0.23	U	0.35	U	0.22	U	0.25	U	0.35
Selenium	0.75	0.26	0.80	0.25	0.65	0.38	0.83	0.24	0.77	0.27	1.0	0.38
Thallium	U	0.26	U	0.25	U	0.38	U	0.24	U	0.27	U	0.38
Vanadium	0.16	0.072	0.097	0.068	0.13	0.11	0.078	0.067	0.18	0.074	0.11	0.11
Zinc	26	0.26	21	0.25	23	0.38	23	0.24	23	0.27	21	0.38

Table 1.15 (Cont) Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	10451		10452		10453	
Location	A5-PS-6		A5-PS-7		A5-PS-8	
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	0.026	0.013	0.048	0.014	0 036	0.014
Silver	U	0.045	U	0.15	U	0.072
Aluminum	U	4.1	U	13	U	6.6
Arsenic	0 15	0 13	U	0.39	U	0 20
Barium	1 7	0.13	2.4	0.39	1 8	0.20
Beryllium	U	0 013	U	0 041	U	0.021
Calcium	13000	15	19000	48	12000	24
Cadmium	U	0.084	U	0.27	U	0.14
Cobalt	U	0.045	U	0.15	U	0.072
Chromium	0.29	0 13	0 42	0.42	0.33	0.21
Copper	0.64	0 22	0.75	0.68	0.80	0.34
Iron	11	0.90	11	2 9	22	1 5
Potassium	2000	3 6	2300	12	2200	5.7
Magnesium	390	7.8	470	25	340	12
Manganese	3.0	0.038	8.1	0 13	11	0 062
Sodium	850	17	1100	52	970	26
Nickel	U	0 071	U	0 23	U	0 11
Lead	0.18	0.084	0.52	0 27	0.43	0 14
Antimony	U	0 15	U	0 48	U	0 24
Selenium	0.83	0 17	0.97	0 52	0.80	0.26
Thallium	U	0.17	U	0 52	U	0.26
Vanadium	0.10	0.045	U	0 15	0.12	0.072
Zinc	17	0.17	23	0 52	17	0 26

Table 1.15 (Cont) Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	Method Blank		B 10239		B 10240		B 10241		B 10242		B 10243	
Location	-		A2-13		A9-1		A9-2		A9-3		A9-4	
% Lipids			2.4		2.5		0.9		5.9		2.2	
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	U	0.05	U	0.016	U	0.018	0.023	0.011	U	0.017	0.032	0.017
Silver	U	0.07	0.40	0.35	U	0.35	0.49	0.35	0.39	0.35	U	0.35
Aluminum	U	6.3	U	32	U	32	240	32	39	32	U	32
Arsenic	U	0.19	U	0.95	U	0.95	U	0.95	U	0.95	U	0.95
Barium	U	0.19	48	0.95	93	0.95	140	0.95	86	0.95	47	0.95
Beryllium	U	0.02	U	0.10	U	0.10	U	0.10	U	0.10	U	0.10
Calcium	U	23	28000	120	36000	120	61000	120	38000	120	35000	120
Cadmium	U	0.13	U	0.65	U	0.65	5.4	0.65	1.0	0.65	U	0.65
Cobalt	U	0.07	U	0.35	U	0.35	0.67	0.35	U	0.35	U	0.35
Chromium	U	0.20	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0
Copper	U	0.33	43	1.7	27	1.7	37	1.7	39	1.7	35	1.7
Iron	U	1.4	66	7.0	140	7.0	710	7.0	91	7.0	24	7.0
Potassium	U	5.5	2600	28	2100	28	1400	28	2100	28	1900	28
Magnesium	U	12	440	60	480	60	700	60	580	60	380	60
Manganese	U	0.06	100	0.30	59	0.30	120	0.30	170	0.30	77	0.30
Sodium	U	25	1800	130	1700	130	2000	130	1800	130	1800	130
Nickel	U	0.11	U	0.55	U	0.55	U	0.55	U	0.55	U	0.55
Lead	0.14	0.13	1.0	0.65	1.2	0.65	6.5	0.65	1.2	0.65	U	0.65
Antimony	U	0.23	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2
Selenium	U	0.25	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3
Thallium	U	0.25	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3
Vanadium	U	0.07	U	0.35	U	0.35	1.1	0.35	U	0.35	U	0.35
Zinc	U	0.25	23	1.3	23	1.3	27	1.3	27	1.3	20	1.3

Table 1.15 (Cont) Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	B 10244		B 10245		B 10246		B 10247		B 10248		B 10249	
Location	A9-5		A9-6		A9-7		A9-9		A9-13		A9-14	
% Lipids	2.0		2.2		5.4		2.5		2.2		2.9	
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	0.025	0.019	0.021	0.02	0.02	0.01	0.019	0.018	U	0.018	0.036	0.016
Silver	0.32	0.07	0.42	0.07	0.19	0.07	U	0.35	U	0.35	0.42	0.35
Aluminum	12	6.3	8.2	6.3	12	6.3	U	32	U	32	U	32
Arsenic	U	0.19	U	0.19	U	0.19	U	0.95	U	0.95	U	0.95
Barium	12	0.19	15	0.19	14	0.19	29	0.95	74	0.95	71	0.95
Beryllium	U	0.02	U	0.02	U	0.02	U	0.10	U	0.10	U	0.10
Calcium	15000	23	12000	23	10000	23	25000	120	44000	120	46000	120
Cadmium	0.25	0.13	0.39	0.13	0.23	0.13	U	0.65	U	0.65	U	0.65
Cobalt	U	0.07	U	0.07	U	0.07	U	0.35	U	0.35	U	0.35
Chromium	U	0.20	U	0.20	U	0.20	U	1.0	U	1.0	U	1.0
Copper	25	0.33	26	0.33	17	0.33	25	1.7	43	1.7	35	1.7
Iron	14	1.4	16	1.4	26	1.4	19	7.0	73	7.0	33	7.0
Potassium	1700	5.5	1900	5.5	1500	5.5	1900	28	1900	28	1800	28
Magnesium	280	12	270	12	240	12	390	60	490	60	440	60
Manganese	9.8	0.06	8.2	0.06	11	0.06	40	0.30	170	0.30	85	0.30
Sodium	1600	25	1400	25	720	25	1700	130	1900	130	2100	130
Nickel	U	0.11	U	0.11	U	0.11	U	0.55	U	0.55	U	0.55
Lead	0.27	0.13	0.35	0.13	0.46	0.13	0.89	0.65	U	0.65	1.2	0.65
Antimony	U	0.23	U	0.23	U	0.23	U	1.2	U	1.2	U	1.2
Selenium	0.44	0.25	0.58	0.25	0.52	0.25	U	1.3	U	1.3	U	1.3
Thallium	U	0.25	U	0.25	U	0.25	U	1.3	U	1.3	U	1.3
Vanadium	U	0.07	U	0.07	U	0.07	U	0.35	U	0.35	U	0.35
Zinc	14	0.25	15	0.25	16	0.25	19	1.3	27	1.3	24	1.3

Table 1.15 (Cont) Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	B 10250		B 10268		B 10269		B 08628		B 08629		B 08630	
Location	A9-Comp		A4-1		A4-2		A4-3		A4-4		A4-Comp	
% Lipids	2.9		1.5		2.9		3.1		2.7		2.7	
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	0.017	0.013	U	0.019	U	0.017	U	0.020	0.015	0.015	U	0.020
Silver	0.38	0.07	0.54	0.35	0.35	0.07	U	0.35	0.51	0.35	0.58	0.07
Aluminum	13	6.3	U	32	22	6.3	U	32	U	32	15	6.3
Arsenic	U	0.19	U	0.95	U	0.19	U	0.95	U	0.95	U	0.19
Barium	37	0.19	29	0.95	41	0.19	41	0.95	29	0.95	26	0.19
Beryllium	U	0.02	U	0.10	U	0.02	U	0.10	U	0.10	U	0.02
Calcium	16000	23	30000	120	20000	23	21000	120	26000	120	20000	23
Cadmium	0.25	0.13	1.2	0.65	0.28	0.13	U	0.65	U	0.65	0.26	0.13
Cobalt	U	0.07	U	0.35	U	0.07	U	0.35	U	0.35	U	0.07
Chromium	U	0.20	U	1.0	U	0.20	U	1.0	U	1.0	U	0.20
Copper	32	0.33	37	1.7	40	0.33	40	1.7	29	1.7	32	0.33
Iron	49	1.4	38	7.0	70	1.4	62	7.0	7.8	7.0	21	1.4
Potassium	2000	5.5	1600	28	2100	5.5	2400	28	1700	28	1800	5.5
Magnesium	330	12	280	60	350	12	370	60	280	60	300	12
Manganese	43	0.06	91	0.30	97	0.06	97	0.30	86	0.30	46	0.06
Sodium	1600	25	1700	130	1900	25	2000	130	1800	130	1800	25
Nickel	U	0.11	U	0.55	U	0.11	U	0.55	U	0.55	U	0.11
Lead	0.37	0.13	1.2	0.65	0.54	0.13	U	0.65	U	0.65	0.29	0.13
Antimony	U	0.23	U	1.2	U	0.23	U	1.2	U	1.2	U	0.23
Selenium	0.35	0.25	U	1.3	0.53	0.25	U	1.3	U	1.3	0.57	0.25
Thallium	U	0.25	U	1.3	U	0.25	U	1.3	U	1.3	U	0.25
Vanadium	U	0.07	U	0.35	0.10	0.07	U	0.35	U	0.35	U	0.07
Zinc	18	0.25	25	1.3	20	0.25	21	1.3	16	1.3	16	0.25

Table 1.15 (Cont) Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	B 08631		B 08632		B 08633	
Location	A1-1		A1-2		A5-1	
% Lipids	2.8		4 4		2.1	
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	U	0.019	U	0.018	U	0.017
Silver	0.37	0.07	0.47	0.35	0.41	0.35
Aluminum	20	6.3	45	32	41	32
Arsenic	U	0.19	U	0.95	U	0.95
Barium	25	0.19	52	0.95	49	0.95
Beryllium	U	0.02	U	0.10	U	0.10
Calcium	18000	23	24000	120	47000	120
Cadmium	0.94	0.13	0.74	0.65	U	0.65
Cobalt	0.07	0.07	U	0.35	U	0.35
Chromium	U	0.20	U	1.0	U	1.0
Copper	30	0.33	42	1.7	35	1.7
Iron	56	1.4	180	7.0	110	7.0
Potassium	2100	5.5	2500	28	2000	28
Magnesium	310	12	430	60	530	60
Manganese	110	0.06	150	0.30	170	0.30
Sodium	1800	25	1900	130	1700	130
Nickel	U	0.11	U	0.55	U	0.55
Lead	0.51	0.13	1.1	0.65	1.2	0.65
Antimony	U	0.23	U	1.2	U	1.2
Selenium	0.68	0.25	U	1.3	U	1.3
Thallium	U	0.25	U	1.3	U	1.3
Vanadium	0.14	0.07	U	0.35	U	0.35
Zinc	21	0.25	24	1.3	34	1.3

Table 1.15 (Cont) Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	Method Blank		B 10219		B 10220		B 10221		B 10222		B 10223	
Location	-		A3-1		A3-2		A3-3		A3-12		A3-13	
% Lipids												
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	U	0.05	U	0.02	U	0.016	U	0.017	U	0.018	U	0.019
Silver	U	0.07	0.91	0.14	0.23	0.14	1.2	0.14	0.25	0.14	1.2	0.14
Aluminum	U	6.3	U	13	U	13	21	13	U	13	52	13
Arsenic	U	0.19	U	0.38	U	0.38	U	0.38	U	0.38	U	0.38
Barium	U	0.19	9.7	0.38	0.96	0.38	49	0.38	1.5	0.38	48	0.38
Beryllium	U	0.02	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04
Calcium	40	23	8800	46	650	46	34000	46	1400	46	41000	46
Cadmium	U	0.13	0.30	0.26	U	0.26	0.43	0.26	U	0.26	0.91	0.26
Cobalt	U	0.07	U	0.14	U	0.14	0.22	0.14	U	0.14	0.27	0.14
Chromium	U	0.20	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40
Copper	U	0.33	28	0.66	4.5	0.66	57	0.66	3.9	0.66	63	0.66
Iron	2.8	1.4	25	2.8	12	2.8	47	2.8	16	2.8	170	2.8
Potassium	U	5.5	1300	11	390	11	2800	11	430	11	2600	11
Magnesium	U	12	150	24	27	24	460	24	43	24	550	24
Manganese	U	0.06	27	0.12	3.1	0.12	130	0.12	2.5	0.12	180	0.12
Sodium	U	25	1200	50	310	50	2000	50	300	50	2200	50
Nickel	U	0.11	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22
Lead	U	0.13	U	0.26	0.44	0.26	0.69	0.26	0.30	0.26	0.61	0.26
Antimony	0.23	0.23	0.65	0.46	U	0.46	0.54	0.46	U	0.46	0.52	0.46
Selenium	U	0.25	0.52	0.50	U	0.50	1.0	0.50	U	0.50	1.3	0.50
Thallium	U	0.25	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50
Vanadium	U	0.07	U	0.14	U	0.14	0.17	0.14	U	0.14	0.35	0.14
Zinc	U	0.25	11	0.50	2.2	0.50	27	0.50	3.2	0.50	35	0.50

Table 1.15 (Cont) Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	B 10224		B 10225		B 10226		B 10227		B 10228		B 10229	
Location	A3-14		A3-15		A3-16		A3-17		A3-18		A3-19	
% Lipids												
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	0.016	0.015	U	0.015	U	0.018	U	0.016	U	0.018	U	0.019
Silver	1.6	0.14	0.90	0.14	2.0	0.14	1.3	0.14	1.6	0.14	1.4	0.14
Aluminum	64	13	13	13	38	13	39	13	24	13	43	13
Arsenic	0.93	0.38	U	0.38	U	0.38	U	0.38	U	0.38	U	0.38
Barium	38	0.38	15	0.38	48	0.38	48	0.38	28	0.38	42	0.38
Beryllium	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04
Calcium	41000	46	13000	46	26000	46	30000	46	29000	46	42000	46
Cadmium	0.99	0.26	0.32	0.26	0.82	0.26	0.45	0.26	0.42	0.26	0.46	0.26
Cobalt	0.68	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14
Chromium	0.89	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40
Copper	47	0.66	31	0.66	59	0.66	55	0.66	56	0.66	39	0.66
Iron	150	2.8	28	2.8	92	2.8	170	2.8	45	2.8	160	2.8
Potassium	2400	11	1800	11	2900	11	2900	11	2300	11	2200	11
Magnesium	500	24	240	24	480	24	420	24	380	24	420	24
Manganese	200	0.12	27	0.12	110	0.12	92	0.12	52	0.12	77	0.12
Sodium	2100	50	1400	50	2100	50	2000	50	2100	50	2300	50
Nickel	0.42	0.22	U	0.22	U	0.22	U	0.22	U	0.22	U	0.22
Lead	0.93	0.26	0.41	0.26	0.83	0.26	0.96	0.26	0.73	0.26	0.90	0.26
Antimony	1.5	0.46	U	0.46	0.59	0.46	U	0.46	U	0.46	U	0.46
Selenium	0.82	0.50	U	0.50	0.93	0.50	1.4	0.50	0.87	0.50	1.0	0.50
Thallium	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50
Vanadium	0.78	0.14	U	0.14	0.24	0.14	0.32	0.14	0.16	0.14	0.48	0.14
Zinc	39	0.50	17	0.50	26	0.50	23	0.50	24	0.50	22	0.50

Table 1.15 (Cont) Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	B 10230		B 10231		B 10232		B 10233		B 10234		B 10235	
Location	A3-Comp		A2-10		A2-2		A2-3		A2-4		A2-5	
% Lipids												
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	U	0.019	U	0.018	U	0.020	U	0.017	U	0.020	U	0.018
Silver	0.73	0.14	0.63	0.14	0.63	0.14	2.5	0.14	1.9	0.14	1.0	0.14
Aluminum	32	13	45	13	21	13	23	13	19	13	22	13
Arsenic	U	0.38	U	0.38	U	0.38	0.39	0.38	U	0.38	U	0.38
Barium	32	0.38	45	0.38	39	0.38	39	0.38	54	0.38	56	0.38
Beryllium	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04
Calcium	26000	46	24000	46	32000	46	34000	46	39000	46	31000	46
Cadmium	0.32	0.26	0.64	0.26	0.90	0.26	1.7	0.26	1.6	0.26	0.73	0.26
Cobalt	U	0.14	U	0.14	U	0.14	U	0.14	0.16	0.14	U	0.14
Chromium	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40	U	0.40
Copper	47	0.66	49	0.66	46	0.66	70	0.66	59	0.66	52	0.66
Iron	68	2.8	110	2.8	55	2.8	61	2.8	63	2.8	80	2.8
Potassium	2500	11	3100	11	2500	11	2500	11	2500	11	2900	11
Magnesium	350	24	480	24	360	24	440	24	440	24	480	24
Manganese	130	0.12	120	0.12	95	0.12	130	0.12	140	0.12	120	0.12
Sodium	2100	50	2000	50	2000	50	2100	50	2100	50	2100	50
Nickel	U	0.22	U	0.22	U	0.22	U	0.22	0.24	0.22	0.23	0.22
Lead	0.62	0.26	0.98	0.26	0.88	0.26	0.76	0.26	0.42	0.26	0.86	0.26
Antimony	U	0.46	U	0.46	U	0.46	U	0.46	U	0.46	U	0.46
Selenium	0.97	0.50	1.0	0.50	0.71	0.50	0.85	0.50	0.75	0.50	0.83	0.50
Thallium	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U	0.50
Vanadium	U	0.14	0.29	0.14	0.21	0.14	0.19	0.14	0.20	0.14	0.14	0.14
Zinc	20	0.50	24	0.50	23	0.50	24	0.50	25	0.50	24	0.50

Table 1.15 (Cont) Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	B 10236		B 10237		B 10238	
Location	A2-11		A2-Comp		A2-12	
% Lipids						
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	0.021	0.019	U	0.020	U	0.019
Silver	0.63	0.14	1.6	0.14	0.69	0.14
Aluminum	77	13	38	13	25	13
Arsenic	U	0.38	U	0.38	U	0.38
Barium	34	0.38	38	0.38	44	0.38
Beryllium	U	0.04	U	0.04	U	0.04
Calcium	40000	46	35000	46	30000	46
Cadmium	0.55	0.26	0.83	0.26	0.68	0.26
Cobalt	0.36	0.14	U	0.14	U	0.14
Chromium	U	0.40	U	0.40	U	0.40
Copper	50	0.66	51	0.66	52	0.66
Iron	130	2.8	96	2.8	78	2.8
Potassium	2400	11	2600	11	2800	11
Magnesium	460	24	440	24	420	24
Manganese	260	0.12	140	0.12	88	0.12
Sodium	2000	50	2800	50	2100	50
Nickel	0.25	0.22	U	0.22	U	0.22
Lead	1.4	0.26	0.76	0.26	0.66	0.26
Antimony	U	0.46	U	0.46	U	0.46
Selenium	1.2	0.50	0.97	0.50	0.89	0.50
Thallium	U	0.50	U	0.50	U	0.50
Vanadium	0.43	0.14	0.31	0.14	0.26	0.14
Zinc	30	0.50	24	0.50	25	0.50

Table 1.15 (Cont) Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	Method Blank		B08634		B08635	
Location	-		A5-2		A5-3	
% Lipids	NA					
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	U	0.05	U	0.020	U	0.016
Silver	0.084	0.08	U	1.4	0.79	0.14
Aluminum	U	6.3	U	130	16	13
Arsenic	U	0.19	U	3.8	U	0.38
Barium	U	0.19	54	3.8	30	0.38
Beryllium	U	0.02	U	0.40	U	0.040
Calcium	42.1	23	49000	460	29000	46
Cadmium	U	0.13	U	2.6	0.34	0.26
Cobalt	U	0.07	U	1.4	U	0.14
Chromium	U	0.20	U	4.0	U	0.40
Copper	U	0.33	43	6.6	37	0.66
Iron	2.1	1.4	130	28	64	2.8
Potassium	U	5.5	2300	110	2200	11
Magnesium	U	12	550	240	330	24
Manganese	U	0.06	250	1.2	85	0.12
Sodium	U	25	2000	500	2100	50
Nickel	U	0.11	U	2.2	U	0.22
Lead	U	0.13	U	2.6	0.63	0.26
Antimony	U	0.23	U	4.6	U	0.46
Selenium	U	0.25	U	5.0	0.89	0.50
Thallium	U	0.25	U	5.0	U	0.50
Vanadium	U	0.07	U	1.4	U	0.14
Zinc	U	0.25	36	5.0	22	0.50

Table 1.15 (Cont) Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	Method Blank		10454		10455		10456		10457		10458	
Location	-		A5-PS-9		A5-PS-10		A1-PS-1		A1-PS-2		A1-PS-3	
% Lipids	NA											
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	U	0 05	0.044	0.018	0.035	0.019	0.018	0.017	U	0.016	0.036	0.021
Silver	U	0.15	U	0 14	0.22	0.14	0.17	0.14	0.15	0.14	0.14	0.14
Aluminum	11	6.3	19	13	12	13	15	13	19	13	12	13
Arsenic	U	0 19	U	0 37	U	0.38	U	0.38	U	0.37	U	0.38
Barium	0.26	0.19	2.3	0.37	3.2	0 38	1.5	0.38	2 9	0 37	3.5	0.38
Beryllium	U	0.02	U	0 039	U	0.04	U	0.04	U	0.04	U	0.04
Calcium	61	0.23	15000	45	22000	46	13000	46	22000	45	25000	46
Cadmium	U	0 13	U	0.26	U	0.26	0.27	0.26	0.38	0.26	0.27	0 26
Cobalt	U	0 07	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14
Chromium	U	0.20	U	0.39	U	0.40	U	0 40	U	0.39	U	0.40
Copper	U	0.33	0.87	0.65	0.76	0.66	0.98	0.65	2.0	0.65	0.89	0.65
Iron	6 6	1 4	23	2.8	18	2.8	29	2.8	35	2.8	27	2.8
Potassium	U	5.5	2500	11	2500	11	2500	11	2500	11	2300	11
Magnesium	U	12	430	24	550	24	390	24	510	24	570	24
Manganese	0.12	0 06	6.0	0.12	6.5	0.12	7.1	0.12	22	0.12	13	0.12
Sodium	U	25	1100	49	1100	49	1300	49	1500	49	7800	49
Nickel	U	0 11	U	0 22	U	0.22	U	0.22	U	0.22	U	0.22
Lead	0.20	0.13	0.46	0.26	0.51	0.26	0.76	0.26	0.67	0 26	0.59	0.26
Antimony	0.32	0.23	U	0.45	0.81	0 46	0 46	0.46	0.57	0 45	U	0 46
Selenium	U	0 25	1 6	0 49	1 0	0 49	1 9	0.49	1 4	0 49	1 4	0 49
Thallium	U	0 25	U	0.49	U	0 49	U	0.49	U	0.49	U	0.49
Vanadium	0.11	0.07	0.16	0.14	0.39	0.14	0.20	0.14	0.39	0 14	0.33	0.14
Zinc	0 94	0.25	20	0.49	22	0 49	22	0 49	28	0.49	31	0.49

Table 1 15 (Cont) Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	10459		10460		10461		10462		10463		10464	
Location	A1-PS-4		A1-PS-5		A1-PS-6		A3-PS-1		A3-PS-2		A3-PS-3	
% Lipids												
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	U	0.020	0.027	0.024	0.19	0.014	0.075	0.018	0.034	0.016	0.025	0.014
Silver	0.19	0.14	0.23	0.14	U	0.14	0.22	0.14	0.21	0.14	0.15	0.13
Aluminum	13	13	13	13	16	12	67	12	15	13	17	12
Arsenic	U	0.37	U	0.38	U	0.36	U	0.37	U	0.37	U	0.35
Barium	2.1	0.37	1.9	0.38	1.9	0.36	3.1	0.37	2.7	0.37	3.9	0.35
Beryllium	U	0.039	U	0.039	U	0.038	U	0.038	U	0.039	U	0.037
Calcium	12000	45	13000	46	15000	44	16000	44	16000	45	13000	43
Cadmium	U	0.26	U	0.26	U	0.25	0.45	0.25	U	0.26	0.27	0.24
Cobalt	U	0.14	U	0.14	U	0.14	U	0.14	U	0.14	U	0.13
Chromium	U	0.39	U	0.40	U	0.38	U	0.39	U	0.39	U	0.37
Copper	0.70	0.65	0.70	0.66	0.90	0.63	2.0	0.63	0.66	0.65	1.4	0.61
Iron	22	2.8	19	2.8	24	2.7	110	2.7	21	2.8	35	2.6
Potassium	2800	11	2900	11	3000	11	2400	11	2500	11	2200	11
Magnesium	380	24	400	24	430	23	420	23	460	24	350	22
Manganese	22	0.12	5.4	0.12	17	0.12	17	0.12	4.7	0.12	12	0.11
Sodium	1100	49	1000	49	1000	48	1500	48	1300	49	3100	46
Nickel	U	0.22	U	0.22	U	0.21	U	0.21	U	0.22	U	0.21
Lead	0.54	0.26	0.48	0.26	0.50	0.25	1.2	0.25	0.49	0.26	0.49	0.24
Antimony	0.48	0.45	0.58	0.46	U	0.44	0.55	0.44	0.57	0.45	0.46	0.43
Selenium	1.3	0.49	1.2	0.49	1.4	0.48	1.4	0.48	1.5	0.49	1.0	0.46
Thallium	U	0.49	U	0.49	U	0.48	U	0.48	U	0.49	U	0.46
Vanadium	0.27	0.14	0.26	0.14	0.22	0.14	0.43	0.14	0.25	0.14	0.27	0.13
Zinc	37	0.49	21	0.49	21	0.48	24	0.48	24	0.49	26	0.46

Table 1.15 (Cont) Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	10465		10466		10467		10468		10469		10470	
Location	A3-PS-4		A3-PS-5		A3-PS-6		A3-PS-7		A3-PS-8		A2-PS-1	
% Lipids												
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	0.023	0.023	0 035	0.023	0.046	0.022	0.034	0.020	0.038	0.021	0.028	0.021
Silver	0.16	0.13	U	0 14	0.16	0 14	0.19	0.14	0.15	0.13	0.16	0.13
Aluminum	21	12	26	13	15	12	48	13	13	12	13	12
Arsenic	U	0.35	U	0.37	U	0 37	U	0.37	U	0 35	U	0.35
Barium	2.2	0.35	2.6	0.37	2.8	0.37	2.4	0.37	2.4	0.35	3 6	0.35
Beryllium	U	0.037	U	0.038	U	0.038	U	0.039	U	0 036	U	0.037
Calcium	15000	43	14000	45	17000	44	15000	46	15000	42	20000	43
Cadmium	U	0 24	U	0 25	U	0.25	U	0.26	U	0.24	U	0 25
Cobalt	U	0 13	U	0 14	U	0 14	U	0.14	U	0.13	U	0 13
Chromium	U	0.37	U	0.39	U	0.39	U	0.40	U	0 37	U	0.37
Copper	0.64	0.61	1.2	0.64	0.86	0.63	0.94	0.65	1 0	0.60	0.81	0.62
Iron	24	2 6	36	2.7	22	2.7	65	2.8	18	2.6	21	2.6
Potassium	2700	11	2900	11	2700	11	2600	11	2700	10	2300	11
Magnesium	450	22	420	24	460	23	430	24	470	22	460	23
Manganese	8.5	0.11	13	0 12	12	0.12	23	0 12	8 0	0.11	14	0.12
Sodium	1000	46	960	49	1100	48	910	49	1100	46	1200	47
Nickel	U	0.21	U	0.22	U	0 21	U	0.22	U	0.20	U	0 21
Lead	0.56	0.24	0.75	0.25	0 59	0.25	0 77	0.26	0.55	0.24	0 65	0.25
Antimony	U	0 43	0.52	0 45	0.56	0 44	0 53	0.46	U	0.42	0.59	0 43
Selenium	1.0	0 46	1.3	0 49	1 2	0 48	0.97	0 49	1.5	0.46	1 6	0 47
Thallium	U	0 46	U	0 49	U	0 48	U	0 49	U	0 46	U	0 47
Vanadium	0.25	0.13	0.27	0 14	0.20	0 14	0.21	0.14	0.26	0 13	0.27	0 13
Zinc	22	0.46	20	0 49	25	0 48	23	0 49	24	0 46	27	0 47

Table 1.15 (Cont) Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	10471		10472		10473	
Location	A2-PS-2		A2-PS-3		A2-PS-4	
% Lipids						
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	0.035	0.015	0.042	0.022	0.041	0.013
Silver	U	0.14	U	0.13	0.16	0.14
Aluminum	26	13	13	12	15	13
Arsenic	U	0.37	U	0.35	U	0.38
Barium	2.7	0.37	2.4	0.35	2.4	0.38
Beryllium	U	0.039	U	0.037	U	0.04
Calcium	16000	45	17000	43	14000	46
Cadmium	0.42	0.26	U	0.24	U	0.26
Cobalt	U	0.14	U	0.13	U	0.14
Chromium	0.40	0.39	U	0.37	U	0.40
Copper	1.2	0.65	0.77	0.61	0.78	0.66
Iron	41	2.8	16	2.6	16	2.8
Potassium	2300	11	2200	11	2500	11
Magnesium	400	24	450	22	400	24
Manganese	13	0.12	12	0.11	8.1	0.12
Sodium	1400	49	880	46	1100	50
Nickel	U	0.22	U	0.21	U	0.22
Lead	0.74	0.26	0.57	0.24	0.63	0.26
Antimony	U	0.45	U	0.43	0.80	0.46
Selenium	1.5	0.49	1.5	0.46	1.1	0.50
Thallium	U	0.49	U	0.46	U	0.50
Vanadium	0.16	0.14	0.25	0.13	0.21	0.14
Zinc	53	0.49	21	0.46	23	0.50

Table 1.15 (Cont) Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	Method Blank		10474		10475		10476	
Location	-		A2-PS-5		Ref-PS-1		Ref-PS-2	
% Lipids	NA							
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	U	0.05	0.048	0.022	0.032	0.015	0.032	0.026
Silver	U	0.07	0.19	0.14	0.18	0.13	U	0.13
Aluminum	U	6.3	18	13	13	12	16	12
Arsenic	U	0.19	U	0.38	U	0.35	U	0.35
Barium	U	0.19	2.1	0.38	2.6	0.35	2.3	0.35
Beryllium	U	0.02	U	0.04	U	0.036	U	0.036
Calcium	50	23	8700	46	15000	42	13000	42
Cadmium	U	0.13	U	0.26	U	0.24	U	0.24
Cobalt	U	0.07	U	0.14	U	0.13	U	0.13
Chromium	U	0.20	U	0.40	U	0.37	U	0.37
Copper	U	0.33	0.80	0.66	0.91	0.60	0.84	0.60
Iron	2.6	1.4	20	2.8	13	2.6	19	2.6
Potassium	U	5.5	2300	11	2800	10	2500	10
Magnesium	U	12	330	24	450	22	400	22
Manganese	U	0.06	7.4	0.12	5.6	0.11	6.3	0.11
Sodium	U	25	790	50	930	46	830	46
Nickel	U	0.11	U	0.22	U	0.20	U	0.20
Lead	0.15	0.13	0.65	0.26	0.38	0.24	0.47	0.24
Antimony	U	0.23	0.47	0.46	U	0.42	0.54	0.42
Selenium	U	0.25	1.1	0.50	1.3	0.46	1.1	0.46
Thallium	U	0.25	U	0.50	U	0.46	U	0.46
Vanadium	U	0.07	0.19	0.14	0.36	0.13	0.20	0.13
Zinc	0.40	0.25	19	0.50	20	0.46	19	0.46

Table 1.15 (Cont) Results of the Analysis for Metals in Tissue (GP Environmental)
WA # 2-274 Cornell Dubilier Electronics
Results are Wet Weight

Client ID	10477		10478		10479	
Location	Ref-PS-3		Ref-PS-4		Ref-PS-5	
% Lipids						
Parameter	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Mercury	0.030	0.022	0.029	0.021	0 019	0.018
Silver	0.24	0.14	0.22	0.14	U	0.14
Aluminum	14	13	17	13	18	13
Arsenic	U	0.37	U	0.38	U	0 37
Barium	2.4	0.37	3.0	0.38	2.1	0.37
Beryllium	U	0 038	U	0.04	U	0.038
Calcium	9700	45	16000	46	12000	45
Cadmium	U	0 25	U	0.26	U	0.25
Cobalt	U	0.14	U	0.14	U	0.14
Chromium	U	0.39	U	0 40	U	0 39
Copper	0.67	0.64	0.96	0.66	1.1	0.64
Iron	18	2.7	43	2.8	20	2.7
Potassium	2600	11	2600	11	2600	11
Magnesium	350	24	460	24	400	24
Manganese	8.3	0 12	8.4	0.12	6.5	0 12
Sodium	810	49	970	50	740	49
Nickel	U	0 22	U	0.22	U	0 22
Lead	0 61	0 25	0.50	0.26	0.66	0 25
Antimony	0 80	0 45	0 52	0.46	U	0.45
Selenium	1 5	0 49	1 1	0.50	1.6	0.49
Thallium	U	0.49	U	0 50	U	0.49
Vanadium	0.25	0.14	0.29	0 14	U	0.14
Zinc	17	0.49	21	0.50	21	0.49

Table 1.16 Results of the Ammonia and TPH*** Analyses
WA # 2-274 Cornell Dubilier Electronics

Sample ID	Location	Ammonia Conc mg/kg	Ammonia MDL mg/kg	TPH*** Conc mg/kg	TPH*** MDL mg/kg
Method Blank	-	U	0.1	U	25
ABCDEF 10263	A7-1	NR	NA	NR	NA
ABCDEFGH 10264	A3-1	160	40	610	110
ABCDEFGH 10265	A9-1	85	19	210	55
ABCDEFGH 10266	A9-2	NR	NA	NR	NA
ABCDEFGH 10267	A3-2	NR	NA	NR	NA
A 10212	Field Blank	NR	NA	NR	NA
A 10211	Field Blank	NR	NA	NR	NA
A 10213	Field Blank	NR	NA	NR	NA
A 10214	Trip Blank	NR	NA	NR	NA
A 10491	A1-6	NR	NA	NR	NA
A 10492	A2-1	NR	NA	NR	NA
A 10377	Field Blank	NR	NA	NR	NA
A 10396	T4-1-10	U	9.3	U	25
A 10378	Field Blank	U	9.2	25.4	25
Method Blank		U	0.1	U	25
ABCDEF 10486	A1-1	140	23	110	60
ABCDEF 10493	A2-2	400	32	98	80
ABCDEF 10494	A4-1	270	24	820	59
ABCDEF 10497	A5-2	180	13	45	34
ABCDEF 10262	A6-2	670	44	330	130

*** TPH denotes Total Petroleum Hydrocarbons

Each sample was spiked with a four component mixture of CLP surrogate standards consisting of toluene-d_8, 4-bromofluorobenzene, 1,2-dichloroethane-d_4 and dichlorobenzene-d_4. The surrogate percent recoveries for the water samples, listed in Table 2.1, ranged from 81 to 99. All seventy-six values were within the acceptable QC limits.

The surrogate percent recoveries for the soil samples, listed in Table 2.2, ranged from 49 to 131. Two hundred and fifty-six out of two hundred and eighty-four values were within the acceptable QC limits.

Samples ABCDEF 10216 and 2000-1008 were chosen for the matrix spike/matrix spike duplicate (MS/MSD) analyses for the water samples. The percent recoveries, ranging from 90 to 114, are listed in Table 2.3. All twenty values were within the acceptable QC limits. The relative percent differences, also listed in Table 2.3, ranged from 2 to 6, and all ten were within the acceptable QC limits.

Samples 10265, E 10266, E 10267, ABCDEF 10388 and ABCDEF 10374 were chosen for the MS/MSD analyses for the soil samples. The percent recoveries, ranging from 74 to 125, are listed in Table 2.4. All fifty values were within the acceptable QC limits. The relative percent differences, also listed in Table 2.4, ranged from 0 (zero) to 18, and all twenty-five were within the acceptable QC limits.

Table 2.2 (Cont) Results of the Surrogate Recoveries for VOC in Soil
WA # 2-274 Cornell Dubilier Electronics

Sample ID	S1 (DIC)	S2 (TOL)	S3 (BFB)	S4 (DCB)	Total Out
VBLKA	86	102	99	109	0
VBLKB	92	88	88	94	0
10489 DL	102	85	77	60 *	1
10490 DL	106	84	95	92	0
10491 DL	108	84	87	77	0
10492 DL	105	85	86	77	0
10493 DL	114	62 *	94	78	1
10494 DL	110	83	89	82	0
10495 DL	117	73 *	106	111	1
10496 DL	104	84	99	99	0
10497 DL	109	82	82	70	0
10498 DL	103	86	86	80	0
10262 DL	107	85	88	84	0
VBLKC	103	81	90	96	0
10395 DL	117	79 *	83	79	1
10396 DL	127 *	70 *	77	65 *	3
10397 DL	113	89	94	98	0
10398 DL	108	83	89	88	0
10399 DL	115	80 *	83	74	1
10400 DL	111	84	90	91	0
10486 DL	117	79 *	83	71	1
VBLKD	115	105	105	104	0
10487 DL	111	93	91	64 *	1
10488 DL	103	92	83	49 *	1
10489 DL2	109	104	100	95	0
10493 DL2	120	95	93	69 *	1
10495 DL2	111	103	101	95	0

	QC Limits
S1 (DIC) = 1,2-Dichloroethane-d4	70-121
S2 (TOL) = Toluene-d8	81-117
S3 (BFB) = Bromofluorobenzene	74-121
S4 (DCB) = Dichlorobenzene-d4	70-121

Table 2 2 (Cont) Results of the Surrogate Recoveries for VOC in Soil
WA # 2-274 Cornell Dubilier Electronics

Sample ID	S1 (DIC)	S2 (TOL)	S3 (BFB)	S4 (DCB)	Total Out
VBLKA	84	88	89	98	0
ABCDEF 10374 MS	93	90	84	77	0
ABCDEF 10374 MSD	109	83	82	70	0
VBLKB	86	102	99	109	0
VBLKE	91	89	89	96	0
ABCDEF 10388 MS	104	87	86	76	0
ABCDEF 10388 MSD	114	87	86	82	0
VBLKC	115	105	105	104	0
ABCDEF 10371 DL	121	96	108	100	0
ABCDEF 10372 DL	126 *	92	102	95	1
ABCDEF 10373 DL	124 *	92	94	76	1
ABCDEF 10374 DL	115	93	94	88	0
ABCDEF 10375 DL	117	90	88	65 *	1
ABCDEF 10380 DL	130 *	92	96	85	1
ABCDEF 10381 DL	107	92	75	68 *	1
ABCDEF 10382 DL	117	96	84	77	0
ABCDEF 10383 DL	121	98	97	90	0
ABCDEF 10384 DL	112	87	78	68 *	1
ABCDEF 10385 DL	131 *	80 *	83	64 *	3
VBLKD	103	97	108	101	0
ABCDEF 10386 DL	110	100	93	81	0
ABCDEF 10387 DL	118	101	100	89	0
ABCDEF 10389 DL	117	100	98	85	0
ABCDEF 10390 DL	129 *	99	97	84	1
ABCDEF 10391 DL	124 *	102	97	90	1
ABCDEF 10393 DL	126 *	93	90	84	1
ABCDEF 10394 DL	128 *	101	101	84	1

	QC Limits
S1 (DIC) = 1,2-Dichloroethane-d4	70-121
S2 (TOL) = Toluene-d8	74-121
S3 (BFB) = Bromofluorobenzene	81-117
S4 (DCB) = Dichlorobenzene-d4	70-121

Table 2.3 Results of the MS/MSD Analysis for VOC in Water
WA # 2-274 Cornell Dubilier Electronics

Sample ID: ABCDEF 10216

Parameter	Spike Added (ug/L)	Sample Conc. (ug/L)	MS Rec (ug/L)	MS %	MSD Rec (ug/L)	MSD %	RPD	QC Limits RPD	QC Limits Rec
1,1-Dichloroethene	50	U	48	96	51	102	6	14	61-145
Benzene	50	U	48	96	50	100	4	11	76-127
Trichloroethene	50	U	46	92	48	96	4	14	71-120
Toluene	50	2.8	48	90	51	96	6	13	76-125
Chlorobenzene	50	U	51	102	53	106	4	13	75-130

Sample ID: 2000-1008

Parameter	Spike Added (ug/L)	Sample Conc. (ug/L)	MS Rec (ug/L)	MS %	MSD Rec (ug/L)	MSD %	RPD	QC Limits RPD	QC Limits Rec
1,1-Dichloroethene	50	U	45	90	46	92	2	14	61-145
Benzene	50	U	49	98	51	102	4	11	76-127
Trichloroethene	50	U	47	94	48	96	2	14	71-120
Toluene	50	U	51	102	52	104	2	13	76-125
Chlorobenzene	50	U	56	112	57	114	2	13	75-130

Table 2.9 (Cont) Results of the MS/MSD Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID: 10380

Compound Name	Sample Conc µg/kg	MS Spike Added µg/kg	MSD Spike Added µg/kg	MS Conc µg/kg	MSD Conc µg/kg	MS % Rec	MSD % Rec	RPD	QC Limits RPD	QC Limits % Rec
Phenol	U	26000	25000	12000	11000	46	44	9	35	26 - 90
2-Chlorophenol	U	26000	25000	12000	12000	46	48	7	50	25 - 102
1,4-Dichlorobenzene	U	13000	12000	6000	6400	46	53	6	27	28 - 104
N-Nitroso-Di-N-Propylamine	U	13000	12000	5800	5500	45	46	3	38	41 - 126
1,2,4-Trichlorobenzene	U	13000	12000	7100	6700	55	56	6	23	38 - 107
4-Chloro-3-Methylphenol	U	26000	25000	13000	11000	50	44	13	33	26 - 103
Acenaphthene	U	13000	12000	7400	6700	57	56	10	19	31 - 137
2 4-Dinitrotoluene	U	13000	12000	5700	4800	44	40	17	47	28 - 89
4-Nitrophenol	U	26000	25000	5100	4400	20	18	15	50	11 - 114
Pentachlorophenol	U	26000	25000	14000	12000	54	48	15	47	17 - 109
Pyrene	2000	13000	12000	9700	9400	59	62	3	36	35 - 142

Sample ID: 10386

Compound Name	Sample Conc µg/kg	MS Spike Added µg/kg	MSD Spike Added µg/kg	MS Conc µg/kg	MSD Conc µg/kg	MS % Rec	MSD % Rec	RPD	QC Limits RPD	QC Limits % Rec
Phenol	U	25000	25000	13000	14000	52	56	7	35	26 - 90
2-Chlorophenol	U	25000	25000	14000	16000	56	64	13	50	25 - 102
1,4-Dichlorobenzene	U	12000	12000	7500	8300	63	69	10	27	28 - 104
N-Nitroso-Di-N-Propylamine	U	12000	12000	6600	7100	55	59	4	38	41 - 126
1 2,4-Trichlorobenzene	320	12000	12000	9200	10000	74	81	8	23	38 - 107
4-Chloro-3-Methylphenol	U	25000	25000	16000	17000	64	68	5	33	26 - 103
Acenaphthene	840	12000	12000	8800	10000	66	76	14	19	31 - 137
2 4-Dinitrotoluene	U	12000	12000	8500	8400	71	70	1	47	28 - 89
4-Nitrophenol	U	25000	25000	6900	7200	28	29	4	50	11 - 114
Pentachlorophenol	U	25000	25000	26000	28000	104	112 *	7	47	17 - 109
Pyrene	10000	12000	12000	20000	32000	80	183 *	75 *	36	35 - 142

Table 2.4 (Cont) Results of the MS/MSD Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Electronics

Sample ID: ABCDEF 10388

Parameter	Spike Added (ug/kg)	Sample Conc. (ug/kg)	MS Rec (ug/kg)	MS %	MSD Rec (ug/kg)	MSD %	RPD	QC Limits RPD	QC Limits Rec
1,1-Dichloroethene	71	U	82	115	71	100	14	22	59-172
Benzene	71	U	62	87	61	86	2	21	66-142
Trichloroethene	71	U	59	83	58	82	2	24	62-137
Toluene	71	5.4	58	74	58	74	0	21	59-139
Chlorobenzene	71	U	67	94	70	99	4	21	60-133

Sample ID: ABCDEF 10374

Parameter	Spike Added (ug/kg)	Sample Conc. (ug/kg)	MS Rec (ug/kg)	MS %	MSD Rec (ug/kg)	MSD %	RPD	QC Limits RPD	QC Limits Rec
1,1-Dichloroethene	79	U	99	125	83	105	18	22	59-172
Benzene	79	U	83	105	82	104	1	21	66-142
Trichloroethene	79	U	76	96	65	82	16	24	62-137
Toluene	79	U	76	96	65	82	16	21	59-139
Chlorobenzene	79	U	79	100	78	99	1	21	60-133

Before extraction, each sample was spiked with a six component mixture of CLP surrogate standards consisting of nitrobenzene-d_5, 2-fluorobiphenyl, terphenyl-d_{14}, phenol-d_5, 2-fluorophenol, and 2,4,6-tribromophenol. The surrogate percent recoveries for the water samples, listed in Table 2.5, ranged from 11 to 125. Ninety-four out of ninety-six values were within the acceptable QC limits.

The surrogate percent recoveries for the soil samples, listed in Table 2.6, ranged from 32 to 135. All four hundred and eighty values were within the acceptable QC limits.

The surrogate percent recoveries for the soil samples, listed in Table 2.7, ranged from 44 to 126. All one hundred and fourteen values were within the acceptable QC limits.

Samples 2000-1008 and 10216 were chosen for the matrix spike/matrix spike duplicate (MS/MSD) analyses for the water samples. The percent recoveries, ranging from 25 to 110, are listed in Table 2.8. All forty-four values were within the acceptable QC limits. The relative percent differences, also listed in Table 2.8, ranged from 0 (zero) to 13. All twenty-two values were within the acceptable QC limits.

Samples 10396, 10492, 10498, 10380 and 10386 were chosen for the MS/MSD analyses for the soil samples. The percent recoveries, ranging from 18 to 183, are listed in Table 2.9. One hundred and eight out of one hundred and ten values were within the acceptable QC limits. The relative percent differences, also listed in Table 2.9, ranged from 0 (zero) to 75. Fifty-four out of fifty-five values were within the acceptable QC limits

Sample B 08634 was chosen for the MS/MSD analyses for the tissue samples The percent recoveries, ranging from 22 to 100, are listed in Table 2.10. All twenty-one calculated values were within the acceptable QC limits. One value was not calculated because the spike was not recovered. The relative percent differences, also listed in Table 2.10, ranged from 0 (zero) to 17. All ten calculated values were within the acceptable QC limits. One value was not calculated because the spike was not recovered.

Table 2.5 Results of the Surrogate Recoveries for BNA in Water
WA # 2-274 Cornell Dubilier Electronics

Sample ID	S1 (2FP)	S2 (PHL)	S3 (NBZ)	S4 (FBP)	S5 (TBP)	S6 (TPH)	Total Out
SBLKA 7/9/97)	63	78	82	87	85	99	0
2000-1001	64	72	71	76	83	85	0
2000-1002	61	64	71	78	86	85	0
2000-1003	49	66	75	81	86	91	0
2000-1004	47	55	70	80	71	89	0
2000-1005	58	68	74	80	92	104	0
2000-1007	64	73	77	85	101	102	0
2000-1008 MS	64	73	73	85	107	100	0
2000-1008 MSD	57	70	76	85	106	125	0
2000-1006	67	75	74	87	102	88	0
2000-1008	60	73	79	89	111	110	0
2000-1010	53	70	75	86	105	110	0
SBLKA (6/30/97)	63	70	70	97	100	95	0
10216	12 *	32	62	88	11 *	103	2
10216 MS	68	63	67	85	83	92	0
10216 MSD	56	64	67	88	85	113	0
					QC Limits		
S1 (2FP) = 2-Fluorophenol					21-100		
S2 (PHL) = Phenol-d5					10-94		
S3 (NBZ) = Nitrobenzene-d5					35-114		
S4 (FBP) = 2-Fluorobiphenyl					43-116		
S5 (TBP) = 2,4,6-Tribromophenol					10-123		
S6 (TPH) = Terphenyl-d14					33-141		

Table 2.6 Results of the Surrogate Recoveries for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics

Sample ID	S1 (2FP)	S2 (PHL)	S3 (NBZ)	S4 (FBP)	S5 (TBP)	S6 (TPH)	Total Out
SBLKC (7/2/97)	80	75	80	84	94	91	0
10485	55	61	59	87	56	120	0
10264	67	64	53	65	75	77	0
10266	88	83	73	80	97	89	0
10267	91	90	78	82	105	96	0
10265	61	67	59	66	97	83	0
SBLB (7/3/97)	79	87	93	89	69	106	0
10263	80	78	73	75	86	86	0
SBLKA (7/11/97)	95	96	97	95	106	105	0
B 08634 MSD	93	91	70	89	81	126	0
B 08634	69	63	60	80	82	106	0
B 08634 MS	89	86	71	96	87	124	0
B 08635	88	84	67	94	92	119	0
					QC Limits		
S1 (2FP) = 2-Fluorophenol					25-121		
S2 (PHL) = Phenol-d5					24-113		
S3 (NBZ) = Nitrobenzene-d5					23-120		
S4 (FBP) = 2-Fluorobiphenyl					30-115		
S5 (TBP) = 2,4,6-Tribromophenol					19-122		
S6 (TPH) = Terphenyl-d14					18-137		

Table 2.6 (Cont) Results of the Surrogate Recoveries for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics

Sample ID	S1 (2FP)	S2 (PHL)	S3 (NBZ)	S4 (FBP)	S5 (TBP)	S6 (TPH)	Total Out
SBLKA (7/2/97)	80	75	80	84	94	91	0
10395	72	70	61	85	85	92	0
10396	75	69	68	94	91	83	0
10396 MS	64	60	55	81	82	75	0
10396 MSD	64	61	55	80	79	75	0
10397	69	64	57	84	83	90	0
10398	79	73	73	101	95	102	0
SBLKB (7/1/97)	66	67	70	76	81	89	0
10398 DL	77	76	88	102	108	135	0
10400	58	57	53	67	76	79	0
10487	65	63	58	78	86	88	0
10489	64	59	59	73	79	94	0
10490	59	57	54	70	80	81	0
10491	63	63	62	80	86	100	0
10492	65	62	62	77	75	91	0
10492 MS	66	64	59	79	77	83	0
10492 MSD	64	60	60	81	83	85	0
10493	71	70	67	73	55	82	0
10494	67	68	64	73	55	82	0
10495	73	75	71	82	72	101	0
10497	63	69	67	77	53	89	0
10262	68	66	63	71	62	92	0
10399	66	67	61	74	51	81	0
10486	63	64	60	73	52	79	0
10488	74	74	72	86	65	92	0
10496	71	73	64	78	57	94	0
10498	76	77	67	85	61	100	0
10498 MS	73	72	69	81	58	96	0
10498 MSD	75	72	73	80	53	87	0
10492 RE	52	53	68	78	33	78	0
10489 DL	63	63	76	91	34	75	0
10491 DL	56	52	52	65	59	72	0
10399 DL	35	32	29	38	32	39	0
10486 DL	54	52	46	59	58	61	0
10496 DL	56	51	49	63	56	67	0

	QC Limits
S1 (2FP) = 2-Fluorophenol	25-121
S2 (PHL) = Phenol-d5	24-113
S3 (NBZ) = Nitrobenzene-d5	23-120
S4 (FBP) = 2-Fluorobiphenyl	30-115
S5 (TBP) = 2,4,6-Tribromophenol	19-122
S6 (TPH) = Terphenyl-d14	18-137

Table 2.6 (Cont) Results of the Surrogate Recoveries for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics

Sample ID	S1 (2FP)	S2 (PHL)	S3 (NBZ)	S4 (FBP)	S5 (TBP)	S6 (TPH)	Total Out
SBLKA (6/29/97)	69	70	74	78	88	96	0
10388	67	69	73	79	83	88	0
10384	63	66	72	78	86	108	0
10371	49	58	60	67	73	83	0
10372	41	47	52	56	55	68	0
10373	49	56	61	67	69	85	0
10374	51	55	59	64	62	84	0
10375	43	47	49	56	52	66	0
10380	36	43	43	54	49	79	0
10380 MS	42	50	52	60	53	76	0
10380 MSD	47	49	49	57	47	72	0
10381	64	68	69	83	73	85	0
10382	56	61	70	77	60	73	0
10383	62	65	71	84	64	80	0
10390	61	64	65	80	62	82	0
10394	60	65	64	75	60	72	0
SBLKB (7/2/97)	80	75	80	84	94	91	0
10385	63	63	67	75	93	85	0
10386 MS	59	57	65	75	98	123	0
10386 MSD	67	64	71	79	95	108	0
10386	67	64	57	76	101	80	0
10387	45	46	51	64	66	75	0
10389	60	64	63	85	92	112	0
10391	68	68	70	89	91	98	0
10392	64	67	66	81	80	102	0
10393	63	63	64	81	79	96	0
10383 DL	59	62	66	86	80	91	0
10382 DL	55	62	60	79	68	80	0
10381 DL	60	64	65	79	76	84	0
10386 DL	72	71	63	82	99	110	0
10387 DL	84	80	81	100	110	116	0
10393 DL	54	56	58	76	60	80	0
					QC Limits		
S1 (2FP) = 2-Fluorophenol					25-121		
S2 (PHL) = Phenol-d5					24-113		
S3 (NBZ) = Nitrobenzene-d5					23-120		
S4 (FBP) = 2-Fluorobiphenyl					30-115		
S5 (TBP) = 2,4,6-Tribromophenol					19-122		
S6 (TPH) = Terphenyl-d14					18-137		

Table 2.7 Results of the Surrogate Recoveries for BNA in Tissue
WA # 2-274 Cornell Dubilier Electronics

Sample ID	S1 (2FP)	S2 (PHL)	S3 (NBZ)	S4 (FBP)	S5 (TBP)	S6 (TPH)	Total Out
SBLKA (7/11/97)	95	96	97	95	106	105	0
B08634 MSD	93	91	70	89	81	126	0
B08634	69	63	60	80	82	106	0
B08634 MS	89	86	71	96	87	124	0
B 08635	88	84	67	94	92	119	0
B 10222	93	99	89	94	108	136	0
B 10223	109	105	96	99	92	120	0
B 10233	91	91	79	96	85	122	0
B 10224	85	55	69	96	79	114	0
B 10242	100	44	86	98	85	120	0
B 10248	83	80	65	89	84	109	0
B 10249	82	79	60	90	99	108	0
B 10241	80	76	62	90	86	107	0
B 10268	82	73	65	93	98	113	0
B 08628	82	74	67	96	94	122	0
B 08631	79	73	66	94	96	121	0
B 08632	75	71	64	91	92	120	0
B 08633	69	64	62	82	82	102	0

	QC Limits
S1 (2FP) = 2-Fluorophenol	25-121
S2 (PHL) = Phenol-d5	24-113
S3 (NBZ) = Nitrobenzene-d5	23-120
S4 (FBP) = 2-Fluorobiphenyl	30-115
S5 (TBP) = 2,4,6-Tribromophenol	19-122
S6 (TPH) = Terphenyl-d14	18-137

Table 2.8 Results of the MS/MSD Analysis for BNA in Water
WA # 2-274 Cornell Dubilier Electronics

Sample ID: 2000-1008

Compound Name	Sample Conc µg/L	MS Spike Added µg/L	MSD Spike Added µg/L	MS Conc µg/L	MSD Conc µg/L	MS % Rec	MSD % Rec	RPD	QC Limits RPD	QC Limits % Rec
Phenol	U	400	400	220	230	55	58	4	42	12 - 89
2-Chlorophenol	U	400	400	250	250	63	63	0	40	27 - 123
1,4-Dichlorobenzene	U	200	200	130	140	65	70	7	28	36 - 97
N-Nitroso-Di-N-Propylamine	U	200	200	110	120	55	60	9	38	41 - 116
1,2,4-Trichlorobenzene	U	200	200	150	150	75	75	0	28	39 - 98
4-Chloro-3-Methylphenol	U	400	400	260	270	65	68	4	42	23 - 97
Acenaphthene	U	200	200	150	150	75	75	0	31	46 - 118
2 4-Dinitrotoluene	U	200	200	150	150	75	75	0	38	24 - 96
4-Nitrophenol	U	400	400	110	140	28	35	24	50	10 - 80
Pentachlorophenol	U	400	400	410	440	103	110	7	50	9 - 103
Pyrene	U	200	200	160	180	80	90	12	31	26 - 127

Sample ID: 10216

Compound Name	Sample Conc µg/L	MS Spike Added µg/L	MSD Spike Added µg/L	MS Conc µg/L	MSD Conc µg/L	MS % Rec	MSD % Rec	RPD	QC Limits RPD	QC Limits % Rec
Phenol	U	670	670	360	380	54	57	5	42	12 - 89
2-Chlorophenol	U	670	670	440	440	66	66	0	40	27 - 123
1,4-Dichlorobenzene	U	330	330	220	250	67	76	13	28	36 - 97
N-Nitroso-Di-N-Propylamine	U	330	330	170	170	52	52	0	38	41 - 116
1,2,4-Trichlorobenzene	U	330	330	260	270	79	82	4	28	39 - 98
4-Chloro-3-Methylphenol	U	670	670	420	430	63	64	2	42	23 - 97
Acenaphthene	U	330	330	240	250	73	76	4	31	46 - 118
2 4-Dinitrotoluene	U	330	330	210	210	64	64	0	38	24 - 96
4-Nitrophenol	U	670	670	170	170	25	25	0	50	10 - 80
Pentachlorophenol	U	670	670	590	580	88	87	2	50	9 - 103
Pyrene	U	330	330	250	280	76	85	11	31	26 - 127

Table 2.9 Results of the MS/MSD Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID: 10396

Compound Name	Sample Conc µg/kg	MS Spike Added µg/kg	MSD Spike Added µg/kg	MS Conc µg/kg	MSD Conc µg/kg	MS % Rec	MSD % Rec	RPD	QC Limits RPD	QC Limits % Rec
Phenol	U	28000	28000	15000	15000	54	54	0	35	26 - 90
2-Chlorophenol	U	28000	28000	16000	17000	57	61	7	50	25 - 102
1,4-Dichlorobenzene	U	14000	14000	7500	7400	54	53	2	27	28 - 104
N-Nitroso-Di-N-Propylamine	U	14000	14000	6400	6300	46	45	2	38	41 - 126
1,2,4-Trichlorobenzene	U	14000	14000	9100	9400	65	67	3	23	38 - 107
4-Chloro-3-Methylphenol	U	28000	28000	16000	16000	57	57	0	33	26 - 103
Acenaphthene	U	14000	14000	9100	9500	65	68	5	19	31 - 137
2,4-Dinitrotoluene	U	14000	14000	7300	7500	52	54	4	47	28 - 89
4-Nitrophenol	U	28000	28000	6600	6600	24	24	0	50	11 - 114
Pentachlorophenol	U	28000	28000	28000	29000	100	104	4	47	17 - 109
Pyrene	1900	14000	14000	9700	9300	56	53	6	36	35 - 142

Sample ID: 10492

Compound Name	Sample Conc µg/kg	MS Spike Added µg/kg	MSD Spike Added µg/kg	MS Conc µg/kg	MSD Conc µg/kg	MS % Rec	MSD % Rec	RPD	QC Limits RPD	QC Limits % Rec
Phenol	U	41000	42000	23000	23000	56	55	2	35	26 - 90
2-Chlorophenol	U	41000	42000	25000	26000	61	62	2	50	25 - 102
1,4-Dichlorobenzene	U	20000	21000	12000	12000	60	57	5	27	28 - 104
N-Nitroso-Di-N-Propylamine	U	20000	21000	9800	9800	49	47	4	38	41 - 126
1,2,4-Trichlorobenzene	U	20000	21000	14000	15000	70	71	1	23	38 - 107
4-Chloro-3-Methylphenol	U	41000	42000	22000	24000	54	57	5	33	26 - 103
Acenaphthene	U	20000	21000	14000	14000	70	67	4	19	31 - 137
2 4-Dinitrotoluene	U	20000	21000	12000	12000	60	57	5	47	28 - 89
4-Nitrophenol	U	41000	42000	9900	11000	24	26	8	50	11 - 114
Pentachlorophenol	U	41000	42000	35000	40000	85	95	11	47	17 - 109
Pyrene	4000	20000	21000	16000	16000	60	57	5	36	35 - 142

Sample ID: 10498

Compound Name	Sample Conc µg/kg	MS Spike Added µg/kg	MSD Spike Added µg/kg	MS Conc µg/kg	MSD Conc µg/kg	MS % Rec	MSD % Rec	RPD	QC Limits RPD	QC Limits % Rec
Phenol	U	79000	78000	52000	51000	66	65	2	35	26 - 90
2-Chlorophenol	U	79000	78000	53000	55000	67	71	6	50	25 - 102
1 4-Dichlorobenzene	U	40000	39000	24000	25000	60	64	6	27	28 - 104
N-Nitroso-Di-N-Propylamine	U	40000	39000	24000	25000	60	64	6	38	41 - 126
1 2,4-Trichlorobenzene	U	40000	39000	24000	25000	60	64	6	23	38 - 107
4-Chloro-3-Methylphenol	U	79000	78000	51000	52000	65	67	3	33	26 - 103
Acenaphthene	U	40000	39000	28000	29000	70	74	6	19	31 - 137
2 4-Dinitrotoluene	U	40000	39000	23000	23000	58	59	2	47	28 - 89
4-Nitrophenol	U	79000	78000	22000	24000	28	31	10	50	11 - 114
Pentachlorophenol	U	79000	78000	63000	57000	80	73	9	47	17 - 109
Pyrene	4200	40000	39000	37000	35000	82	79	4	36	35 - 142

Table 2.10 Results of the MS/MSD Analysis for BNA in Tissue
WA # 2-274 Cornell Dubilier Electronics
based on wet weight

Sample ID: B 08634

Compound Name	Sample Conc µg/kg	MS Spike Added µg/kg	MSD Spike Added µg/kg	MS Conc µg/kg	MSD Conc µg/kg	MS % Rec.	MSD % Rec.	RPD	QC Limits RPD	QC Limits % Rec.
Phenol	U	33000	33000	22000	25000	67	76	13	35	26 - 90
2-Chlorophenol	U	33000	33000	25000	26000	76	79	4	50	25 - 102
1,4-Dichlorobenzene	U	17000	17000	12000	12000	71	71	0	27	28 - 104
N-Nitroso-Di-N-Propylamine	U	17000	17000	8700	9700	51	57	11	38	41 - 126
1,2,4-Trichlorobenzene	U	17000	17000	13000	12000	76	71	8	23	38 - 107
4-Chloro-3-Methylphenol	U	33000	33000	24000	23000	73	70	4	33	26 - 103
Acenaphthene	U	17000	17000	15000	14000	88	82	7	19	31 - 137
2,4-Dinitrotoluene	U	17000	17000	13000	11000	76	65	17	47	28 - 89
4-Nitrophenol	U	33000	33000	7200	7900	22	24	9	50	11 - 114
Pentachlorophenol	U	33000	33000	U	25000	NC	76	NC	47	17 - 109
Pyrene	U	17000	17000	16000	17000	94	100	6	36	35 - 142

Table 2.9 (Cont) Results of the MS/MSD Analysis for BNA in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Sample ID: 10380

Compound Name	Sample Conc µg/kg	MS Spike Added µg/kg	MSD Spike Added µg/kg	MS Conc µg/kg	MSD Conc µg/kg	MS % Rec	MSD % Rec	RPD	QC Limits RPD	QC Limits % Rec
Phenol	U	26000	25000	12000	11000	46	44	9	35	26 - 90
2-Chlorophenol	U	26000	25000	12000	12000	46	48	7	50	25 - 102
1,4-Dichlorobenzene	U	13000	12000	6000	6400	46	53	6	27	28 - 104
N-Nitroso-Di-N-Propylamine	U	13000	12000	5800	5500	45	46	3	38	41 - 126
1,2,4-Trichlorobenzene	U	13000	12000	7100	6700	55	56	6	23	38 - 107
4-Chloro-3-Methylphenol	U	26000	25000	13000	11000	50	44	13	33	26 - 103
Acenaphthene	U	13000	12000	7400	6700	57	56	10	19	31 - 137
2,4-Dinitrotoluene	U	13000	12000	5700	4800	44	40	17	47	28 - 89
4-Nitrophenol	U	26000	25000	5100	4400	20	18	15	50	11 - 114
Pentachlorophenol	U	26000	25000	14000	12000	54	48	15	47	17 - 109
Pyrene	2000	13000	12000	9700	9400	59	62	3	36	35 - 142

Sample ID: 10386

Compound Name	Sample Conc µg/kg	MS Spike Added µg/kg	MSD Spike Added µg/kg	MS Conc µg/kg	MSD Conc µg/kg	MS % Rec	MSD % Rec	RPD	QC Limits RPD	QC Limits % Rec
Phenol	U	25000	25000	13000	14000	52	56	7	35	26 - 90
2-Chlorophenol	U	25000	25000	14000	16000	56	64	13	50	25 - 102
1,4-Dichlorobenzene	U	12000	12000	7500	8300	63	69	10	27	28 - 104
N-Nitroso-Di-N-Propylamine	U	12000	12000	6600	7100	55	59	4	38	41 - 126
1 2,4-Trichlorobenzene	320	12000	12000	9200	10000	74	81	8	23	38 - 107
4-Chloro-3-Methylphenol	U	25000	25000	16000	17000	64	68	5	33	26 - 103
Acenaphthene	840	12000	12000	8800	10000	66	76	14	19	31 - 137
2 4-Dinitrotoluene	U	12000	12000	8500	8400	71	70	1	47	28 - 89
4-Nitrophenol	U	25000	25000	6900	7200	28	29	4	50	11 - 114
Pentachlorophenol	U	25000	25000	26000	28000	104	112 *	7	47	17 - 109
Pyrene	10000	12000	12000	20000	32000	80	183 *	75 *	36	35 - 142

QA/QC for Pesticides/PCBs

Each water sample was spiked with a solution of tetrachloro-m-xylene and decachlorobiphenyl as surrogates. Percent recoveries for the water samples ranged from 41 to 125 and are listed in Table 2.11. All thirty-two values were within the advisory QC limits.

Each soil sample was spiked with a solution of tetrachloro-m-xylene and decachlorobiphenyl as surrogates. Percent recoveries for the soil samples ranged from 35 to 526 and are listed in Table 2.12. One hundred and thirty-four out of one hundred and sixty-six values were within the advisory QC limits. Eight other values were from diluted samples and the percent recovery could not be calculated.

Each tissue sample was spiked with a solution of tetrachloro-m-xylene and decachlorobiphenyl as surrogates. Percent recoveries for the tissue samples ranged from 59 to 9023 and are listed in Table 2.13. Three hundred and five out of three hundred and thirty-eight values were within the advisory QC limits.

Samples ABCDEF 10216 and 2000-1008 were chosen for the matrix spike/matrix spike duplicate (MS/MSD) analyses for the water samples. The percent recoveries ranged from 38 to 192 and are listed in Table 2.14. Thirteen out of twenty-four values were within the acceptable QC limits. The relative percent differences (RPDs), also listed in Table 2.14, ranged from 0 (zero) to 45. Ten out of twelve values were within the acceptable QC limits.

Samples ABCDEF 10375, ABCDEF 10388, ABCDEF 10397, ABCDEF 10492, ABCDEF 10498 and ABCDEF 10265 were chosen for the MS/MSD analyses for the soil samples. The percent recoveries ranged from 30 to 924 and are listed in Table 2.15. Forty-one out of seventy-two values were within the acceptable QC limits. The RPDs, also listed in Table 2.15, ranged from 1 to 153. Twenty-eight out of thirty-six values were within the acceptable QC limits.

Samples 10462, B 08634, B 10406, 10478, B 10230, B 10237, 10453, 10421, B 10250 and B 08630 were chosen for the MS/MSD analyses for the tissue samples. The percent recoveries ranged from 44 to 640 and are listed in Table 2.16. One hundred four out of one hundred twenty values were within the acceptable QC limits. The RPDs, also listed in Table 2.16, ranged from 0 (zero) to 69. Fifty-nine out of sixty values were within the acceptable QC limits.

Table 2.11 Results of the Surrogate Recoveries
for Pesticides/PCBs in Water
WA # 2-274 Cornell Dubilier Electronics

Sample ID	Percent Recovery TCMX	DCBP
PBLKA	79	90
2000-1001	99	60
2000-1002	76	69
2000-1003	84	49
2000-1004	81	69
2000-1005	81	66
2000-1006	80	51
2000-1007	93	50
2000-1008	64	61
2000-1008 MS	77	83
2000-1008 MSD	43	78
2000-1010	41	76
PBLKA	101	116
ABCDEF 10216	125	102
ABCDEF 10216 MS	113	109
ABCDEF 10216 MSD	120	110

TCMX denotes Tetrachloro-m-xylene
DCBP denotes Decachlorobiphenyl

	Advisory QC Limits
TCMX	30-150
DCBP	30-150

Table 2.12 Results of the Surrogate Recoveries
for Pesticides/PCBs in Soil (GP)
WA # 2-274 Cornell Dubilier Electronics

Sample ID	Percent Recovery TCMX	DCBP
PBLKA (7/13/97)	90	78
ABCDEF 10371	86	71
ABCDEF 10372	96	62
ABCDEF 10373	101	71
ABCDEF 10374	88	86
ABCDEF 10380	73	92
ABCDEF 10381	79	44
ABCDEF 10382	66	59
ABCDEF 10383	85	165 *
ABCDEF 10384	84	35
ABCDEF 10385	79	69
ABCDEF 10386	109	170 *
ABCDEF 10387	83	560 *
ABCDEF 10388	84	78
ABCDEF 10389	71	266 *
ABCDEF 10390	102	330 *
ABCDEF 10391	105	566 *
ABCDEF 10392	74	176 *
ABCDEF 10393	85	320 *
ABCDEF 10394	93	246 *
ABCDEF 10375	105	83
ABCDEF 10371 DL	128	142
ABCDEF 10372 DL	126	130
ABCDEF 10373 DL	140	142
ABCDEF 10384 DL	132	91
ABCDEF 10388 DL	120	184 *
ABCDEF 10374 DL	152 *	202 *
ABCDEF 10375 DL	163 *	202 *
ABCDEF 10380 DL	139	226 *
ABCDEF 10381 DL	189 *	153 *
ABCDEF 10382 DL	159 *	142
ABCDEF 10383 DL	D	D
ABCDEF 10385 DL	D	D
ABCDEF 10386 DL	D	D
ABCDEF 10387 DL	D	D
ABCDEF 10390 RE	99	363 *
ABCDEF 10391 RE	92	538 *
ABCDEF 10375 MS RE	98	90
ABCDEF 10375 MSD RE	96	103
ABCDEF 10388 MS RE	112	101
ABCDEF 10388 MSD RE	46	35

TCMX denotes Tetrachloro-m-xylene
DCBP denotes Decachlorobiphenyl

	Advisory QC Limits
TCMX	30-150
DCBP	30-150

Table 2.12 (Cont) Results of the Surrogate Recoveries
for Pesticides/PCBs in Soil (GP)
WA # 2-274 Cornell Dubilier Electronics

Sample ID	Percent Recovery TCMX	DCBP
PBLKA (7/2/97)	88	86
ABCDEF 10494	95	76
ABCDEF 10495	91	96
ABCDEF 10497	112	93
ABCDEF 10490	104	72
ABCDEF 10492	88	68
ABCDEF 10493	81	63
ABCDEF 10395	96	67
ABCDEF 10400	98	75
ABCDEF 10262	100	64
ABCDEF 10491	82	73
ABCDEF 10488	95	69
ABCDEF 10398	102	286 *
ABCDEF 10396	89	125
ABCDEF 10397	85	80
ABCDEF 10399	87	254 *
ABCDEF 10486	86	79
ABCDEF 10487	93	71
ABCDEF 10496	113	72
ABCDEF 10498	108	68
ABCDEF 10492 DL	113	146
ABCDEF 10493 DL	99	116
ABCDEF 10395 DL	110	107
ABCDEF 10400 DL	130	97
ABCDEF 10398 DL	141	106
ABCDEF 10396 DL	121	87
ABCDEF 10399 DL	144	80
ABCDEF 10486 DL	116	105
ABCDEF 10496 DL	107	91
ABCDEF 10397 MS RE	96	77
ABCDEF 10489 RE	101	87
ABCDEF 10262 RE	110	74
ABCDEF 10397 MSD RE	114	91
ABCDEF 10498 MS RE	104	73
ABCDEF 10498 MSD RE	90	71
ABCDEF 10492 MS RE	105	88
ABCDEF 10492 MSD RE	95	74

TCMX denotes Tetrachloro-m-xylene
DCBP denotes Decachlorobiphenyl

	Advisory QC Limits
TCMX	30-150
DCBP	30-150

Table 2.12 (Cont) Results of the Surrogate Recoveries
for Pesticides/PCBs in Soil
WA # 2-274 Cornell Dubilier Electronics

Sample ID	Percent Recovery TCMX	DCBP
PBLKC (7/3/97)	135	119
ABCDEF 10263 RE	133	161 *
ABCDEFGH 10264 RE	164 *	162 *
ABCDEFGH 10265 RE	162 *	228 *
ABCDEFGH 10265 RE MS	135	224 *
ABCDEFGH 10265 RE MSD	139	235 *
ABCDEFGH 10266 RE	114	162 *
ABCDEFGH 10267 RE	315 *	127
A 10379 RE	104	165 *

TCMX denotes Tetrachloro-m-xylene
DCBP denotes Decachlorobiphenyl

	Advisory QC Limits
TCMX	30-150
DCBP	30-150

Table 2.13 Results of the Surrogate Recoveries
for Pesticides/PCBs in Tissue (GP)
WA # 2-274 Cornell Dubilier Electronics

Sample ID	Percent Recovery TCMX	DCBP
PBLKA (7/14/97)	100	114
B 08634	110	102
B 08635	114	107
B 08634 MS RE	89	84
B 08634 MSD RE	80	77
PBLKA (6/27/97)	62	92
B 10401	134	162 *
B 10402	59	67
B 10403	68	117
B 10404	60	82
B 10405	61	144
B 10406	72	80
B 10406 MS	77	86
B 10406 MSD	77	90
B 10407	87	83
B 10408	142	124
B 10409	88	177 *
B 10410	76	80
B 10411	72	66
B 10412	84	73
B 10413	155 *	63
B 10414	122	90
B 10415	135	81
B 10416	120	87
B 10418	137	205 *
B 10419	151 *	101
B 10420	159 *	199 *
10474 DL	94	89
10475	93	79
10476	91	80
10477	76	77
10478	68	70
10479	87	76
PBLKA (6/26/97)	86	82
10478 MS	74	84
10478 MSD	76	75

TCMX denotes Tetrachloro-m-xylene
DCBP denotes Decachlorobiphenyl

	Advisory QC Limits
TCMX	30-150
DCBP	30-150

Table 2.13 (Cont) Results of the Surrogate Recoveries
for Pesticides/PCBs in Tissue (GP)
WA # 2-274 Cornell Dubilier Electronics

Sample ID	Percent Recovery TCMX	DCBP
PBLKA (7/10/97)	94	77
B 10219	97	75
B 10220	97	72
B 10221	105	75
B 10222	81	71
B 10223	91	72
B 10224	98	89
B 10225	79	84
B 10226	85	82
B 10227	68	75
B 10228	77	82
B 10229	80	82
B 10230	71	77
B 10231	79	80
B 10232	69	70
B 10233	79	83
B 10234	72	79
B 10235	124	84
B 10236	90	87
B 10237	86	86
B 10238	90	90
B 10230 MS RE	88	86
B 10230 MSD RE	71	70
B 10237 MS RE	85	86
B 10237 MSD RE	93	85

TCMX denotes Tetrachloro-m-xylene
DCBP denotes Decachlorobiphenyl

	Advisory QC Limits
TCMX	30-150
DCBP	30-150

Table 2.13 (Cont) Results of the Surrogate Recoveries
for Pesticides/PCBs in Tissue (GP)
WA # 2-274 Cornell Dubilier Electronics

Sample ID	Percent Recovery TCMX	DCBP
PBLKA (6/24/97)	81	84
10434 DL	255 *	91
10435 DL	159	109
10436 DL 1	140	130
10437 DL	150	128
10438 DL	140	105
10439 DL	109	97
10440 DL	149	116
10441 DL	118	118
10442	92	83
10443 DL	94	101
10444 DL	112	94
10445 DL	83	78
10446 DL	125	102
10447 DL	131	95
10448 DL	143	102
10449 DL	115	99
10450 DL 1	117	99
10451 DL 1	107	100
10452 DL	99	87
10453 DL	89	85
10453 DL MS	79	70
10453 DL MSD	68	67
10450 DL2	141	117
10451 DL2	376 *	124
10436 DL2	140	9073 *

TCMX denotes Tetrachloro-m-xylene
DCBP denotes Decachlorobiphenyl

	Advisory QC Limits
TCMX	30-150
DCBP	30-150

Table 2.13 (Cont) Results of the Surrogate Recoveries
for Pesticides/PCBs in Tissue (GP)
WA # 2-274 Cornell Dubilier Electronics

Sample ID	Percent Recovery	
	TCMX	DCBP
PBLKB (6/28/97)	100	100
B 10421 RE	81	147
B 10421 RE MS	89	158 *
B 10421 RE MSD	96	156 *
B 10422 RE	94	257 *
B 10423 RE	94	166 *
B 10424 RE	92	264 *
B 10425 RE	101	129
B 10426 RE	87	106
B 10427 RE	103	100
B 10428 RE	99	103
B 10429 RE	81	98
B 10430 RE	83	104
B 10431 RE	85	102
B 10432 RE	72	96
B 10433 RE	202 *	238 *

TCMX denotes Tetrachloro-m-xylene
DCBP denotes Decachlorobiphenyl

	Advisory QC Limits
TCMX	30-150
DCBP	30-150

Table 2.13 (Cont) Results of the Surrogate Recoveries
for Pesticides/PCBs in Tissue (GP)
WA # 2-274 Cornell Dubilier Electronics

Sample ID	Percent Recovery TCMX	DCBP
10454 DL	105	104
10455 DL	99	91
10456 DL	106	94
10457 DL 1	107	94
10458 DL	121	85
10459 DL	95	92
10460 DL	115	88
10461 DL	108	99
10462 DL	121	97
10463 DL 1	166	85
10464 DL 1	313 *	91
10465 DL	169 *	99
10466 DL	121	99
10467 DL	130	96
10468 DL	100	88
10469 DL	113	91
10470 DL	86	92
10471 DL	85	92
10472 DL	113	93
10473 DL	103	88
PBLKA (6/25/97)	66	78
10462 MS	80	65
10462 MSD	85	63
10457 DL 2	119	101
10463 DL 2	165 *	112
10464 DL 2	133	129
10470 DL 2	180 *	127
10471 DL 2	145	129
10462 DL 2	180 *	202 *
10470 DL 3	187 *	177 *

TCMX denotes Tetrachloro-m-xylene
DCBP denotes Decachlorobiphenyl

	Advisory QC Limits
TCMX	30-150
DCBP	30-150

Table 2.13 (Cont) Results of the Surrogate Recoveries
for Pesticides/PCBs in Tissue (GP)
WA # 2-274 Cornell Dubilier Electronics

Sample ID	Percent Recovery TCMX	DCBP
PBLKA (7/12/97)	99	101
B 10239	95	102
B 10240	93	99
B 10241	93	100
B 10242	101	106
B 10243	95	102
B 10244	104	107
B 10245	98	104
B 10246	99	103
B 10247	110	120
B 10248	117	120
B 10249	116	119
B 10250	119	123
B 10268	154 *	171 *
B 10269	106	113
B 08628	200 *	191 *
B 08629	108	115
B 08630	202 *	206 *
B 08631	116	130
B 08632	161 *	162 *
B 08633	131	132
B 08628 DL	120	82
B 10250 MS RE	97	92
B 10250 MSD RE	96	89
B 08630 MS RE	106	100
B 08630 MSD RE	103	97

TCMX denotes Tetrachloro-m-xylene
DCBP denotes Decachlorobiphenyl

	Advisory QC Limits
TCMX	30-150
DCBP	30-150

Table 2.14 Results of the MS/MSD Analysis for Pesticides/PCBs in Water
WA # 2-274 Cornell Dubilier Electronics

Sample ID: 2000-1008

Compound	Sample Conc (µg/L)	MS Spike Added (µg/L)	MS Conc (µg/L)	MS % Rec	MSD Spike Added (µg/L)	MSD Conc (µg/L)	MSD % Rec	RPD	Advisory QC Limits % Rec	RPD
g-BHC	U	0.40	0.36	90	0.40	0.33	83	8	56-123	15
Heptachlor	U	0.40	0.47	118	0.40	0.36	90	27 *	40-121	20
Aldrin	U	0.40	0.24	60	0.40	0.15	38 *	45 *	40-120	22
Dieldrin	U	1.0	1.00	100	1.0	0.96	96	4	52-126	18
Endrin	U	1.0	1.1	110	1.0	1.0	100	10	56-121	21
p,p'-DDT	U	1.0	1.1	110	1.0	1.1	110	0	38-127	27

Sample ID: ABCDEF 10216

Compound	Sample Conc (µg/L)	MS Spike Added (µg/L)	MS Conc (µg/L)	MS % Rec	MSD Spike Added (µg/L)	MSD Conc (µg/L)	MSD % Rec	RPD	Advisory QC Limits % Rec	RPD
g-BHC	U	0.67	1.00	150 *	0.67	0.97	145 *	3	56-123	15
Heptachlor	U	0.67	1.4	203 *	0.67	1.3	192 *	6	40-121	20
Aldrin	U	0.67	0.73	110	0.67	0.75	112	2	40-120	22
Dieldrin	U	1.7	2.6	155 *	1.7	2.6	155 *	0	52-126	18
Endrin	U	1.7	2.9	168 *	1.7	2.8	164 *	1	56-121	21
p,p'-DDT	U	1.7	2.6	155 *	1.7	2.5	149 *	4	38-127	27

Table 2.15 Results of the MS/MSD Analysis for Pesticides/PCBs in Soil (GP)
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Sample ID: ABCDEF 10375

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec		MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec		RPD		Advisory QC Limits % Rec	RPD
g-BHC	U	29	35	121		29	36	123		2		46-127	50
Heptachlor	U	29	27	94		29	28	95		1		35-130	31
Aldrin	U	29	48	165	*	29	45	157	*	5		34-132	43
Dieldrin	U	73	540	743	*	73	500	686	*	8		31-134	38
Endrin	U	73	370	511	*	73	350	477	*	7		42-139	45
p,p'-DDT	U	73	670	924	*	73	287	394	*	80	*	23-134	50

Sample ID: ABCDEF 10388

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec		MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec		RPD		Advisory QC Limits % Rec	RPD
g-BHC	U	28	44	157	*	29	15	51		102	*	46-127	50
Heptachlor	U	28	76	273	*	29	29	100		93	*	35-130	31
Aldrin	U	28	40	142	*	29	14	48		99	*	34-132	43
Dieldrin	U	71	260	360	*	71	100	148	*	83	*	31-134	38
Endrin	U	71	200	282	*	71	62	88		105	*	42-139	45
p,p'-DDT	U	71	160	227	*	71	22	30		153	*	23-134	50

Table 2.15 (Cont) Results of the MS/MSD Analysis for Pesticides/PCBs in Soil (GP)
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Sample ID: ABCDEF 10397

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec		MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec		RPD	Advisory QC Limits % Rec	Advisory QC Limits RPD
g-BHC	U	26	33	127		26	26	100		24	46-127	50
Heptachlor	U	26	44	169	*	26	41	158		7	35-130	31
Aldrin	U	26	33	127		26	27	104		20	34-132	43
Dieldrin	U	65	106	163	*	65	92	142	*	14	31-134	38
Endrin	U	65	101	155	*	65	83	128		19	42-139	45
p,p'-DDT	U	65	93	143	*	65	90	139	*	3	23-134	50

Table 2.15 (Cont) Results of the MS/MSD Analysis for Pesticides/PCBs in Soil (GP)
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Sample ID: ABCDEF 10492

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec		MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec		RPD		Advisory QC Limits % Rec	RPD
g-BHC	U	42	44	105		41	37	91		14		46-127	50
Heptachlor	U	42	91	217	*	41	78	192	*	12		35-130	31
Aldrin	U	42	25	58		41	17	42		32		34-132	43
Dieldrin	U	105	400	382	*	104	360	347	*	10		31-134	38
Endrin	U	105	280	266	*	104	250	243	*	9		42-139	45
p,p'-DDT	U	105	340	324	*	104	290	283	*	14	*	23-134	50

Sample ID: ABCDEF 10498

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec		RPD		Advisory QC Limits % Rec	RPD
g-BHC	U	77	71	92	77	72	93		1		46-127	50
Heptachlor	U	77	85	110	77	93	120		9		35-130	31
Aldrin	U	77	33	43	77	35	45		5		34-132	43
Dieldrin	U	194	220	114	192	290	151	*	28		31-134	38
Endrin	U	194	180	93	192	210	111		18		42-139	45
p,p'-DDT	U	194	45	23	192	49	25		8		23-134	50

Table 2.15 (Cont) Results of the MS/MSD Analysis for Pesticides/PCBs in Soil (GP)
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Sample ID: ABCDEFGH 10265

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec		RPD	Advisory QC Limits % Rec	Advisory QC Limits RPD
g-BHC	U	42	42	100	43	57	133	*	28	46-127	50
Heptachlor	U	42	42	100	43	54	126		23	35-130	31
Aldrin	U	42	35	83	43	53	123		39	34-132	43
Dieldrin	U	110	120	109	110	130	118		8	31-134	38
Endrin	U	110	110	100	110	120	109		9	42-139	45
p,p'-DDT	U	110	65	59	110	70	64		7	23-134	50

Table 2.16 Results of the MS/MSD Analysis for Pesticides/PCBs in Tissue (GP)
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Sample ID: 10462

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec		MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec		RPD		Advisory QC Limits % Rec	RPD
g-BHC	U	20	16	80		20	16	80		0		46-127	50
Heptachlor	U	20	25	125		20	29	145	*	15		35-130	31
Aldrin	U	20	19	95		20	25	125		27		34-132	43
Dieldrin	U	50	220	440	*	50	320	640	*	37		31-134	38
Endrin	U	50	160	320	*	50	220	440	*	32		42-139	45
p,p'-DDT	U	50	22	44		50	45	90		69	*	23-134	50

Table 2.16 (Cont) Results of the MS/MSD Analysis for Pesticides/PCBs in Tissue (GP)
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Sample ID: B 08634

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	Advisory QC Limits RPD
g-BHC	U	59	63	107	67	69	103	4	46-127	50
Heptachlor	U	59	67	114	67	78	116	2	35-130	31
Aldrin	U	59	41	70	67	43	65	7	34-132	43
Dieldrin	U	150	130	87	170	130	78	11	31-134	38
Endrin	U	150	130	87	170	140	80	8	42-139	45
p,p'-DDT	U	150	120	80	170	130	75	6	23-134	50

Table 2.16 (Cont) Results of the MS/MSD Analysis for Pesticides/PCBs in Tissue (GP)
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Sample ID: B 10406

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	Advisory QC Limits RPD
g-BHC	U	38	32	84	37	30	81	4	46-127	50
Heptachlor	U	38	39	103	37	37	100	3	35-130	31
Aldrin	U	38	27	71	37	27	73	3	34-132	43
Dieldrin	U	96	81	84	93	86	92	9	31-134	38
Endrin	U	96	95	99	93	95	102	3	42-139	45
p,p'-DDT	U	96	69	72	93	78	84	15	23-134	50

Table 2.16 (Cont) Results of the MS/MSD Analysis for Pesticides/PCBs in Tissue (GP)
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Sample ID: 10478

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	Advisory QC Limits RPD
g-BHC	U	44	42	95	44	39	89	7	46-127	50
Heptachlor	U	44	48	109	44	43	98	11	35-130	31
Aldrin	U	44	41	93	44	40	91	2	34-132	43
Dieldrin	U	110	150	136 *	110	150	136 *	0	31-134	38
Endrin	U	110	140	127	110	140	127	0	42-139	45
p,p'-DDT	U	110	100	91	110	92	84	8	23-134	50

Table 2.16 (Cont) Results of the MS/MSD Analysis for Pesticides/PCBs in Tissue (GP)
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Sample ID: B 10230

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	RPD
g-BHC	U	63	60	95	59	44	75	24	46-127	50
Heptachlor	U	63	66	105	59	56	95	10	35-130	31
Aldrin	U	63	45	72	59	32	55	27	34-132	43
Dieldrin	U	160	130	81	150	100	67	19	31-134	38
Endrin	U	160	130	81	150	100	67	19	42-139	45
p,p'-DDT	U	160	140	88	150	100	67	27	23-134	50

Sample ID: B 10237

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	RPD
g-BHC	U	61	63	103	63	63	100	3	46-127	50
Heptachlor	U	61	71	116	63	68	108	7	35-130	31
Aldrin	U	61	46	76	63	47	75	1	34-132	43
Dieldrin	U	150	160	107	160	170	106	1	31-134	38
Endrin	U	150	140	93	160	150	94	1	42-139	45
p,p'-DDT	U	150	130	87	160	140	93	7	23-134	50

Table 2.16 (Cont) Results of the MS/MSD Analysis for Pesticides/PCBs in Tissue (GP)
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Sample ID: 10453

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec		MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec		RPD	Advisory QC Limits % Rec	Advisory QC Limits RPD
g-BHC	U	20	18	90		20	27	135	*	40	46-127	50
Heptachlor	U	20	24	120		20	29	145	*	19	35-130	31
Aldrin	U	20	20	100		20	27	135	*	30	34-132	43
Dieldrin	U	49	180	367	*	49	160	327	*	12	31-134	38
Endrin	U	49	120	245	*	49	100	204	*	18	42-139	45
p,p'-DDT	U	49	73	149	*	49	65	144	*	3	23-134	50

Table 2.16 (Cont) Results of the MS/MSD Analysis for Pesticides/PCBs in Tissue (GP)
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Sample ID: 10421

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	Advisory QC Limits RPD
g-BHC	U	47	46	98	47	48	102	4	46-127	50
Heptachlor	U	47	53	113	47	55	117	3	35-130	31
Aldrin	U	47	41	87	47	47	100	14	34-132	43
Dieldrin	U	120	97	81	120	102	85	5	31-134	38
Endrin	U	120	120	100	120	110	92	8	42-139	45
p,p'-DDT	U	120	115	96	120	114	95	1	23-134	50

Table 2.16 (Cont) Results of the MS/MSD Analysis for Pesticides/PCBs in Tissue (GP)
WA # 2-274 Cornell Dubilier Electronics
Based on wet weight

Sample ID: B 10250

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	RPD
g-BHC	U	120	150	125	120	150	125	0	46-127	50
Heptachlor	U	120	140	117	120	140	117	0	35-130	31
Aldrin	U	120	100	83	120	100	83	0	34-132	43
Dieldrin	U	290	240	83	290	240	83	0	31-134	38
Endrin	U	290	270	93	290	260	90	3	42-139	45
p,p'-DDT	U	290	260	90	290	230	79	13	23-134	50

Sample ID: B 08630

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	RPD
g-BHC	U	150	190	127	150	180	120	6	46-127	50
Heptachlor	U	150	200	133	150	190	127	5	35-130	31
Aldrin	U	150	140	93	150	140	93	0	34-132	43
Dieldrin	U	380	370	97	380	360	95	2	31-134	38
Endrin	U	380	380	100	380	370	97	3	42-139	45
p,p'-DDT	U	380	400	105	380	330	87	19	23-134	50

QA/QC for Pesticides/PCBs in Tissue (REAC)

Each sample was spiked with a solution of tetrachloro-m-xylene and *decachlorobiphenyl* as surrogates. Percent recoveries ranged from 26 to 105 and are listed in Table 2.17. One hundred and nine out of one hundred and twenty-two values were within the advisory QC limits.

Samples A5-CC-1, R-WS-1, A6-LB-1, A1-CC-2 and A3-WS-3 were chosen for the matrix spike/matrix spike duplicate (MS/MSD) analyses. The percent recoveries ranged from 52 to 143 and are listed in Table 2.18. Thirty-three out of thirty-four values were within the acceptable QC limits. Twenty-six other values were not calculated because of matrix interference. The relative percent differences (RPDs), also listed in Table 2.18, ranged from 0 (zero) to 62. Sixteen out of seventeen values were within the acceptable QC limits. Thirteen other values were not calculated because of matrix interference.

Table 2.17 Results of the Surrogate Recoveries
for Pesticides/PCBs in Tissue (REAC)
WA # 2-274 Corneli Dubilier Electronics

Sample ID	Percent Recovery TCMX	DCBP
MBLK 061997	54 *	77
A5-PS-1	70	68
A5-PS-2	50 *	67
A5-PS-3	67	71
A5-LB-1	69	81
A5-LB-2	55 *	71
A5-LB-3	65	73
A5-WS-1	67	80
A5-WS-2	70	89
A5-WS-3	66	85
A5-CC-1	69	84
A6-LB-1	66	80
A6-LB-2	59 *	71
A6-LB-3	58 *	66
A6-PS-1	61	64
A6-PS-2	63	66
A6-PS-3	59 *	69
A6-CC-1	61	74
A6-CC-2	64	72
A6-CC-3	63	72
MBLK 062097	55 *	85
A1-CC-1	63	71
A1-CC-2	64	72
A1-CC-3	77	26 *
A1-WS-1	67	44 *
A1-WS-2	67	59 *
A1-WS-3	69	70
A1-PS-1	71	66
A1-PS-2	73	59 *
A1-PS-3	64	64

TCMX denotes Tetrachloro-m-xylene
DCBP denotes Decachlorobiphenyl

	Advisory QC Limits
TCMX	60-150
DCBP	60-150

Table 2.17 (Cont) Results of the Surrogate Recoveries
for Pesticides/PCBs in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics

Sample ID	Percent Recovery TCMX	DCBP
A2-WS-1	71	72
A2-WS-2	69	74
A2-WS-3	71	73
A2-PS-1	70	56 *
A2-PS-2	75	65
A3-WS-1	72	73
A3-WS-2	69	76
A3-WS-3	74	79
A3-PS-1	68	68
A3-PS-2	67	63
A3-PS-3	74	71
A4-PS-1	71	68
A4-PS-2	66	80
A4-PS-3	72	93
MBLK 062197	58 *	90
R-WS-1	70	91
R-WS-2	74	93
R-WS-3	69	89
R-CC-1	64	87
R-CC-2	69	82
R-CC-3	63	85
A5-CC-1 MS	84	105
A5-CC-1 MSD	69	89
R-WS-1 MS	76	98
R-WS-1 MSD	75	101
A6-LB-1 MS	63	81
A6-LB-1 MSD	71	97
A1-CC-2 MS	83	70
A1-CC-2 MSD	71	90
A3-WS-3 MS	67	86
A3-WS-3 MSD	74	96

TCMX denotes Tetrachloro-m-xylene
DCBP denotes Decachlorobiphenyl

	Advisory QC Limits
TCMX	60-150
DCBP	60-150

Table 2.18 Results of the MS/MSD Analysis for Pesticides/PCBs in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Sample ID: A5-CC-1

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	RPD
g-BHC	U	114.47	74.37	65	114.47	59.24	52	23	46-127	50
Heptachlor	U	114.47	163.88	143 *	114.47	139.49	122	16	35-130	31
Aldrin	U	114.47	1147.55	MI	114.47	1012.12	MI	NC	34-132	43
Dieldrin	U	228.94	220.55	96	228.94	188.80	82	16	31-134	38
Endrin	U	228.94	517.70	MI	228.94	457.36	MI	NC	42-139	45
p,p'-DDT	U	228.94	4236.74	MI	228.94	3645.12	MI	NC	23-134	50

Sample ID: R-WS-1

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	RPD
g-BHC	U	112.51	83.01	74	112.51	82.95	74	0	46-127	50
Heptachlor	U	112.51	117.61	105	112.51	116.20	103	1	35-130	31
Aldrin	U	112.51	111.78	99	112.51	108.21	96	3	34-132	43
Dieldrin	U	225.02	246.68	110	225.02	240.27	107	3	31-134	38
Endrin	U	225.02	370.23	MI	225.02	358.64	MI	NC	42-139	45
p,p'-DDT	U	225.02	1149.35	MI	225.02	1062.92	MI	NC	23-134	50

Table 2.18 (Cont) Results of the MS/MSD Analysis for Pesticides/PCBs in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics
Based on dry weight

Sample ID: A6-LB-1

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	RPD
g-BHC	U	136.17	84.43	62	136.17	94.54	69	11	46-127	50
Heptachlor	U	136.17	103.66	76	136.17	116.69	86	12	35-130	31
Aldrin	U	136.17	143.00	105	136.17	154.31	113	8	34-132	43
Dieldrin	U	272.33	212.03	78	272.33	237.93	87	12	31-134	38
Endrin	U	272.33	298.33	110	272.33	339.59	125	13	42-139	45
p,p'-DDT	U	272.33	429.37	MI	272.33	494.00	MI	NC	23-134	50

Sample ID: A1-CC-2

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	RPD
g-BHC	U	91.68	67.40	74	91.68	58.83	64	14	46-127	50
Heptachlor	U	91.68	122.08	133 *	91.68	108.65	119	12	35-130	31
Aldrin	U	91.68	296.51	MI	91.68	270.35	MI	NC	34-132	43
Dieldrin	U	183.35	421.59	MI	183.35	391.43	MI	NC	31-134	38
Endrin	U	183.35	837.26	MI	183.35	784.94	MI	NC	42-139	45
p,p'-DDT	U	183.35	1977.20	MI	183.35	1902.84	MI	NC	23-134	50

Sample ID: A3-WS-3

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	RPD
g-BHC	U	119.05	69.48	58	119.05	72.64	61	4	46-127	50
Heptachlor	U	119.05	72.05	61	119.05	136.77	115	62 *	35-130	31
Aldrin	U	119.05	235.07	MI	119.05	252.39	MI	NC	34-132	43
Dieldrin	U	238.10	238.11	100	238.10	251.37	106	5	31-134	38
Endrin	U	238.10	414.04	MI	238.10	444.50	MI	NC	42-139	45
p,p'-DDT	U	238.10	1693.09	MI	238.10	1825.13	MI	NC	23-134	50

QA/QC for Metals (REAC)

QC standards QC-7x100, QC-21x100, ERA 431, TMMA #1 and TMMA #2 were used to check the accuracy of the calibration curve. The percent recoveries ranged from 83 to 107 and all recoveries were within the 95% confidence limits. The recoveries are listed in Table 2.19. The 95% confidence limits for 34 values are not available.

Samples A5-PS-3, A6-CC-1, A1-CC-1, A2-WS-1 and R-WS-2 were chosen for matrix spike/matrix spike duplicate (MS/MSD) analyses. The percent recoveries, listed in Table 2.20, ranged from 26 to 184. The relative percent differences (RPDs), also listed in Table 2.20 ranged from 0 (zero) to 73. QC limits are not available for this analysis.

The results of the spike blank analysis are reported in Table 2.21. The percent recoveries ranged from 80 to 112. QC limits are not available for this analysis.

Table 2.19 Results of the QC Standard Analysis for Metals in Tissue (REAC)
WA # 2-274 Cornell *Dubilier Electronics*

Metal	Date Analyzed	Quality Control Standard	Conc Rec ug/L	True Value ug/L	95 % Confidence Interval	% Rec
Aluminum	06/24/97	QC-7 x100	966	1000	NA	97
	06/24/97	ERA-431	412	441	362 - 520	93
Antimony	06/25/97	TMMA#2	95.83	100	81.65 - 125.67	96
Arsenic	06/26/97	TMMA #1	49.17	50	41.9-55.9	98
Barium	06/24/97	QC-7 x100	989	1000	NA	99
	06/24/97	ERA-431	403	406	333 - 479	99
Beryllium	06/24/97	QC-21 x100	1015	1000	NA	102
	06/24/97	ERA-431	106	103	85 - 122	103
Cadmium	06/24/97	QC-21 x100	1027	1000	NA	103
	06/24/97	ERA-431	85	82	67 - 97	104
Calcium	06/24/97	QC-21 x100	1044	1000	NA	104
	06/24/97					
Chromium	06/24/97	QC-21 x100	1044	1000	NA	104
	06/24/97	ERA-431	551	529	434 - 624	104
Cobalt	06/24/97	QC-21 x100	1040	1000	NA	104
	06/24/97	ERA-431	472	447	367 - 527	106
Copper	06/24/97	QC-21 x100	1005	1000	NA	101
	06/24/97	ERA-431	209	208	171 - 245	100
Iron	06/24/97	QC-21 x100	1035	1000	NA	104
	06/24/97	ERA-431	700	676	554 - 798	104
Lead	06/25/97	TMMA#1	50	50	43.4 - 56.3	100
Magnesium	06/24/97	QC-21 x100	990	1000	NA	99
	06/24/97					
Manganese	06/24/97	QC-21 x100	1036	1000	NA	104
	06/24/97	ERA-431	531	518	425 - 611	103
Mercury	06/20/97	TMWS	2.5	3.00	2.21 - 3.65	83
Nickel	06/24/97	QC-21 x100	1062	1000	NA	106
	06/24/97	ERA-431	100	94	77 - 111	106
Potassium	06/24/97	QC-7 x100	9455	10000	NA	95
	06/24/97					
Selenium	07/02/97	TMMA #1	53.2	50	39.4-57.4	106
Silver	06/24/97	QC-7 x100	1006	1000	NA	101
	06/24/97	ERA-431	65	65	53 - 76	100
Sodium	06/24/97	QC-7 x100	970	1000	NA	97
	06/24/97					
Thallium	06/26/97	TMMA #2	49.5	50	39.9-57.97	99
Vanadium	06/24/97	QC-21 x100	1011	1000	NA	101
	06/24/97	ERA-431	342	338	277 - 399	101
Zinc	06/24/97	QC-21 x100	1017	1000	NA	102
	06/24/97	ERA-431	433	424	348 - 500	102

Table 2.19 (Cont) Results of the QC Standard Analysis for Metals in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics

Metal	Date Analyzed	Quality Control Standard	Conc Rec ug/L	True Value ug/L	95 % Confidence Interval	% Rec
Aluminum	06/25/97	QC-7 x100	1002	1000	NA	100
	06/25/97	ERA-431	423	441	362 - 520	96
Antimony	06/24/97	TMMA#2	97.64	100	81.65 - 125.67	98
Arsenic	06/25/97	TMMA #1	49.32	50	41.9-55.9	99
Barium	06/25/97	QC-7 x100	1009	1000	NA	101
	06/25/97	ERA-431	409	406	333 - 479	101
Beryllium	06/25/97	QC-21 x100	1026	1000	NA	103
	06/25/97	ERA-431	107	103	85 - 122	104
Cadmium	06/25/97	QC-21 x100	1029	1000	NA	103
	06/25/97	ERA-431	84	82	67 - 97	102
Calcium	06/25/97	QC-21 x100	1057	1000	NA	106
Chromium	06/25/97	QC-21 x100	1046	1000	NA	105
	06/25/97	ERA-431	555	529	434 - 624	105
Cobalt	06/25/97	QC-21 x100	1041	1000	NA	104
	06/25/97	ERA-431	469	447	367 - 527	105
Copper	06/25/97	QC-21 x100	1019	1000	NA	102
	06/25/97	ERA-431	214	208	171 - 245	103
Iron	06/25/97	QC-21 x100	1047	1000	NA	105
	06/25/97	ERA-431	702	676	554 - 798	104
Lead	06/25/97	TMMA#1	50.1	50	43.4 - 56.3	100
Magnesium	06/25/97	QC-21 x100	994	1000	NA	99
Manganese	06/25/97	QC-21 x100	1043	1000	NA	104
	06/25/97	ERA-431	532	518	425 - 611	103
Mercury	06/23/97	TMWS	3.0	3.00	2.21 - 3.65	100
Nickel	06/25/97	QC-21 x100	1067	1000	NA	107
	06/25/97	ERA-431	99	94	77 - 111	105
Potassium	06/25/97	QC-7 x100	9776	10000	NA	98
Selenium	07/01/97	TMMA #1	48.73	50	39.4-57.4	97
Silver	06/25/97	QC-7 x100	1018	1000	NA	102
	06/25/97	ERA-431	63	65	53 - 76	97
Sodium	06/25/97	QC-7 x100	1008	1000	NA	101
Thallium	06/27/97	TMMA #2	48	50	39.9-57.97	96
Vanadium	06/25/97	QC-21 x100	1020	1000	NA	102
	06/25/97	ERA-431	344	338	277 - 399	102
Zinc	06/25/97	QC-21 x100	1024	1000	NA	102
	06/25/97	ERA-431	434	424	348 - 500	102

Table 2.20 Results of the MS/MSD Analysis for Metals in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics

Metal	Client #	Sample Conc. mg/kg	Original Conc. Spike mg/kg	Original Conc. Dup. mg/kg	Recovered Conc. Spike mg/kg	Recovered Conc. Dup. mg/kg	% Recovery Spike	% Recovery Dup.	RPD
Antimony	A5-PS-3	0.149	6.48	6.55	6.55	6.33	99	94	5
Antimony	A6-CC-1	0.078	6.28	5.94	6.02	5.84	95	97	3
Arsenic	A5-PS-3	0.122	6.48	6.55	5.69	5.6	86	84	3
Arsenic	A6-CC-1	0.246	6.28	5.94	5.54	5.01	84	80	5
Barium	A5-PS-3	0.269	25.92	26.20	23.0	23.0	88	87	1
Barium	A6-CC-1	0.892	25.14	23.76	22.7	22.4	87	91	4
Beryllium	A5-PS-3	U	25.92	26.20	22.5	22.8	87	87	0
Beryllium	A6-CC-1	U	25.14	23.76	21.8	20.9	87	88	1
Cadmium	A5-PS-3	0.184	25.92	26.20	20.2	20.4	77	77	0
Cadmium	A6-CC-1	0.149	25.14	23.76	18.9	18.5	75	77	4
Chromium	A5-PS-3	2.11	25.92	26.20	22.2	22.7	78	79	1
Chromium	A6-CC-1	3.34	25.14	23.76	21.9	21.7	74	77	5
Cobalt	A5-PS-3	U	25.92	26.20	21.1	21.2	81	81	1
Cobalt	A6-CC-1	U	25.14	23.76	19.3	19.3	77	81	6
Copper	A5-PS-3	2.51	25.92	26.20	25.2	25.2	88	87	1
Copper	A6-CC-1	5.21	25.14	23.76	25	24.2	79	80	2
Lead	A5-PS-3	0.203	6.48	6.55	3.99	6.00	58	89	41
Lead	A6-CC-1	0.9	6.28	5.94	4.3	4.63	54	63	15
Manganese	A5-PS-3	1.18	25.92	26.20	22.4	22.1	82	80	2
Manganese	A6-CC-1	1.65	25.14	23.76	21.4	21.1	79	82	4
Mercury	A5-PS-3	0.937	1.624	1.499	2.60	2.47	102	102	0
Mercury	A6-CC-1	0.115	2.114	1.726	2.22	1.73	100	94	6
Nickel	A5-PS-3	0.944	25.92	26.20	21.7	22.6	80	83	3
Nickel	A6-CC-1	1.29	25.14	23.76	20.1	19.3	75	76	1
Selenium	A5-PS-3	1.47	6.48	6.55	6.30	7.20	75	87	16
Selenium	A6-CC-1	3.08	6.28	5.94	8.55	7.98	87	83	5
Silver	A5-PS-3	U	25.92	26.20	20.5	20.6	79	79	1
Silver	A6-CC-1	U	25.14	23.76	19.0	18.9	76	80	5
Thallium	A5-PS-3	U	6.48	6.55	6.87	6.94	106	106	0
Thallium	A6-CC-1	0.022	6.28	5.94	4.35	4.13	69	69	0
Vanadium	A5-PS-3	0.055	25.92	26.20	22.7	22.5	87	86	2
Vanadium	A6-CC-1	0.118	25.14	23.76	21.2	20.8	84	87	4
Zinc	A5-PS-3	48.5	25.92	26.20	71.5	73.6	89	96	8
Zinc	A6-CC-1	73.5	25.14	23.76	84.1	79.6	42	26	49

Table 2.20 (Cont) Results of the MS/MSD Analysis for Metals in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics

Metal	Client #	Sample Conc. mg/kg	Original Conc Spike mg/kg	Dup. mg/kg	Recovered Conc Spike mg/kg	Dup. mg/kg	% Recovery Spike	Dup.	RPD
Antimony	A1-CC-1	0.092	5.47	4.35	5.75	4.51	103	102	2
Antimony	A2-WS-1	0.017	6.81	6.81	7.15	7.55	105	111	5
Antimony	R-WS-2	0.029	4.54	5.27	4.51	5.64	99	106	8
Arsenic	A1-CC-1	0.2	5.47	4.35	4.71	3.22	82	69	17
Arsenic	A2-WS-1	0.244	6.81	6.81	5.59	5.66	78	79	1
Arsenic	R-WS-2	0.328	4.54	5.27	3.24	4.2	64	73	14
Barium	A1-CC-1	0.32	21.9	17.4	19.1	16.4	86	92	7
Barium	A2-WS-1	0.707	27.3	27.3	25	25.5	89	91	2
Barium	R-WS-2	0.811	18.2	21.1	17.2	19.3	90	88	3
Beryllium	A1-CC-1	0.021	21.9	17.4	18.7	15.5	85	89	4
Beryllium	A2-WS-1	U	27.3	27.3	24.6	24.7	90	91	0
Beryllium	R-WS-2	U	18.2	21.1	16.8	18.7	92	89	4
Cadmium	A1-CC-1	0.079	21.9	17.4	15.8	13.7	72	78	9
Cadmium	A2-WS-1	U	27.3	27.3	22.2	22.3	81	82	0
Cadmium	R-WS-2	U	18.2	21.1	15.1	17.3	83	82	1
Chromium	A1-CC-1	1.29	21.9	17.4	18.3	16.4	78	87	11
Chromium	A2-WS-1	0.924	27.3	27.3	25.4	24.6	90	87	3
Chromium	R-WS-2	1.31	18.2	21.1	16.8	19.2	85	85	0
Cobalt	A1-CC-1	U	21.9	17.4	16.6	14.4	76	83	9
Cobalt	A2-WS-1	U	27.3	27.3	22.9	23.6	84	87	3
Cobalt	R-WS-2	U	18.2	21.1	15.6	17.7	86	84	2
Copper	A1-CC-1	4.49	21.9	17.4	22.7	23.7	83	110	28
Copper	A2-WS-1	2.27	27.3	27.3	27.3	26.6	92	89	3
Copper	R-WS-2	2.39	18.2	21.1	35.8	20.4	184	85	73
Lead	A1-CC-1	U	5.47	4.35	4.73	4.24	86	98	12
Lead	A20WS-1	0.057	6.81	6.81	6.24	5.7	91	83	9
Lead	R-WS-2	U	4.54	5.27	4.4	4.6	97	87	10

Table 2.20 (Cont) Results of the MS/MSD Analysis for Metals in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics

Metal	Client #	Sample Conc. mg/kg	Original Conc. Spike mg/kg	Original Conc. Dup. mg/kg	Recovered Conc. Spike mg/kg	Recovered Conc. Dup. mg/kg	% Recovery Spike	% Recovery Dup.	RPD
Manganese	A1-CC-1	0.572	21.9	17.4	18.1	16.1	80	89	11
Manganese	A2-WS-1	1.07	27.3	27.3	24.9	25.6	87	90	3
Manganese	R-WS-2	1.06	18.2	21.1	16.8	19.2	87	86	1
Mercury	A1-CC-1	0.124	1.03	1.05	1.08	1.16	93	98	5
Mercury	A2-WS-1	1.02	1.75	1.58	2.8	2.53	102	95	6
Mercury	R-WS-2	0.453	1.75	1.69	2.1	2.11	94	98	4
Nickel	A1-CC-1	0.288	21.9	17.4	17.3	14.3	78	81	4
Nickel	A2-WS-1	0.28	27.3	27.3	24.7	23.8	90	86	4
Nickel	R-WS-2	0.558	18.2	21.1	15.7	18.7	83	86	3
Selenium	A1-CC-1	3.3	5.47	4.35	7.81	6.56	82	75	9
Selenium	A2-WS-1	1.78	6.81	6.81	6.72	7.68	72	87	18
Selenium	R-WS-2	1.84	4.54	5.27	5.6	6.13	83	81	2
Silver	A1-CC-1	U	21.9	17.4	16.6	14.3	76	82	8
Silver	A2-WS-1	U	27.3	27.3	22.9	22.9	84	84	0
Silver	R-WS-2	U	18.2	21.1	15	17.2	83	82	1
Thallium	A1-CC-1	0.133	5.47	4.35	3.39	2.77	60	61	2
Thallium	A2-WS-1	0.171	6.81	6.81	7.36	7.31	105	105	1
Thallium	R-WS-2	0.094	4.54	5.27	3.00	4.87	64	91	34
Vanadium	A1-CC-1	0.249	21.9	17.4	18.2	15.6	82	88	7
Vanadium	A2-WS-1	U	27.3	27.3	24.8	24	91	88	3
Vanadium	R-WS-2	0.12	18.2	21.1	16.5	19	90	90	1
Zinc	A1-CC-1	51.2	21.9	17.4	65.3	65.2	64	81	22
Zinc	A2-WS-1	50.5	27.3	27.3	73.7	76.6	85	96	12
Zinc	R-WS-2	59.6	18.2	21.1	67.7	68.3	45	41	8

Table 2.21 Results of the Blank Spike Analysis for Metals in Tissue (REAC WA # 2-274 Cornell Dubilier Electronics

Metal	Spiked Conc mg/kg	Recovered Conc mg/kg	% Recovery
Aluminum	400	334	84
Antimony	2.50	2.80	112
Arsenic	2.50	2.56	102
Barium	10.0	8.48	85
Beryllium	10.0	8.52	85
Cadmium	10.0	8.00	80
Calcium	400	325	81
Chromium	10.0	8.50	85
Cobalt	10.0	8.18	82
Copper	10.0	8.66	87
Iron	400	338	85
Lead	2.50	2.66	106
Magnesium	400	328	82
Manganese	10.0	8.33	83
Mercury	0.400	0.400	100
Nickel	10.0	8.38	84
Potassium	400	338	85
Selenium	2.50	2.68	107
Silver	10.0	8.02	80
Sodium	400	335	84
Thallium	2.50	2.68	107
Vanadium	10.0	8.69	87
Zinc	10.0	8.22	82

Table 2.21 (Cont) Results of the Blank Spike Analysis for Metals in Tissue (REAC)
WA # 2-274 Cornell Dubilier Electronics

Metal	Spiked Conc mg/kg	Recovered Conc mg/kg	% Recovery
Aluminum	400	342	86
Antimony	2.50	2.8	112
Arsenic	2.50	2.51	100
Barium	10.0	8.9	89
Beryllium	10.0	8.75	88
Cadmium	10.0	8.09	81
Calcium	400	336	84
Chromium	10.0	8.83	88
Cobalt	10.0	8.45	85
Copper	10.0	8.96	90
Iron	400	350	88
Lead	2.50	2.71	108
Magnesium	400	341	85
Manganese	10.0	8.57	86
Mercury	0.400	0.400	100
Nickel	10.0	8.68	87
Potassium	400	375	94
Selenium	2.50	2.52	101
Silver	10.0	8.0	80
Sodium	400	346	87
Thallium	2.50	2.64	106
Vanadium	10.0	8.98	90
Zinc	10.0	8.35	84

QA/QC for Metals (GP Environmental)

Sample C 10216 was chosen for the matrix spike (MS) analysis for the water samples. The percent recoveries, listed in Table 2.22, ranged from 100 to 115. All twenty-one values were within the acceptable QC limits. QC limits for two metals (calcium and sodium) are not available.

Sample C 10216 was chosen for the duplicate analyses for the water samples. The relative percent differences, listed in Table 2.23, ranged from 0 (zero) to 65. Eleven other values were not calculated because the analyte was not detected in at least one analysis. QC limits are not available for this analysis

A laboratory control standard was analyzed for the water samples. The percent recoveries, listed in Table 2.24, ranged from 99 to 107. QC limits are not available for this analysis.

Sample 2000-1008 was chosen for the MS analysis for the unfiltered water samples. The percent recoveries listed in Table 2.25, ranged from 89 to 112. All nineteen values were within the acceptable QC limits. QC limits for three metals (calcium, magnesium and sodium) are not available.

Sample 2000-1008 was chosen for the duplicate analyses for the unfiltered water samples. The relative percent differences, listed in Table 2.26, ranged from 0 (zero) to 26. Ten other values were not calculated because the analyte was not detected in at least one analysis. QC limits are not available for this analysis.

Sample 2000-1008 was chosen for the MS analysis for the filtered water samples. The percent recoveries, listed in Table 2.27, ranged from 97 to 117. All nineteen values were within the acceptable QC limits. QC limits for four metals (calcium, magnesium, potassium and sodium) are not available.

Sample 2000-1008 was chosen for the duplicate analyses for the filtered water samples. The relative percent differences, listed in Table 2.28, ranged from 2 to 21. Twelve other values were not calculated because the analyte was not detected in at least one analysis. QC limits are not available for this analysis.

Samples B 10395, B 10492, 10216 and 10498 were chosen for the MS analysis for the soil samples. The percent recoveries, listed in Table 2.29, ranged from 57 to 243. Seventy-three out of eighty values were within the acceptable QC limits. Nine other values were not calculated because the spiked concentration was much less than that contained in the sample. QC limits for ten metals are not available.

Samples B 10382 and B 10390 were chosen for the matrix spike/matrix spike duplicate (MS/MSD) analysis for the soil samples. The percent recoveries, listed in Table 2.30, ranged from 12 to 189. Forty-three out of forty-nine values were within the acceptable QC limits. Seventeen other values were not calculated because the concentration of analyte spiked was less than that contained in the sample. Two other values were not calculated because the sample was not spiked. The relative percent differences, also listed in Table 2.30, ranged from 0 (zero) to 50. Ten other values were not calculated because at least one percent recovery was not calculated. QC limits are not available for the RPDs for this analysis.

Samples B 10382, B 10390, B 10498, C 10216, B 10395 and B 10492 were chosen for the duplicate analyses for the soil samples. The relative percent differences, listed in Table 2.31, ranged from 0 (zero) to 65. Fifteen other values were not calculated because the analyte was not detected in at least one analysis. QC limits are not available for this analysis.

Laboratory control standards were analyzed for the soil samples. The percent recoveries, listed in Table 2.32, ranged from 83 to 124 and all seventy values were within the acceptable QC limits.

Samples 10453, 10250, B 08630, B 10230, B 10237, 10454 and 10474 were chosen for the MS analysis for the tissue samples. The percent recoveries, listed in Table 2.33, ranged from 45 to 147. One hundred and

twenty-three out of one hundred and forty-five values were within the acceptable QC limits. Fourteen other values were not calculated because the concentration of analyte spiked was less than that contained in the sample. QC limits are not available for ten values.

Samples 10434, B 10250, B 08630, B 10230, B 10237, A5-PS-9, 10474 and 10453 were chosen for the duplicate analyses for the tissue samples. The relative percent differences, listed in Table 2.34, ranged from 0 (zero) to 58. Seventy-eight other values were not calculated because the analyte was not detected in one or both of the analyses. QC limits are not available for this analysis.

The results of the blank spike analysis for the tissue samples are reported in Table 2.35. The percent recoveries ranged from 93 to 107 and all twenty-two values were within the acceptable QC limits.

Laboratory control standards were analyzed for the tissue samples. The results, listed in Table 2.36, ranged from 81 to 123 and all one hundred and eighteen values were within the acceptable QC limits.

The results of the post digestion spike are listed in Table 2.37. The percent recoveries ranged from 96 to 103. QC limits are not available for this analysis.

Table 2.22 Results of the Matrix Spike Analysis
for Metals in Water
WA # 2-274 Cornell Dubilier Electronics

Metal	Sample ID	Sample Conc µg/L	Spike Conc µg/L	Rec Conc µg/L	% Rec	QC Limits
Aluminum	C 10216	138.4	2000	2407	113	75-125
Antimony	C 10216	U	100	105.9	106	75-125
Arsenic	C 10216	U	40	42.4	106	75-125
Barium	C 10216	136	2000	2138	100	75-125
Beryllium	C 10216	U	50	56.14	112	75-125
Cadmium	C 10216	U	50	54.55	109	75-125
Calcium	C 10216	58920	5000	64170	105	
Chromium	C 10216	U	200	217.2	109	75-125
Cobalt	C 10216	U	500	535.2	107	75-125
Copper	C 10216	5.4	250	277.1	109	75-125
Iron	C 10216	1264	1000	2400	114	75-125
Lead	C 10216	5.81	20	26.2	102	75-125
Magnesium	C 10216	11350	5000	16540	104	75-125
Manganese	C 10216	495.4	500	1070	115	75-125
Mercury	C 10216	U	1	1.03	103	75-125
Nickel	C 10216	9.57	500	532.9	105	75-125
Potassium	C 10216	2766	1000	3777	101	75-125
Selenium	C 10216	U	10	10.26	103	75-125
Silver	C 10216	U	50	54.16	108	75-125
Sodium	C 10216	26250	5000	31500	105	
Thallium	C 10216	U	50	51.11	102	75-125
Vanadium	C 10216	U	500	543.5	109	75-125
Zinc	C 10216	15.92	500	557.6	108	75-125

Table 2.23 Results of the Duplicate Analysis
for Metals in Water
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis µg/L	Duplicate Analysis µg/L	RPD
Aluminum	C 10216	138.4	70.74	65
Antimony	C 10216	U	U	NC
Arsenic	C 10216	U	U	NC
Barium	C 10216	136	133.8	2
Beryllium	C 10216	U	U	NC
Cadmium	C 10216	U	U	NC
Calcium	C 10216	58920	59250	1
Chromium	C 10216	U	2.55	NC
Cobalt	C 10216	U	U	NC
Copper	C 10216	5.4	5.17	4
Iron	C 10216	1264	1211	4
Lead	C 10216	5.81	4.46	26
Magnesium	C 10216	11350	11320	0
Manganese	C 10216	495.4	468.6	6
Mercury	C 10216	U	U	NC
Nickel	C 10216	9.57	13.16	32
Potassium	C 10216	2766	2721	2
Selenium	C 10216	U	U	NC
Silver	C 10216	U	U	NC
Sodium	C 10216	26250	26330	0
Thallium	C 10216	U	U	NC
Vanadium	C 10216	U	1.84	NC
Zinc	C 10216	15.92	28.76	57

Table 2.24 Results of the Analysis
of the Laboratory Control Sample
for Metals in Water
WA # 2-274 Cornell Dubilier Electronics

Metal	Analyzed Value µg/L	Accepted Value µg/L	% Rec
Aluminum	10280	10000	103
Antimony	507	500	101
Arsenic	502	500	100
Barium	501	500	100
Beryllium	51.82	50	104
Cadmium	503.6	500	101
Calcium	50500	50000	101
Chromium	509.8	500	102
Cobalt	502.9	500	101
Copper	517.3	500	103
Iron	10010	10000	100
Lead	503.7	500	101
Magnesium	49420	50000	99
Manganese	525.9	500	105
Mercury	1.07	1.00	107
Nickel	497.8	500	100
Potassium	9854	10000	99
Selenium	494.7	500	99
Silver	49.34	50	99
Sodium	50730	50000	101
Thallium	509.7	500	102
Vanadium	515 4	500	103
Zinc	516 1	500	103

Table 2.25 Results of the Matrix Spike Analysis
for Metals in Unfiltered Water
WA # 2-274 Cornell Dubilier Electronics

Metal	Sample ID	Sample Conc µg/L	Spike Conc µg/L	Rec Conc µg/L	% Rec	QC Limits
Aluminum	2000-1008	427.4	2000	2481	103	75-125
Antimony	2000-1008	U	100	102.6	103	75-125
Arsenic	2000-1008	U	40	39.16	98	75-125
Barium	2000-1008	150.6	2000	2197	102	75-125
Beryllium	2000-1008	U	50	53.69	107	75-125
Cadmium	2000-1008	U	50	54.24	108	75-125
Calcium	2000-1008					
Chromium	2000-1008	2.01	200	214.7	106	75-125
Cobalt	2000-1008	U	500	533.8	107	75-125
Copper	2000-1008	15.16	250	271.8	103	75-125
Iron	2000-1008	701.1	1000	1713	101	75-125
Lead	2000-1008	8.5	20	26.37	89	75-125
Magnesium	2000-1008					
Manganese	2000-1008	214.5	500	767.7	111	75-125
Mercury	2000-1008	U	1.00	1.12	112	75-125
Nickel	2000-1008	2.19	500	530.3	106	75-125
Potassium	2000-1008					
Selenium	2000-1008	U	10	10.82	108	75-125
Silver	2000-1008	U	50	53.44	107	75-125
Sodium	2000-1008					
Thallium	2000-1008	U	50	47.52	95	75-125
Vanadium	2000-1008	3.5	500	544	108	75-125
Zinc	2000-1008	27.79	500	558	106	75-125

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Table 2.26 Results of the Duplicate Analysis
for Metals in Unfiltered Water
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Aluminum	2000-1008	427.4	444.2	4
Antimony	2000-1008	U	U	NC
Arsenic	2000-1008	U	U	NC
Barium	2000-1008	150.6	149.6	1
Beryllium	2000-1008	U	U	NC
Cadmium	2000-1008	U	U	NC
Calcium	2000-1008	61320	60240	2
Chromium	2000-1008	2.01	U	NC
Cobalt	2000-1008	U	U	NC
Copper	2000-1008	15.16	5.03	100
Iron	2000-1008	701.1	684.1	2
Lead	2000-1008	8.5	6.57	26
Magnesium	2000-1008	11710	11560	1
Manganese	2000-1008	214.5	210.9	2
Mercury	2000-1008	U	U	NC
Nickel	2000-1008	2.19	2.52	14
Potassium	2000-1008	2734	2741	0
Selenium	2000-1008	U	U	NC
Silver	2000-1008	U	U	NC
Sodium	2000-1008	27690	27590	0
Thallium	2000-1008	U	U	NC
Vanadium	2000-1008	3.5	3.1	12
Zinc	2000-1008	27.79	22.25	22

Table 2.27 Results of the Matrix Spike Analysis
for Metals in Filtered Water
WA # 2-274 Cornell Dubilier Electronics

Metal	Sample ID	Sample Conc µg/L	Spike Conc µg/L	Rec Conc µg/L	% Rec	QC Limits
Aluminum	2000-1008	U	2000	2178	109	75-125
Antimony	2000-1008	U	100	105.2	105	75-125
Arsenic	2000-1008	U	40	41.89	105	75-125
Barium	2000-1008	139.3	2000	2212	104	75-125
Beryllium	2000-1008	U	50	54.16	108	75-125
Cadmium	2000-1008	U	50	55.44	111	75-125
Calcium	2000-1008					
Chromium	2000-1008	U	200	215	108	75-125
Cobalt	2000-1008	U	500	536.8	107	75-125
Copper	2000-1008	3.61	250	274.8	108	75-125
Iron	2000-1008	56.44	1000	1120	106	75-125
Lead	2000-1008	3.51	20	26.89	117	75-125
Magnesium	2000-1008					
Manganese	2000-1008	181.1	500	751.8	114	75-125
Mercury	2000-1008	U	1.00	1.12	112	75-125
Nickel	2000-1008	32.85	500	567.1	107	75-125
Potassium	2000-1008					
Selenium	2000-1008	U	10	10.62	106	75-125
Silver	2000-1008	U	50	53.6	107	75-125
Sodium	2000-1008					
Thallium	2000-1008	U	50	48.32	97	75-125
Vanadium	2000-1008	2.21	500	545.9	109	75-125
Zinc	2000-1008	26.35	500	557.8	106	75-125

Table 2.28 Results of the Duplicate Analysis
for Metals in Filtered Water
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Aluminum	2000-1008	U	U	NC
Antimony	2000-1008	U	U	NC
Arsenic	2000-1008	U	U	NC
Barium	2000-1008	139.3	147.2	6
Beryllium	2000-1008	U	U	NC
Cadmium	2000-1008	U	U	NC
Calcium	2000-1008	57530	61000	6
Chromium	2000-1008	U	U	NC
Cobalt	2000-1008	U	U	NC
Copper	2000-1008	3.62	U	NC
Iron	2000-1008	56.44	55.44	2
Lead	2000-1008	3.52	3.95	12
Magnesium	2000-1008	11010	11650	6
Manganese	2000-1008	181.1	191.8	6
Mercury	2000-1008	U	U	NC
Nickel	2000-1008	32.85	34.11	4
Potassium	2000-1008	2615	2723	4
Selenium	2000-1008	U	U	NC
Silver	2000-1008	U	U	NC
Sodium	2000-1008	26800	28080	5
Thallium	2000-1008	U	U	NC
Vanadium	2000-1008	2.21	2.32	5
Zinc	2000-1008	26.35	21.36	21

Table 2.29 Results of the Matrix Spike Analysis
for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Metal	Sample ID	Sample Conc mg/kg	Spike Conc mg/kg	Rec Conc mg/kg	% Rec	QC Limits
Aluminum	B 10395	13438	308.3	15430	NC	75-125
Antimony	B 10395	2.09	15.42	11.63	62	75-125
Arsenic	B 10395	13.36	6.17	19.42	98	75-125
Barium	B 10395	90.31	308.3	413.28	105	75-125
Beryllium	B 10395	0.53	7.71	8.93	109	75-125
Cadmium	B 10395	3.63	7.71	12.37	113	75-125
Calcium	B 10395	1747.9	770.75	2808.6	138 *	75-125
Chromium	B 10395	38.85	30.83	74.93	117	75-125
Cobalt	B 10395	5.68	77.07	87.48	106	75-125
Copper	B 10395	85.87	38.54	129.61	113	75-125
Iron	B 10395	16471	154.15	18251	NC	
Lead	B 10395	228.8	3.08	255.27	NC	
Magnesium	B 10395	2169.2	770.75	3173.9	130	75-125
Manganese	B 10395	258.4	77.07	374.89	151 *	75-125
Mercury	B 10395	0.059	0.24	0.28	92	75-125
Nickel	B 10395	18.55	77.07	102.51	109	75-125
Potassium	B 10395	498.87	154.15	712.63	139 *	75-125
Selenium	B 10395	2.71	1.54	4.05	87	75-125
Silver	B 10395	7.69	7.71	17.16	123	75-125
Sodium	B 10395	95.88	770.75	959.58	112	75-125
Thallium	B 10395	U	7.71	7.09	92	75-125
Vanadium	B 10395	57.05	77.07	142.53	111	75-125
Zinc	B 10395	113.25	77.07	211.49	127 *	75-125

Table 2.29 (Cont) Results of the Matrix Spike Analysis
for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Metal	Sample ID	Sample Conc mg/kg	Spike Conc mg/kg	Rec Conc mg/kg	% Rec	QC Limits
Aluminum	B 10492	7423	406.57	8190	NC	
Antimony	B 10492	1.04	20.33	13.32	60 *	75-125
Arsenic	B 10492	5.58	8.13	13.89	102	75-125
Barium	B 10492	140.29	406.57	529.15	96	75-125
Beryllium	B 10492	0.52	10.16	11.22	105	75-125
Cadmium	B 10492	7.44	10.16	19.12	115	75-125
Calcium	B 10492	3187	1016	4057	86	75-125
Chromium	B 10492	36.55	40.66	77.21	100	75-125
Cobalt	B 10492	7.13	101.64	112.38	104	75-125
Copper	B 10492	78.14	50.82	128.21	99	75-125
Iron	B 10492	13546	203.29	13849	NC	
Lead	B 10492	157.67	4.07	146.49	NC	
Magnesium	B 10492	2343	1016	3213	86	75-125
Manganese	B 10492	459.42	101.64	574.08	113	
Mercury	B 10492	0.25	0.35	0.54	83	75-125
Nickel	B 10492	22.26	101.64	123.86	100	75-125
Potassium	B 10492	515.33	203.29	723.69	102	75-125
Selenium	B 10492	1.67	2.03	3.23	77	75-125
Silver	B 10492	5.23	10.16	12.9	75	75-125
Sodium	B 10492	215.08	1016	1285	105	75-125
Thallium	B 10492	U	10.16	8.91	88	75-125
Vanadium	B 10492	25.31	101.64	130.27	103	75-125
Zinc	B 10492	266.1	101.64	372.82	105	75-125

Table 2.29 (Cont) Results of the Matrix Spike Analysis
for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Metal	Sample ID	Sample Conc mg/kg	Spike Conc mg/kg	Rec Conc mg/kg	% Rec	QC Limits
Aluminum	C 10216	138.4	2000	2407	113	75-125
Antimony	C 10216	U	100	105.9	106	75-125
Arsenic	C 10216	U	40	42.4	106	75-125
Barium	C 10216	136	2000	2138	100	75-125
Beryllium	C 10216	U	50	56.14	112	75-125
Cadmium	C 10216	U	50	54.55	109	75-125
Calcium	C 10216	58920	5000	64170	105	75-125
Chromium	C 10216	U	200	217.2	109	75-125
Cobalt	C 10216	U	500	535.2	107	75-125
Copper	C 10216	5.4	250	277.1	109	75-125
Iron	C 10216	1264	1000	2400	114	
Lead	C 10216	5.81	20	26.2	102	
Magnesium	C 10216	11350	5000	16540	104	75-125
Manganese	C 10216	495.4	500	1070	115	75-125
Mercury	C 10216	U	1.00	1.03	103	75-125
Nickel	C 10216	9.565	500	532	104	75-125
Potassium	C 10216	2766	1000	3777	101	75-125
Selenium	C 10216	U	10	10.26	103	75-125
Silver	C 10216	U	50	54.16	108	75-125
Sodium	C 10216	26250	5000	31500	105	75-125
Thallium	C 10216	U	50	51.11	102	75-125
Vanadium	C 10216	U	500	543	109	75-125
Zinc	C 10216	15.92	500	557	108	75-125

Table 2.29 (Cont) Results of the Matrix Spike Analysis
for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Metal	Sample ID	Sample Conc mg/kg	Spike Conc mg/kg	Rec Conc mg/kg	% Rec	QC Limits
Aluminum	B 10498	14516	813.01	20853	NC	75-125
Antimony	B 10498	2.74	40.65	26.05	57 *	75-125
Arsenic	B 10498	12.81	16.26	27.77	92	75-125
Barium	B 10498	245.78	813.01	1016	95	75-125
Beryllium	B 10498	1.08	20.33	22.23	104	75-125
Cadmium	B 10498	16.62	20.33	36.14	96	75-125
Calcium	B 10498	6644	2032.5	8174	75	75-125
Chromium	B 10498	68.36	81.3	149.51	100	75-125
Cobalt	B 10498	16.15	203.25	222.39	101	75-125
Copper	B 10498	219.9	101.63	316.1	95	75-125
Iron	B 10498	27915	406.5	30365	NC	
Lead	B 10498	289.9	8.13	284.4	NC	
Magnesium	B 10498	5046	2032	7337	113	75-125
Manganese	B 10498	496	203.25	690	95	75-125
Mercury	B 10498	0.91	0.67	1.49	87	75-125
Nickel	B 10498	50.65	203.25	249	98	75-125
Potassium	B 10498	1085	406.5	2073	243 *	75-125
Selenium	B 10498	3.79	4.06	7.17	83	75-125
Silver	B 10498	10.75	20.33	30.96	99	75-125
Sodium	B 10498	430.3	2032.5	2554	104	75-125
Thallium	B 10498	U	20.33	18.3	90	75-125
Vanadium	B 10498	50.85	203.25	260.9	103	75-125
Zinc	B 10498	673	203.25	864.23	94	75-125

Table 2.29 (Cont) Results of the Matrix Spike Analysis
for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Metal	Sample ID	Sample Conc mg/kg	Spike Conc mg/kg	Rec Conc mg/kg	% Rec	QC Limits
Aluminum	B 10498	14516	813.01	20853	NC	75-125
Antimony	B 10498	2.74	40.65	26.05	57 *	75-125
Arsenic	B 10498	12.81	16.26	27.77	92	75-125
Barium	B 10498	245.78	813.01	1016	95	75-125
Beryllium	B 10498	1.08	20.33	22.23	104	75-125
Cadmium	B 10498	16.62	20.33	36.14	96	75-125
Calcium	B 10498	6644	2032.5	8174	75	75-125
Chromium	B 10498	68.36	81.3	149.51	100	75-125
Cobalt	B 10498	16.15	203.25	222.39	101	75-125
Copper	B 10498	219.9	101.63	316.1	95	75-125
Iron	B 10498	27915	406.5	30365	NC	
Lead	B 10498	289.9	8.13	284.4	NC	
Magnesium	B 10498	5046	2032	7337	113	75-125
Manganese	B 10498	496	203.25	690	95	75-125
Mercury	B 10498	0.91	0.67	1.49	87	75-125
Nickel	B 10498	50.65	203.25	249	98	75-125
Potassium	B 10498	1085	406.5	2073	243 *	75-125
Selenium	B 10498	3.79	4.06	7.17	83	75-125
Silver	B 10498	10.75	20.33	30.96	99	75-125
Sodium	B 10498	430.3	2032.5	2554	104	75-125
Thallium	B 10498	U	20.33	18.3	90	75-125
Vanadium	B 10498	50.85	203.25	260.9	103	75-125
Zinc	B 10498	673	203.25	864.23	94	75-125

Table 2.30 Results of the MS/MSD Analysis for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Metal	Sample ID	Sample Conc mg/kg	Original Conc Spike mg/kg	Original Conc Dup mg/kg	Rec Conc Spike µg/l	Rec Conc Dup µg/l	% Recovery Spike	% Recovery Dup	RPD	Recommended Limit % Rec	Recommended Limit RPD
Antimony	B 10382	2.47	10.78	10.68	10.7	8.96	76	61 *	6	75-125	NA
Arsenic	B 10382	12.9	4.31	4.27	18.88	18.15	139 *	123	3		NA
Barium	B 10382	483.95	215.59	213.54	697.55	734.57	99	117	4		NA
Beryllium	B 10382	0.34	5.39	5.34	5.99	6.04	105	107	0	75-125	NA
Cadmium	B 10382	2.66	5.39	5.34	9.07	8.99	119	119	0	75-125	NA
Chromium	B 10382	22.18	21.56	21.35	47.76	46.05	119	112	1	75-125	NA
Cobalt	B 10382	5.4	53.9	53.38	58.94	59.66	99	102	1	75-125	NA
Copper	B 10382	108.31	26.95	26.69	112.65	111.57	16	12	7		NA
Lead	B 10382	285.6	2.16	2.14	313.36	312.09	NC	NC	NC	75-125	NA
Manganese	B 10382	372.51	53.9	53.38	577.03	538.44	NC	NC	NC		NA
Mercury	B 10382	0.34	0.13	NS	0.44	NC	73 *	NC	NC	75-125	NA
Nickel	B 10382	34.7	53.9	53.38	86.09	125.45	95	170 *	14	75-125	NA
Selenium	B 10382	3.55	1.08	1.07	5.59	5.04	189 *	139 *	8		NA
Silver	B 10382	3.72	5.39	5.34	10.11	10.21	119	122	1	75-125	NA
Thallium	B 10382	U	5.39	5.34	4.89	4.93	91	92	0	75-125	NA
Vanadium	B 10382	41.34	53.9	53.38	101.83	98.49	112	107	1	75-125	NA
Zinc	B 10382	98.74	53.9	53.38	150.05	161.11	95	117	5	75-125	NA

Table 2.30 (Cont) Results of the MS/MSD Analysis for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics
based on dry weight

Metal	Sample ID	Sample Conc mg/kg	Original Conc Spike mg/kg	Original Conc Dup mg/kg	Rec Conc Spike µg/l	Rec Conc Dup µg/l	% Recovery Spike	% Recovery Dup	RPD	Recommended Limit % Rec	Recommended Limit RPD
Antimony	B 10390	13.19	12.93	13.18	18.94	23.22	44 *	76	50	75-125	NA
Arsenic	B 10390	24.33	5.17	5.27	35.94	28.6	NC	81	50		NA
Barium	B 10390	1169.66	258.64	263.52	1519.5	1428.27	NC	98	NC		NA
Beryllium	B 10390	0.094	6.47	6.59	6.88	6.84	105	102	1	75-125	NA
Cadmium	B 10390	14.41	6.47	6.59	21.03	23.31	102	135	7	75-125	NA
Chromium	B 10390	70.12	25.86	26.35	91.95	89.52	84	74	3	75-125	NA
Cobalt	B 10390	10.58	64.66	65.88	75.85	74.72	101	97	1	75-125	NA
Copper	B 10390	360.42	32.33	32.94	1621.66	427.69	NC	NC	NC		NA
Lead	B 10390	3612.3	2.59	2.64	2429.91	2077.84	NC	NC	NC	75-125	NA
Manganese	B 10390	949.59	64.66	65.88	948.69	826.13	NC	NC	NC	75-125	NA
Mercury	B 10390	1.93	0.22	NS	2.49	NC	NC	NC	NC	75-125	NA
Nickel	B 10390	51.08	64.66	65.88	108.36	108.23	89	87	1	75-125	NA
Selenium	B 10390	7.9	1.29	1.32	9.01	8.57	NC	NC	NC		NA
Silver	B 10390	3.69	6.47	6.59	11.01	10.38	113	102	3	75-125	NA
Thallium	B 10390	U	6.47	6.59	6.87	6.84	106	104	1	75-125	NA
Vanadium	B 10390	38.44	64.66	65.88	105.45	102.8	104	98	1	75-125	NA
Zinc	B 10390	2020.39	64.66	65.88	2114.37	2623.33	NC	NC	NC	75-125	NA

Table 2.31 Results of the Duplicate Analysis
for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Aluminum	B 10382	3531.95	3647.73	3
Antimony	B 10382	2.47	3.43	33
Arsenic	B 10382	12.91	14.37	11
Barium	B 10382	483.95	503.43	4
Beryllium	B 10382	0.34	0.35	3
Cadmium	B 10382	2.66	3.2	18
Calcium	B 10382	1630.56	1919.58	16
Chromium	B 10382	22.18	26.12	16
Cobalt	B 10382	5.40	4.61	16
Copper	B 10382	108.31	84.78	24
Iron	B 10382	35463.75	47434.22	29
Lead	B 10382	285.60	322.15	12
Magnesium	B 10382	813.83	1049.90	25
Manganese	B 10382	372.51	459.64	21
Mercury	B 10382	0.34	0.41	19
Nickel	B 10382	34.70	39.14	12
Potassium	B 10382	479.07	548.16	13
Selenium	B 10382	3.55	4.19	17
Silver	B 10382	3.73	4.11	10
Sodium	B 10382	126.76	107.35	17
Thallium	B 10382	U	U	NC
Vanadium	B 10382	41.34	46.38	11
Zinc	B 10382	98.74	93.04	6

Table 2.31 (Cont) Results of the Duplicate Analysis for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Aluminum	B 10390	8158.87	10182.1	22
Antimony	B 10390	13 19	17.00	25
Arsenic	B 10390	24.33	23.23	5
Barium	B 10390	1169.66	1509.45	25
Beryllium	B 10390	0.094	0.057	49
Cadmium	B 10390	14.41	16.40	13
Calcium.	B 10390	7171.72	8938.55	22
Chromium	B 10390	70.12	62.41	12
Cobalt	B 10390	10.58	9.33	13
Copper	B 10390	360.42	498.36	32
Iron	B 10390	68327.28	64903.85	5
Lead	B 10390	3612.30	1976.79	59
Magnesium	B 10390	1944.46	2480.39	24
Manganese	B 10390	949.59	981.95	3
Mercury	B 10390	1.93	1.80	7
Nickel	B 10390	51.08	48.45	5
Potassium	B 10390	772.50	829.80	7
Selenium	B 10390	7.90	7.06	11
Silver	B 10390	3.69	3.45	7
Sodium	B 10390	246.24	270.06	9
Thallium	B 10390	U	U	NC
Vanadium	B 10390	38.44	36.59	5
Zinc	B 10390	2020 39	2193.01	8

Table 2.31 (Cont) Results of the Duplicate Analysis
for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Aluminum	B 10498	14516	14927	3
Antimony	B 10498	2.74	2.83	3
Arsenic	B 10498	12.81	14.28	11
Barium	B 10498	245.78	241.44	2
Beryllium	B 10498	1.08	1.04	4
Cadmium	B 10498	16.61	16.10	3
Calcium	B 10498	6644.8	6308.6	5
Chromium	B 10498	68.36	71.61	5
Cobalt	B 10498	16.15	15.67	3
Copper	B 10498	219.94	221.58	1
Iron	B 10498	27915	27583	1
Lead	B 10498	289.87	284.00	2
Magnesium	B 10498	5046	4952	2
Manganese	B 10498	496.4	480.4	3
Mercury	B 10498	0.91	0.80	13
Nickel	B 10498	50.66	51.52	2
Potassium	B 10498	1085.8	1131.96	4
Selenium	B 10498	3.79	3.20	17
Silver	B 10498	10.75	10.23	5
Sodium	B 10498	430.35	404.94	6
Thallium	B 10498	U	U	NC
Vanadium	B 10498	50.85	50.54	1
Zinc	B 10498	673 08	646.50	4

Table 2.31 (Cont) Results of the Duplicate Analysis
for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Aluminum	C 10216	138.4	70.74	65
Antimony	C 10216	U	U	NC
Arsenic	C 10216	U	U	NC
Barium	C 10216	136	133.8	2
Beryllium	C 10216	U	U	NC
Cadmium	C 10216	U	U	NC
Calcium	C 10216	58920	59250	1
Chromium	C 10216	U	2.549	NC
Cobalt	C 10216	U	U	NC
Copper	C 10216	5.4	5.167	4
Iron	C 10216	1264	1211	4
Lead	C 10216	5.81	4.466	26
Magnesium	C 10216	11350	11320	0
Manganese	C 10216	495.4	468.6	6
Mercury	C 10216	U	U	NC
Nickel	C 10216	9.56	13.16	32
Potassium	C 10216	2766	2721	2
Selenium	C 10216	U	U	NC
Silver	C 10216	U	U	NC
Sodium	C 10216	26250	26330	0
Thallium	C 10216	U	U	NC
Vanadium	C 10216	U	1.838	NC
Zinc	C 10216	15.92	28.76	57

Table 2.31 (Cont) Results of the Duplicate Analysis
for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Aluminum	B 10395	13438	13950	4
Antimony	B 10395	2.09	2.60	22
Arsenic	B 10395	13.36	13 6	2
Barium	B 10395	90.31	91.4	1
Beryllium	B 10395	0 53	0.56	6
Cadmium	B 10395	3.62	3.6	1
Calcium	B 10395	1747	1863	6
Chromium	B 10395	38.85	46.4	18
Cobalt	B 10395	5.67	5.56	2
Copper	B 10395	85.87	102	17
Iron	B 10395	16471	17310	5
Lead	B 10395	228	246	8
Magnesium	B 10395	2169	2297	6
Manganese	B 10395	258	246	5
Mercury	B 10395	0.059	0.092	44
Nickel	B 10395	18.54	21.49	15
Potassium	B 10395	498.9	533	7
Selenium	B 10395	2.71	2.89	6
Silver	B 10395	7.69	7.98	4
Sodium	B 10395	95.88	109	13
Thallium	B 10395	U	0.38	NC
Vanadium	B 10395	57.05	59.86	5
Zinc	B 10395	113.25	121	7

Table 2.31 (Cont) Results of the Duplicate Analysis for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Aluminum	B 10492	7423	6952	7
Antimony	B 10492	1.04	1.03	NC
Arsenic	B 10492	5.58	5.95	NC
Barium	B 10492	140	136	3
Beryllium	B 10492	0.52	0.52	NC
Cadmium	B 10492	7.43	6.81	NC
Calcium	B 10492	3187	3187	0
Chromium	B 10492	36.55	32.5	NC
Cobalt	B 10492	7.13	7.14	NC
Copper	B 10492	78.14	74.99	4
Iron	B 10492	13546	12957	4
Lead	B 10492	157	152	3
Magnesium	B 10492	2343	2295	2
Manganese	B 10492	459	473	3
Mercury	B 10492	0.24	0.22	NC
Nickel	B 10492	22.25	19.8	12
Potassium	B 10492	515	470	9
Selenium	B 10492	1.66	1.43	NC
Silver	B 10492	5.22	2.93	NC
Sodium	B 10492	215	204	5
Thallium	B 10492	U	U	NC
Vanadium	B 10492	25.31	23.96	NC
Zinc	B 10492	266	262	2

Table 2.32 Results of the Analysis
of the Laboratory Control Sample
for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics

Metal	Analyzed Value mg/kg	Accepted Value mg/kg	% Rec	Limits mg/kg
Aluminum	6194.3	6990	89	4150-9830
Antimony	31.8	35	91	3.2-66.8
Arsenic	158.2	164	96	115-212
Barium	411.4	439	94	321-557
Beryllium	95	97.8	97	75.1-121
Cadmium	104.4	112	93	82.1-143
Calcium	2410.5	2620	92	1880-3360
Chromium	93.7	96.2	97	73.5-119
Cobalt	82.2	83.6	98	63.6-104
Copper	139.8	140	100	110-169
Iron	14228.6	17000	84	6940-27100
Lead	89.3	96.1	93	70.6-122
Magnesium	1541	1750	88	1240-2260
Manganese	307.7	314	98	250-379
Mercury	2.5	2.6	96	1.2-4.0
Nickel	68.4	72	95	53.6-90.3
Potassium	1802.9	2170	83	1220-3120
Selenium	63.3	68.9	92	49.2-88.6
Silver	82.2	82.5	100	60.9-104
Sodium	321	288	111	185-391
Thallium	81.9	86	95	40.9-131
Vanadium	93.4	96.7	97	60.7-133
Zinc	264.2	276	96	204-349

Table 2.32 (Cont) Results of the Analysis
of the Laboratory Control Sample
for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics

Metal	Analyzed Value mg/kg	Accepted Value mg/kg	% Rec	Limits mg/kg
Aluminum	6397	6990	92	4150-9830
Antimony	43.4	35	124	3.2-66.8
Arsenic	160 4	164	98	115-212
Barium	418.8	439	95	321-557
Beryllium	98.3	97.8	101	75.1-121
Cadmium	107.7	112	96	82.1-143
Calcium	2480	2620	95	1880-3360
Chromium	101.3	96.2	105	73 5-119
Cobalt	85.1	83.6	102	63.6-104
Copper	142.8	140	102	110-169
Iron	18760	17000	110	6940-27100
Lead	91.3	96.1	95	70.6-122
Magnesium	1580	1750	90	1240-2260
Manganese	330.4	314	105	250-379
Mercury	3.0	2.6	115	1.2-4.0
Nickel	71.3	72	99	53.6-90.3
Potassium	1830	2170	84	1220-3120
Selenium	63.3	68.9	92	49.2-88.6
Silver	83.5	82.5	101	60.9-104
Sodium	320.3	288	111	185-391
Thallium	81.7	86	95	40 9-131
Vanadium	105.5	96.7	109	60.7-133
Zinc	279.2	276	101	204-349

Table 2.32 (Cont) Results of the Analysis
of the Laboratory Control Sample
for Metals in Soil
WA # 2-274 Cornell Dubilier Electronics

Metal	Analyzed Value mg/kg	Accepted Value mg/kg	% Rec	Limits mg/kg
Aluminum	6594.2	6990	94	4150-9830
Antimony	41	35	117	3.2-66.8
Arsenic	157.1	164	96	115-212
Barium	409.4	439	93	321-557
Beryllium	96.7	97.8	99	75.1-121
Cadmium	104.5	112	93	82.1-143
Calcium	2461	2620	94	1880-3360
Chromium	98.2	96.2	102	73.5-119
Cobalt	84.2	83.6	101	63.6-104
Copper	142.7	140	102	110-169
Iron	17902	17000	105	6940-27100
Lead	89.1	96.1	93	70.6-122
Magnesium	1591	1750	91	1240-2260
Manganese	328	314	104	250-379
Mercury	3.0	2.6	115	1.2-4.0
Nickel	70.5	72	98	53.6-90.3
Potassium	1863	2170	86	1220-3120
Selenium	61.6	68.9	89	49.2-88.6
Silver	83.2	82.5	101	60.9-104
Sodium	322.9	288	112	185-391
Thallium	77.8	86	90	40.9-131
Vanadium	101.9	96.7	105	60.7-133
Zinc	275.5	276	100	204-349

C2273

Table 2.33 Results of the Matrix Spike Analysis
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Metal	Sample ID	Sample Conc mg/kg	Spike Conc mg/kg	Rec Conc mg/kg	% Rec	QC Limits
Aluminum	10453	U	99.75	110.1247	110	75-125
Antimony	10453	U	4.99	4.8938	98	75-125
Arsenic	10453	U	2.00	1.9461	97	75-125
Barium	10453	1.8436	99.75	96.5885	95	75-125
Beryllium	10453	U	2.49	2.4519	98	75-125
Cadmium	10453	U	2.49	2.4379	98	75-125
Calcium	10453	11755.57	249.38	17905.26	NC	75-125
Chromium	10453	0.33	9.98	10.1845	99	75-125
Cobalt	10453	U	24.94	24.1696	97	75-125
Copper	10453	0.7951	12.47	13.5860	103	75-125
Iron	10453	21.5018	49.88	72.3192	102	75-125
Lead	10453	0.4314	1.00	1.3047	87	75-125
Magnesium	10453	341.8954	249.38	685.3865	138 *	75-125
Manganese	10453	10.5955	24.94	42.6534	129 *	75-125
Mercury	10434	U	0.22	0.20	91	75-125
Nickel	10453	U	24.94	23.7606	95	75-125
Potassium	10453	2189.54	49.88	2159.60	NC	75-125
Selenium	10453	0.8017	0.50	1.1102	62 *	75-125
Silver	10453	U	2.49	2.4599	99	75-125
Sodium	10453	968.5137	249.38	1290.7731	129 *	75-125
Thallium	10453	U	2.49	2.3332	94	75-125
Vanadium	10453	0.123	24.94	24.6683	98	75-125
Zinc	10453	16.8721	24.94	43.9900	109	75-125

Table 2.33 (Cont) Results of the Matrix Spike Analysis
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Metal	Sample ID	Sample Conc mg/kg	Spike Conc mg/kg	Rec Conc mg/kg	% Rec	QC Limits
Aluminum	10250	12.84	200	225.7	106	75-125
Antimony	10250	U	10	10.02	100	75-125
Arsenic	10250	U	4.0	4.15	104	75-125
Barium	10250	37.36	200	237.1	100	75-125
Beryllium	10250	U	5.0	5.21	104	75-125
Cadmium	10250	0.25	5.0	5.42	103	75-125
Calcium	10250	17800	500	18890	NC	
Chromium	10250	U	20	20.36	102	75-125
Cobalt	10250	U	50	51.92	104	75-125
Copper	10250	32.05	25	56.88	99	75-125
Iron	10250	49.17	100	152	103	75-125
Lead	10250	0.37	2.0	2.43	103	75-125
Magnesium	10250	325.5	500	815.6	98	75-125
Manganese	10250	43.25	50	91.24	96	75-125
Mercury	10250	0.017	0.17	0.15	81	75-125
Nickel	10250	U	50	50.34	101	75-125
Potassium	10250	1989	100	2049	NC	75-125
Selenium	10250	0.35	1.0	1.48	113	75-125
Silver	10250	0.38	5.0	5.52	103	75-125
Sodium	10250	1598	500	2107	102	75-125
Thallium	10250	U	5.0	4.69	94	75-125
Vanadium	10250	U	50	52.62	105	75-125
Zinc	10250	17.7	50	68.44	101	75-125

Table 2.33 (Cont) Results of the Matrix Spike Analysis
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Metal	Sample ID	Sample Conc mg/kg	Spike Conc mg/kg	Rec Conc mg/kg	% Rec	QC Limits
Aluminum	B 08630	15.3	200	225.2	105	75-125
Antimony	B 08630	U	10	9.99	100	75-125
Arsenic	B 08630	U	4.0	4.11	103	75-125
Barium	B 08630	26.21	200	228.4	101	75-125
Beryllium	B 08630	U	5.0	5.15	103	75-125
Cadmium	B 08630	0.26	5.0	5.46	104	75-125
Calcium	B 08630	19960	500	23560	NC	
Chromium	B 08630	U	20	20.36	102	75-125
Cobalt	B 08630	U	50	51.63	103	75-125
Copper	B 08630	32.26	25	62.8	122	75-125
Iron	B 08630	20.55	100	125.3	105	75-125
Lead	B 08630	0.29	2.0	2.37	104	75-125
Magnesium	B 08630	296	500	794.3	100	75-125
Manganese	B 08630	45.88	50	107.6	123	75-125
Mercury	B 08630	U	0.19	0.17	89	75-125
Nickel	B 08630	U	50	49.49	99	75-125
Potassium	B 08630	1842	100	1883	NC	
Selenium	B 08630	0.57	1.0	1.41	84	75-125
Silver	B 08630	0.57	5.0	5.89	106	75-125
Sodium	B 08630	1750	500	2231	96	75-125
Thallium	B 08630	U	5.0	4.71	94	75-125
Vanadium	B 08630	U	50	52.91	106	75-125
Zinc	B 08630	16.3	50	68.3	104	75-125

Table 2.33 (Cont) Results of the Matrix Spike Analysis
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Metal	Sample ID	Sample Conc mg/kg	Spike Conc mg/kg	Rec Conc mg/kg	% Rec	QC Limits
Aluminum	B 10230	31.62	200	283.6	126 *	75-125
Antimony	B 10230	U	10	12.35	124	75-125
Arsenic	B 10230	U	4.0	4.98	125	75-125
Barium	B 10230	31.66	200	271.8	120	75-125
Beryllium	B 10230	U	5.0	6.18	124	75-125
Cadmium	B 10230	0.32	5.0	6.52	124	75-125
Calcium	B 10230	26440	500	30020	NC	
Chromium	B 10230	U	20	25.04	125	75-125
Cobalt	B 10230	U	50	61.08	122	75-125
Copper	B 10230	47.02	25	80.62	134 *	75-125
Iron	B 10230	68.08	100	201.2	133 *	75-125
Lead	B 10230	0.62	2.0	3.5	144 *	75-125
Magnesium	B 10230	348.8	500	1005.6	131 *	75-125
Manganese	B 10230	125.04	50	198.76	147 *	75-125
Mercury	B 10230	U	0.19	0.16	84	75-125
Nickel	B 10230	U	50	59.72	119	75-125
Potassium	B 10230	2462	100	2578	116	
Selenium	B 10230	0.97	1.0	1.77	NC	75-125
Silver	B 10230	0.73	5.0	7.35	132 *	75-125
Sodium	B 10230	2078	500	2786	142 *	
Thallium	B 10230	U	5.0	5.2	104	75-125
Vanadium	B 10230	U	50	62.58	125	75-125
Zinc	B 10230	19.74	50	82.82	126 *	75-125

Table 2.33 (Cont) Results of the Matrix Spike Analysis
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Metal	Sample ID	Sample Conc mg/kg	Spike Conc mg/kg	Rec Conc mg/kg	% Rec		QC Limits
Aluminum	B 10237	38.16	200	302.8	132	*	75-125
Antimony	B 10237	U	10	12.22	122		75-125
Arsenic	B 10237	U	4.0	4.89	122		75-125
Barium	B 10237	38.08	200	272.4	117		75-125
Beryllium	B 10237	U	5.0	6.26	125		75-125
Cadmium	B 10237	0.83	5.0	6.86	121		75-125
Calcium	B 10237	34980	500	32420	NC		
Chromium	B 10237	U	20	25.12	126	*	75-125
Cobalt	B 10237	U	50	61.18	122		75-125
Copper	B 10237	50.62	25	82.64	128	*	75-125
Iron	B 10237	96.04	100	222.6	127	*	75-125
Lead	B 10237	0.76	2.0	3.29	127	*	75-125
Magnesium	B 10237	441	500	987.4	109		75-125
Manganese	B 10237	140.84	50	198.3	115		75-125
Mercury	B 10237	U	0.20	0.17	85		75-125
Nickel	B 10237	U	50	59.9	120		75-125
Potassium	B 10237	2638	100	2714	NC		75-125
Selenium	B 10237	0.966	1.0	2.1	113		
Silver	B 10237	1.5548	5.0	7.55	120		75-125
Sodium	B 10237	2750	500	3036	NC		75-125
Thallium	B 10237	U	5.0	5.55	111		75-125
Vanadium	B 10237	0.31	50	63.06	126	*	75-125
Zinc	B 10237	24.32	50	84.74	121		75-125

Table 2.33 (Cont) Results of the Matrix Spike Analysis
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Metal	Sample ID	Sample Conc mg/kg	Spike Conc mg/kg	Rec Conc mg/kg	% Rec	QC Limits
Aluminum	10454	18.47	196.08	226.47	106	75-125
Antimony	10454	U	9.80	10.69	109	75-125
Arsenic	10454	U	3.92	3.79	97	75-125
Barium	10454	2.34	196.08	206.27	104	75-125
Beryllium	10454	U	4.90	4.70	96	75-125
Cadmium	10454	U	4.90	5.27	108	75-125
Calcium	10454	15277.67	490.2	21901.96	NC	
Chromium	10454	U	19.61	20.37	104	75-125
Cobalt	10454	U	49.02	50.61	103	75-125
Copper	10454	0.87	24.51	27.78	110	75-125
Iron	10454	23.36	98.04	121.76	100	75-125
Lead	10454	0.46	1.96	2.63	111	75-125
Magnesium	10454	430.1	490.2	996.27	115	75-125
Manganese	10454	6.04	49.02	59.98	110	75-125
Mercury	10454	0.04	0.19	0.21	89	75-125
Nickel	10454	U	49.02	48.9	100	75-125
Potassium	10454	2475.73	98.04	2474.51	NC	
Selenium	10454	1.57	0.98	2.01	45 *	75-125
Silver	10454	U	4.90	5.33	109	75-125
Sodium	10454	1077.67	490.2	1717.06	130 *	75-125
Thallium	10454	0.49	4.90	3.94	80	75-125
Vanadium	10454	0.16	49.02	51.51	105	75-125
Zinc	10454	20.39	49.02	70.14	101	75-125

Table 2.33 (Cont) Results of the Matrix Spike Analysis
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Metal	Sample ID	Sample Conc mg/kg	Spike Conc mg/kg	Rec Conc mg/kg	% Rec	QC Limits
Aluminum	10474	17.83	186.92	221.12	109	75-125
Antimony	10474	0.47	9.35	10.42	106	75-125
Arsenic	10474	U	3.74	3.63	97	75-125
Barium	10474	2.06	186.92	197.38	104	75-125
Beryllium	10474	U	4.67	4.64	99	75-125
Cadmium	10474	U	4.67	5.17	111	75-125
Calcium	10474	8730	467.29	10476.64	NC	
Chromium	10474	U	18.69	19.61	105	75-125
Cobalt	10474	U	46.73	48.82	104	75-125
Copper	10474	0.80	23.36	26.3	109	75-125
Iron	10474	20.4	93.46	121.68	108	75-125
Lead	10474	0.65	1.87	2.42	95	75-125
Magnesium	10474	326.6	467.29	822.24	106	75-125
Manganese	10474	7.39	46.73	59.94	112	75-125
Mercury	10474	0.047	0.22	0.25	92	75-125
Nickel	10474	U	46.73	47.35	101	75-125
Potassium	10474	2320	93.46	2407.48	94	
Selenium	10474	1.14	0.93	1.95	87	75-125
Silver	10474	0.19	4.67	5.11	105	75-125
Sodium	10474	790.6	467.29	1349.72	120	75-125
Thallium	10474	U	4.67	3.67	79	75-125
Vanadium	10474	0.19	46.73	49.61	106	75-125
Zinc	10474	19.13	46.73	68.71	106	75-125

Table 2.34 Results of the Duplicate Analysis
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Aluminum	10434	U	U	NC
Antimony	10434	U	U	NC
Arsenic	10434	U	U	NC
Barium	10434	1.8436	1.9699	7
Beryllium	10434	U	U	NC
Cadmium	10434	U	U	NC
Calcium	10434	11755.6	12704.6	8
Chromium	10434	0.3	0.3995	18
Cobalt	10434	U	U	NC
Copper	10434	0.7951	0.7923	0
Iron	10434	21.5018	20.9016	3
Lead	10434	0.4314	0.4179	3
Magnesium	10434	341.8954	358.8601	5
Manganese	10434	10.5955	12.3523	15
Mercury	10434	U	U	NC
Nickel	10434	U	U	NC
Potassium	10434	2189.5	2130.6	3
Selenium	10434	0.8017	0.9588	18
Silver	10434	U	U	NC
Sodium	10434	968.5137	987.0466	2
Thallium	10434	U	U	NC
Vanadium	10434	0.1230	0.1109	10
Zinc	10434	16.8721	17.5440	4

Table 2.34 (Cont) Results of the Duplicate Analysis for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Aluminum	B 10250	12.84	12.07	6
Antimony	B 10250	U	U	NC
Arsenic	B 10250	U	U	NC
Barium	B 10250	37.36	33.01	12
Beryllium	B 10250	U	U	NC
Cadmium	B 10250	0.25	0.26	4
Calcium	B 10250	17800	15600	13
Chromium	B 10250	U	U	NC
Cobalt	B 10250	U	U	NC
Copper	B 10250	32.05	29.33	9
Iron	B 10250	49.17	46.31	6
Lead	B 10250	0.37	0.35	6
Magnesium	B 10250	325.5	292.7	11
Manganese	B 10250	43.25	33.21	26
Mercury	B 10250	0.017	0.018	6
Nickel	B 10250	U	U	NC
Potassium	B 10250	1989	2006	1
Selenium	B 10250	0.35	0.58	49
Silver	B 10250	0.38	0.38	0
Sodium	B 10250	1598	1554	3
Thallium	B 10250	U	U	NC
Vanadium	B 10250	U	U	NC
Zinc	B 10250	17.7	16.06	10

Table 2.34 (Cont) Results of the Duplicate Analysis
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Aluminum	B 08630	15.3	31.5	NC
Antimony	B 08630	U	U	NC
Arsenic	B 08630	U	U	NC
Barium	B 08630	26.21	28.38	8
Beryllium	B 08630	U	U	NC
Cadmium	B 08630	0.26	U	NC
Calcium	B 08630	19960	21160	6
Chromium	B 08630	U	U	NC
Cobalt	B 08630	U	U	NC
Copper	B 08630	32.26	34.98	8
Iron	B 08630	20.55	23.33	13
Lead	B 08630	0.29	0.36	22
Magnesium	B 08630	296	298.8	1
Manganese	B 08630	45.88	55.90	20
Mercury	B 08630	U	U	NC
Nickel	B 08630	U	U	NC
Potassium	B 08630	1842	1779	3
Selenium	B 08630	0.57	U	NC
Silver	B 08630	0.57	0.69	19
Sodium	B 08630	1750	1675	4
Thallium	B 08630	U	U	NC
Vanadium	B 08630	U	U	NC
Zinc	B 08630	16.3	17.93	10

Table 2.34 (Cont) Results of the Duplicate Analysis
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Aluminum	B 10230	31.62	43.12	NC
Antimony	B 10230	U	U	NC
Arsenic	B 10230	U	U	NC
Barium	B 10230	31.66	36.5	14
Beryllium	B 10230	U	U	NC
Cadmium	B 10230	0.32	0.41	NC
Calcium	B 10230	26440	31160	16
Chromium	B 10230	U	U	NC
Cobalt	B 10230	U	U	NC
Copper	B 10230	47.02	50.32	7
Iron	B 10230	68.08	88.72	26
Lead	B 10230	0.62	1.06	NC
Magnesium	B 10230	348.8	394.2	12
Manganese	B 10230	125.04	143.72	14
Mercury	B 10230	U	U	NC
Nickel	B 10230	U	U	NC
Potassium	B 10230	2462	2472	0
Selenium	B 10230	0.97	0.78	NC
Silver	B 10230	0.73	1.22	NC
Sodium	B 10230	2078	2114	2
Thallium	B 10230	U	U	NC
Vanadium	B 10230	U	0.26	NC
Zinc	B 10230	19.74	21.94	11

Table 2.34 (Cont) Results of the Duplicate Analysis
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Aluminum	B 10237	38.16	33.48	13
Antimony	B 10237	U	U	NC
Arsenic	B 10237	U	U	NC
Barium	B 10237	38.08	29.6	25
Beryllium	B 10237	U	U	NC
Cadmium	B 10237	0.83	0.73	13
Calcium	B 10237	34980	26600	27
Chromium	B 10237	U	U	NC
Cobalt	B 10237	U	U	NC
Copper	B 10237	50.62	47.58	6
Iron	B 10237	96.04	88.84	8
Lead	B 10237	0.76	0.72	5
Magnesium	B 10237	441	375	16
Manganese	B 10237	140.84	110.66	24
Mercury	B 10237	U	U	NC
Nickel	B 10237	U	U	NC
Potassium	B 10237	2638	2616	1
Selenium	B 10237	0.97	0.94	3
Silver	B 10237	1.55	1.37	12
Sodium	B 10237	2750	2476	10
Thallium	B 10237	U	U	NC
Vanadium	B 10237	0.31	0.28	10
Zinc	B 10237	24.32	22.26	9

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Table 2.34 (Cont) Results of the Duplicate Analysis
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Aluminum	A5-PS-9	18.47	15.68	16
Antimony	A5-PS-9	U	0.45	NC
Arsenic	A5-PS-9	U	U	NC
Barium	A5-PS-9	2.34	2.41	3
Beryllium	A5-PS-9	U	U	NC
Cadmium	A5-PS-9	U	U	NC
Calcium	A5-PS-9	15277.67	17890.74	16
Chromium	A5-PS-9	U	U	NC
Cobalt	A5-PS-9	U	U	NC
Copper	A5-PS-9	0.87	0.86	1
Iron	A5-PS-9	23.36	18.91	21
Lead	A5-PS-9	0.46	0.84	58
Magnesium	A5-PS-9	430.1	454.44	6
Manganese	A5-PS-9	6.04	6.03	0
Mercury	A5-PS-9	0.044	0.056	24
Nickel	A5-PS-9	U	U	NC
Potassium	A5-PS-9	2475.73	2444.44	1
Selenium	A5-PS-9	1.57	1.47	7
Silver	A5-PS-9	U	U	NC
Sodium	A5-PS-9	1077.67	1343.15	22
Thallium	A5-PS-9	U	U	NC
Vanadium	A5-PS-9	0.16	0.16	0
Zinc	A5-PS-9	20.39	19.09	7

Table 2 34 (Cont) Results of the Duplicate Analysis
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Aluminum	10474	17.83	18.05	1
Antimony	10474	0.47	0.45	4
Arsenic	10474	U	U	NC
Barium	10474	2.06	2.59	23
Beryllium	10474	U	U	NC
Cadmium	10474	U	0 25	NC
Calcium	10474	8730	11136	24
Chromium	10474	U	U	NC
Cobalt	10474	U	U	NC
Copper	10474	0.80	1.06	28
Iron	10474	20.4	24.09	17
Lead	10474	0.65	0.61	6
Magnesium	10474	326.6	370.84	13
Manganese	10474	7.39	10.01	30
Mercury	10474	0 047	0 042	11
Nickel	10474	U	U	NC
Potassium	10474	2320	2143.9	8
Selenium	10474	1 14	1 04	9
Silver	10474	0.19	0.19	0
Sodium	10474	790 6	811.03	3
Thallium	10474	U	U	NC
Vanadium	10474	0.19	0.23	19
Zinc	10474	19 13	22 44	16

Table 2.34 (Cont) Results of the Duplicate Analysis for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Aluminum	10453	U	U	NC
Antimony	10453	U	U	NC
Arsenic	10453	U	U	NC
Barium	10453	1.84	1.97	7
Beryllium	10453	U	U	NC
Cadmium	10453	U	U	NC
Calcium	10453	11755	12704	8
Chromium	10453	0.334	0.399	18
Cobalt	10453	U	U	NC
Copper	10453	0.795	0.792	0
Iron	10453	21.502	20.902	3
Lead	10453	0.4314	0.418	3
Magnesium	10453	341.89	358.86	5
Manganese	10453	10.595	12.352	15
Mercury	10434	U	U	NC
Nickel	10453	0.114	U	NC
Potassium	10453	2189.54	2130.57	3
Selenium	10453	0.802	0.958	18
Silver	10453	U	U	NC
Sodium	10453	968.51	987.05	2
Thallium	10453	U	0.259	NC
Vanadium	10453	0.123	0.111	10
Zinc	10453	16.872	17.544	4

Table 2.35 Results of the Blank Spike Analysis
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Metal	Sample Conc mg/kg	Spike Conc mg/kg	Rec Conc mg/kg	% Rec	QC Limits
Aluminum	U	200.0	200.6	100	75-125
Antimony	U	10.00	9.41	94	75-125
Arsenic	U	4.00	3.71	93	75-125
Barium	U	200.0	195.8	98	75-125
Beryllium	U	5.000	5.029	101	75-125
Cadmium	U	5.00	5.04	101	75-125
Calcium	U	500.0	506.2	101	75-125
Chronium	U	20.0	20.3	102	75-125
Cobalt	U	50.00	48.75	98	75-125
Copper	U	25.00	24.92	100	75-125
Iron	U	100.0	102.6	103	75-125
Lead	U	2.000	2.089	104	75-125
Magnesium	U	500.0	477.5	96	75-125
Manganese	U	50.00	51.79	104	75-125
Nickel	U	50.00	48.44	97	75-125
Potassium	U	100.0	107.3	107	75-125
Selenium	U	1.000	0.928	93	75-125
Silver	U	5.000	4.954	99	75-125
Sodium	U	500.0	521.1	104	75-125
Thallium	U	5.000	4.719	94	75-125
Vanadium	U	50.00	49.58	99	75-125
Zinc	U	50.00	49.93	100	75-125

Table 2.36 Results of the Analysis
of the Laboratory Control Sample
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Metal	Analyzed Value mg/kg	Accepted Value mg/kg	% Rec	Limits mg/kg
Mercury	2.6	2.6	100	1.2-4.0

003287

Table 2.36 (Cont) Results of the Analysis
of the Laboratory Control Sample
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Metal	Analyzed Value mg/kg	Accepted Value mg/kg	% Rec	Limits mg/kg
Aluminum	6860	6990	98	4150-9830
Antimony	31.7	35	91	3.2-66.8
Arsenic	157.1	164	96	115-212
Barium	416.1	439	95	321-557
Beryllium	92	97.8	94	75.1-121
Cadmium	105.3	112	94	82.1-143
Calcium	2430	2620	93	1880-3360
Chromium	94.6	96.2	98	73.5-119
Cobalt	81.9	83.6	98	63.6-104
Copper	134.4	140	96	110-169
Iron	16790	17000	99	6940-27100
Lead	88.7	96.1	92	70.6-122
Magnesium	1616	1750	92	1240-2260
Manganese	317.5	314	101	250-379
Mercury	2.5	2.6	96	1.2-4.0
Mercury	2.8	2.6	108	1.2-4.0
Nickel	67.7	72	94	53.6-90.3
Potassium	1892	2170	87	1220-3120
Selenium	61.4	68.9	89	49.2-88.6
Silver	79.2	82.5	96	60.9-104
Sodium	315.8	288	110	185-391
Thallium	79.5	86	92	40.9-131
Vanadium	99.7	96.7	103	60.7-133
Zinc	268.6	276	97	204-349

Table 2.36 (Cont) Results of the Analysis
of the Laboratory Control Sample
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Metal	Analyzed Value mg/kg	Accepted Value mg/kg	% Rec	Limits mg/kg
Aluminum	6964	6990	100	4150-9830
Antimony	31.6	35	90	3.2-66.8
Arsenic	156.7	164	96	115-212
Barium	434.8	439	99	321-557
Beryllium	90.7	97.8	93	75.1-121
Cadmium	104.9	112	94	82.1-143
Calcium	2420	2620	92	1880-3360
Chromium	93.9	96.2	98	73.5-119
Cobalt	81	83.6	97	63.6-104
Copper	135.8	140	97	110-169
Iron	15700	17000	92	6940-27100
Lead	89.7	96.1	93	70.6-122
Magnesium	1615	1750	92	1240-2260
Manganese	311.5	314	99	250-379
Mercury	2.7	2.6	104	1.2-4.0
Mercury	2.5	2.6	96	1.2-4.0
Nickel	67.7	72	94	53.6-90.3
Potassium	1931	2170	89	1220-3120
Selenium	62.6	68.9	91	49.2-88.6
Silver	78.7	82.5	95	60.9-104
Sodium	316.5	288	110	185-391
Thallium	80.6	86	94	40.9-131
Vanadium	98.5	96.7	102	60.7-133
Zinc	261.3	276	95	204-349

Table 2.36 (Cont) Results of the Analysis
of the Laboratory Control Sample
for Metals in Tissue.
WA # 2-274 Cornell Dubilier Electronics

Metal	Analyzed Value mg/kg	Accepted Value mg/kg	% Rec	Limits mg/kg
Aluminum	7062	6990	101	4150-9830
Antimony	31.2	35	89	3.2-66.8
Arsenic	151.2	164	92	115-212
Barium	406	439	92	321-557
Beryllium	89.7	97.8	92	75.1-121
Cadmium	101.8	112	91	82.1-143
Calcium	2360	2620	90	1880-3360
Chromium	92	96.2	96	73.5-119
Cobalt	78.7	83.6	94	63.6-104
Copper	133	140	95	110-169
Iron	16250	17000	96	6940-27100
Lead	86	96.1	89	70.6-122
Magnesium	1595	1750	91	1240-2260
Manganese	306.1	314	97	250-379
Mercury	2.8	2.6	108	1.2-4.0
Nickel	65.1	72	90	53.6-90.3
Potassium	1925	2170	89	1220-3120
Selenium	61	68.9	89	49.2-88.6
Silver	76.5	82.5	93	60.9-104
Sodium	311.3	288	108	185-391
Thallium	79.7	86	93	40.9-131
Vanadium	98	96.7	101	60.7-133
Zinc	255	276	92	204-349

Table 2.36 (Cont) Results of the Analysis
of the Laboratory Control Sample
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Metal	Analyzed Value mg/kg	Accepted Value mg/kg	% Rec	Limits mg/kg
Aluminum	6802.9	6990	97	4150-9830
Antimony	41.9	35	120	3.2-66.8
Arsenic	153.9	164	94	115-212
Barium	426	439	97	321-557
Beryllium	92.4	97.8	94	75.1-121
Cadmium	106.7	112	95	82.1-143
Calcium	2467	2620	94	1880-3360
Chromium	94.1	96.2	98	73.5-119
Cobalt	81.9	83.6	98	63.6-104
Copper	138.1	140	99	110-169
Iron	13825.2	17000	81	6940-27100
Lead	88.3	96.1	92	70.6-122
Magnesium	1570.9	1750	90	1240-2260
Manganese	307.8	314	98	250-379
Mercury	2.6	2.6	100	1.2-4.0
Nickel	67.2	72	93	53.6-90.3
Potassium	1921.4	2170	89	1220-3120
Selenium	58.1	68.9	84	49.2-88.6
Silver	80.2	82.5	97	60.9-104
Sodium	333.7	288	116	185-391
Thallium	82.8	86	96	40.9-131
Vanadium	96.8	96.7	100	60.7-133
Zinc	268.7	276	97	204-349

Table 2.36 (Cont) Results of the Analysis
of the Laboratory Control Sample
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Metal	Analyzed Value mg/kg	Accepted Value mg/kg	% Rec	Limits mg/kg
Aluminum	6802.9	6990	97	4150-9830
Antimony	41.9	35	120	3.2-66.8
Arsenic	153.9	164	94	115-212
Barium	426	439	97	321-557
Beryllium	92.4	97.8	94	75.1-121
Cadmium	106.7	112	95	82.1-143
Calcium	2467	2620	94	1880-3360
Chromium	94.1	96.2	98	73.5-119
Cobalt	81.9	83.6	98	63.6-104
Copper	138.1	140	99	110-169
Iron	13825.2	17000	81	6940-27100
Lead	88.3	96.1	92	70.6-122
Magnesium	1570.9	1750	90	1240-2260
Manganese	307.8	314	98	250-379
Mercury	2.6	2.6	100	1.2-4.0
Nickel	67.2	72	93	53.6-90.3
Potassium	1921.4	2170	89	1220-3120
Selenium	58.1	68.9	84	49.2-88.6
Silver	80.2	82.5	97	60.9-104
Sodium	333.7	288	116	185-391
Thallium	82.8	86	96	40.9-131
Vanadium	96.8	96.7	100	60.7-133
Zinc	268.7	276	97	204-349

Table 2.36 (Cont) Results of the Analysis
of the Laboratory Control Sample
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Metal	Analyzed Value mg/kg	Accepted Value mg/kg	% Rec	Limits mg/kg
Aluminum	7599	6990	109	4150-9830
Antimony	43	35	123	3.2-66.8
Arsenic	163	164	99	115-212
Barium	463.2	439	106	321-557
Beryllium	96.4	97.8	99	75.1-121
Cadmium	110	112	98	82.1-143
Calcium	2556	2620	98	1880-3360
Chromium	99 6	96.2	104	73.5-119
Cobalt	85.7	83.6	103	63.6-104
Copper	148.5	140	106	110-169
Iron	16070	17000	95	6940-27100
Lead	93	96.1	97	70.6-122
Magnesium	1684	1750	96	1240-2260
Manganese	327	314	104	250-379
Mercury	2.5	2.6	96	1.2-4.0
Nickel	70.4	72	98	53.6-90.3
Potassium	2140	2170	99	1220-3120
Selenium	62	68.9	90	49.2-88.6
Silver	85.1	82.5	103	60.9-104
Sodium	350.3	288	122	185-391
Thallium	84.7	86	98	40.9-131
Vanadium	104.2	96.7	108	60.7-133
Zinc	277.1	276	100	204-349

Table 2.37 Results of the Post Digestion Spike Analysis
for Metals in Tissue
WA # 2-274 Cornell Dubilier Electronics

Metal	Sample	Sample Conc mg/kg	Spike Conc mg/kg	Rec Conc mg/kg	% Rec
Magnesium	10453	6602	50000	54460	96
Manganese	10453	204.6	500	710.7	101
Selenium	10453	15.48	500	508.4	99
Sodium	10453	18702	50000	70420	103

QA/QC for Ammonia and Total Petroleum Hydrocarbons

Samples H 10264 and B 10486 were chosen for the matrix spike (MS) analysis for ammonia. The percent recoveries, listed in Table 2.38, were 96 and 107 and both values were within the acceptable QC limits.

Samples H 10264 and B 10486 were chosen for the duplicate analyses for ammonia. The relative percent differences, listed in Table 2.39, were 7 and 4. QC limits are not available for this analysis.

Laboratory control standards were also analyzed for ammonia. The percent recoveries, listed in Table 2.40, ranged from 93 to 101. QC limits are not available for this analysis.

Sample B 10486 was chosen for the MS analysis for total petroleum hydrocarbons. The percent recovery, listed in Table 2.41, was 89 and it was within the acceptable QC limits.

Sample B 10486 was chosen for the duplicate analyses for total petroleum hydrocarbons. The relative percent difference, listed in Table 2.42, was 6. QC limits are not available for this analysis.

A laboratory control standard was also analyzed for total petroleum hydrocarbons. The percent recovery, listed in Table 2.43, was 100. QC limits are not available for this analysis.

Table 2.38 Results of the Matrix Spike Analysis
for Ammonia
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Sample Conc mg/kg	Spike Conc mg/kg	Rec Conc mg/kg	% Rec	QC Limits
Ammonia	H 10264	161	361	508	96	75-125

Table 2.38 (Cont) Results of the Matrix Spike Analysis
for Ammonia
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Sample Conc mg/kg	Spike Conc mg/kg	Rec Conc mg/kg	% Rec	QC Limits
Ammonia	B10486	0.605	1.00	1.67	107	75-125

Table 2.39 Results of the Duplicate Analysisfor Ammonia
for Ammonia
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Ammonia	H 10264	161	172	7

Table 2.39 (Cont) Results of the Duplicate Analysis
for Ammonia
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Ammonia	B10486	138	143	4

Table 2.40 Results of the Analysis
of the Laboratory Control Sample
for Ammonia
WA # 2-274 Cornell Dubilier Electronics

Analyte	Analyzed Value mg/kg	Accepted Value mg/kg	% Rec
Ammonia	9.8	10.5	93

Table 2.40 (Cont) Results of the Analysis
of the Laboratory Control Sample
for Ammonia
WA # 2-274 Cornell Dubilier Electronics

Analyte	Analyzed Value mg/kg	Accepted Value mg/kg	% Rec
Ammonia	10.3	10.5	98

Table 2.40 (Cont) Results of the Analysis
of the Laboratory Control Sample
for Ammonia
WA # 2-274 Cornell Dubilier Electronics

Analyte	Analyzed Value mg/kg	Accepted Value mg/kg	% Rec
Ammonia	10.61	10.5	101

Table 2.41 Results of the Matrix Spike Analysis
for Total Petroleum Hydrocarbons
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Sample Conc mg/kg	Spike Conc mg/kg	Rec Conc mg/kg	% Rec	QC Limits
Total Petroleum Hydrocarbons	B10486	106	236	316	89	75-125

Table 2.42 Results of the Duplicate Analysis
for Total Petroleum Hydrocarbons
WA # 2-274 Cornell Dubilier Electronics

Analyte	Sample ID	Initial Analysis mg/kg	Duplicate Analysis mg/kg	RPD
Total Petroleum Hydrocarbons	B10486	106	113	6

Table 2.43 Results of the Analysis
of the Laboratory Control Sample
for Total Petroleum hydrocarbons
WA # 2-274 Cornell Dubilier Electronics

Analyte	Analyzed Value mg/kg	Accepted Value mg/kg	% Rec
Total Petroleum Hydrocarbons	50	50	100

Roy F. Weston, Inc.
GSA Raritan Depot
Building 209 Annex (Bay F)
2890 Woodbridge Avenue
Edison, New Jersey 08837-3679
908-321-4200 • Fax 908-494-4021

General Physics Environmental
202 Perry Parkway
Gaithersburg, MD 20877

Attn: Marty Sadoughi

17 June 1997

Project # 3847-142-001-2274 Cornell Dubilier Electronics Site

As per Weston REAC Purchase Order number 81434, please analyze samples according to the following parameters:

Analysis/Method	Matrix	# of samples
Pest/PCB SW-846-8080	Water Soil Tissue*	15 48 175-250
TAL Metals SW-846-6010 or 7000	Water Soil Tissue*	15 48 175-250
Percent Lipids	Tissue	175-250
Semivolatiles/See attached list SW-846-8270	Water Soil Tissue	15 48 48
Volatiles/See attached list SW-846-8260	Water Soil	15 48
Grain Size/ASTM D-422	Soil	48
LOI/AASHTO T267-86	Soil	48
TPH/EPA 418.1	Soil	10
Ammonia/ EPA 350	Soil	10
Data package: see attached Deliverables Requirements		

* Tissue samples consist of frogs, crayfish, fish fillets, whole fish, and mice.
Fish fillets will be analyzed with a 5 day turn around time for preliminary data.

Samples are expected to arrive at your laboratory between June 17-21,1997. **All applicable QA/QC (MS/MSD) analysis as per method, will be performed on our sample matrix.** Preliminary sample and MS/MSD result tables plus a signed copy of our Chain of Custody must be faxed to REAC 10 business days after receipt of the last samples (except fish tissue which is 5 days). The complete data package is due 21 business days after receipt of last batch of samples. The complete data package must include all items on the deliverables checklist.

ALL ORGANIC EXTRACTIONS ON SOLIDS IE:'BNA,PEST/PCB MUST BE BY SOXHLET EXTRACTION

Please submit all reports and technical questions concerning this project to **John Johnson at (908) 321-4248** or fax to **(908) 494-4020**. Any contractual question, please call Cynthia Davison at (908) 321-4296.
Thank you

Sincerely,

Misty Barkley
Data Validation and Report Writing Group Leader
Roy F. Weston, Inc. / REAC Project

MB:jj Attachments

cc. R. Singhvi
M. Sprenger
2274\non\mem\9706\sub\2274Con
V. Kansal
Subcontracting File
Y. Exume
C. Davison
S. Grossman
M. Barkley

USEPA E — CHAIN OF CUS)Y RECORD — COC)0-001

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier
Location: South Plainfield, NJ
Site Phone:

Page No.: 1 of 1
Cooler #:009042
Lab: GPE Environmental
Contact:

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
	A	2000-1001	A1	Surface water	6/27/97	1 L Amber/4 C	Pesticides/PCB		
	B	2000-1001	A1	Surface water	6/27/97	1 L Amber/4 C	Base neutral/acid extractables		
	C	2000-1001	A1	Surface water	6/27/97	1 L poly/4 C	Base neutral/acid extractables		
	G	2000-1001	A1	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (unfiltered)		
	H	2000-1001	A1	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (filtered)		
	A	2000-1002	A2	Surface water	6/27/97	1 L Amber/4 C	Pesticides/PCB		
	B	2000-1002	A2	Surface water	6/27/97	1 L Amber/4 C	Base neutral/acid extractables		
	C	2000-1002	A2	Surface water	6/27/97	1 L poly/4 C	Base neutral/acid extractables		
	G	2000-1002	A2	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (unfiltered)		
	H	2000-1002	A2	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (filtered)		
	A	2000-1003	A3	Surface water	6/27/97	1 L Amber/4 C	Pesticides/PCB		
	B	2000-1003	A3	Surface water	6/27/97	1 L Amber/4 C	Base neutral/acid extractables		
	C	2000-1003	A3	Surface water	6/27/97	1 L poly/4 C	Base neutral/acid extractables		
	G	2000-1003	A3	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (unfiltered)		
	H	2000-1003	A3	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (filtered)		

0308

Special Instructions: COOLER 9042 Filtered Samples Have already been Filtered (TAG H)

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
all analyses	Mark Huston	6/27/97							C Gross	6/30/97	9:22am

USEPA ER

CHAIN OF CUSTODY RECORD

COC 1 0-002

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier
Location: South Plainfield, NJ
Site Phone:

Page No.: 1 of 1
Cooler #:009383
Lab:
Contact: Scott Grossman
(908) 321-4230

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
	A	2000-1004	A4	Surface water	6/27/97	1 L Amber/4 C	Pesticides/PCB		
	B	2000-1004	A4	Surface water	6/27/97	1 L Amber/4 C	Base neutral/acid extractables		
	C	2000-1004	A4	Surface water	6/27/97	1 L poly/4 C	Base neutral/acid extractables		
	G	2000-1004	A4	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (unfiltered)		
	H	2000-1004	A4	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (filtered)		
	A	2000-1005	A5	Surface water	6/27/97	1 L Amber/4 C	Pesticides/PCB		
	B	2000-1005	A5	Surface water	6/27/97	1 L Amber/4 C	Base neutral/acid extractables		
	C	2000-1005	A5	Surface water	6/27/97	1 L poly/4 C	Base neutral/acid extractables		
	G	2000-1005	A5	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (unfiltered)		
	H	2000-1005	A5	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (filtered)		
	A	2000-1006	A6	Surface water	6/27/97	1 L Amber/4 C	Pesticides/PCB		
	B	2000-1006	A6	Surface water	6/27/97	1 L Amber/4 C	Base neutral/acid extractables		
	C	2000-1006	A6	Surface water	6/27/97	1 L poly/4 C	Base neutral/acid extractables		
	G	2000-1006	A6	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (unfiltered)		
	H	2000-1006	A6	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (filtered)		
	B	2000-1010	Laboratory Blank	Water	6/27/97	1 L Amber/4 C	Base neutral/acid extractables		
	C	2000-1010	Laboratory Blank	Water	6/27/97	1 L poly/4 C	Base neutral/acid extractables		
	G	2000-1010	Laboratory Blank	Water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (unfiltered)		

0309

Special Instructions:

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
all analyses	Mark Huston	6/27/97							C Lyons	6/30/97	9:20 AM

USEPA E

CHAIN OF CUS DY RECORD

COC J00-003

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#. 03347-142-001-2274
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier
Location: South Plainfield, NJ
Site Phone:

Page No.: 1 of 1
Cooler #:009338
Lab:
Contact: Scott Grossman
(908) 321-4230

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
	A	2000-1007	A7	Surface water	6/27/97	1 L Amber/4 C	Pesticides/PCB		
	B	2000-1007	A7	Surface water	6/27/97	1 L Amber/4 C	Base neutral/acid extractables		
	C	2000-1007	A7	Surface water	6/27/97	1 L poly/4 C	Base neutral/acid extractables		
	G	2000-1007	A7	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (unfiltered)		
	H	2000-1007	A7	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (filtered)		
	A	2000-1008	A9	Surface water	6/27/97	1 L Amber/4 C	Pesticides/PCB	Y	
	B	2000-1008	A9	Surface water	6/27/97	1 L Amber/4 C	Base neutral/acid extractables	Y	
	C	2000-1008	A9	Surface water	6/27/97	1 L poly/4 C	Base neutral/acid extractables	Y	
	G	2000-1008	A9	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (unfiltered)	Y	
	H	2000-1008	A9	Surface water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (filtered)		
	A	2000-1010	Laboratory Blank	Water	6/27/97	1 L Amber/4 C	Pesticides/PCB		
	H	2000-1010	Laboratory Blank	Water	6/27/97	1 L poly/HNO3, pH<2	metals, TAL (filtered)		

0310

Special Instructions: 9338 COOLER#

Filtered samples have already been filtered (TAG H)

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
all analyses	Mark Huston	6/27/97									

C Lyon 6/30/97 9:22 am

USEPA ERT

CHAIN OF CUSTODY RECORD

COC # 000-004

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#. 03347-142-001-2274
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier
Location: South Plainfield, NJ
Site Phone:

Page No.: 1 of 2
Cooler #:NA
Lab:
Contact: Scott Grossman
(908) 321-4230

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
	D	2000-1001	A1	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	E	2000-1001	A1	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	F	2000-1001	A1	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	D	2000-1002	A2	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	E	2000-1002	A2	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	F	2000-1002	A2	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	D	2000-1003	A3	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	E	2000-1003	A3	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	F	2000-1003	A3	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	D	2000-1004	A4	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	E	2000-1004	A4	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	F	2000-1004	A4	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	D	2000-1005	A5	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	E	2000-1005	A5	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	F	2000-1005	A5	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	D	2000-1006	A6	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	E	2000-1006	A6	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	F	2000-1006	A6	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	D	2000-1007	A7	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	E	2000-1007	A7	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		
	F	2000-1007	A7	Surface water	6/27/97	40 ml VOA/4 C	Volatiles		

0311

G379 0001

Special Instructions: COOLER ADD 1

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
all analyses	Mark Huston	6/27/97									

USEPA ERT

CHAIN OF CUSTODY RECORD

COC # 000-005

REAC, Edison, NJ
Contact. Scott Grossman
(908) 321-4230
WO#. 03347-142-001-2274
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier
Location: South Plainfield, NJ
Site Phone:

Page No.: 2 of 2
Cooler #:NA
Lab:
Contact: Scott Grossman
(908) 321-4230

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
	D	2000-1008	A9	Surface water	6/27/97	40 ml VOA/4 C	Volatiles	Y	
	E	2000-1008	A9	Surface water	6/27/97	40 ml VOA/4 C	Volatiles	Y	
	F	2000-1008	A9	Surface water	6/27/97	40 ml VOA/4 C	Volatiles	Y	
	D	2000-1009	Trip Blank	Water	6/27/97	40 ml VOA/4 C	Volatiles		
	E	2000-1009	Trip Blank	Water	6/27/97	40 ml VOA/4 C	Volatiles		
	F	2000-1009	Trip Blank	Water	6/27/97	40 ml VOA/4 C	Volatiles		
	D	2000-1010	Laboratory Blank	Water	6/27/97	40 ml VOA/4 C	Volatiles		
	E	2000-1010	Laboratory Blank	Water	6/27/97	40 ml VOA/4 C	Volatiles		
	F	2000-1010	Laboratory Blank	Water	6/27/97	40 ml VOA/4 C	Volatiles		

G379 0002

0312

Special Instructions: COOLER A001

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
all analyses	Mark Huston	6/27/97									

C. Agoni 6/30/97 9:20am

REAC, ison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CH...N OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 2-274
RFW Contact: Scott Grossman Phone: 321-4200 (908)

No: 05308

SHEET NO. 1 OF 2

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	BNA			
	C10371C	T2-12-5	S	6-18-97	1	8oz glass/4°C	X			
	C10372C	T2-7-1								
	C10373C	T2-6-7								
	C10374C	T2-2-1								
	C10375C	T2-5-6								
	~~C10380C~~	~~T2-~~								
	C10380*	T2-1-3								
	C10381	T1-1-4								
	C10382	T1-4-5								
	C10383	T1-7-2								
	C10384	T1-3-7								
	C10385	T1-5-6								
	C10386*	T1-10-2								
	C10387	T1-11-9								
	C10388	T1-14-3								
	C10389	T3-1-7								
	C10390	T3-1-13								
	C10391	T3-2-11								
	C10392	T3-3-10								
	C10393	T3-3-16								

G350 0006

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

* MS/MSD

QC: Horne

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	Jennifer Pierce	6/20/97									

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Carnell Dubbler
Project Number: 2-274
RFW Contact: Scott Grossman Phone: 321-4200 (908)

No: 05309

SHEET NO. 2 OF 2

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	BNA			
	C10394	T3-4-6	S	6-18-97	1	8oz glass/4°C	X			
	C10395	T4-1-4	↓	↓	↓	↓	↓			
	C10396*	T4-1-10								
	C10397	T4-2-19								
	C10398	T4-3-3								
	C10399	T4-4-1								
	C10400	T4-5-6	↓	↓	↓	↓	↓			
	A10485	Field Blank	S	6-18-97	1	8oz glass/4°C	X			

G3860003

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

* MS/MSD

Cooler #9338

QC: Home

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	Jennifer Kay	6/20/97									
									C Lyon	6/23/97	14:45

FORM #4 8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 2-274
RFW Contact: Scott Grossman Phone: 321-4200 (908)

No: 05310

SHEET NO. 1 OF 2

Sample Identification | **Analyses Requested**

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TAL			
	B10371	~~6-18-9~~ T2-12-5	S	6-18-97	1	8oz glass/4°C	X			
	B10372	T2-7-1								
	B10373	T2-6-7								
	B10374	T2-2-1								
	B10375	T2-5-6								
	B10380	T2-1-3								
	B10381	T1-1-4								
	B10382	T1-4-5 *								
	B10383	T1-7-2								
	B10384	T1-3-7								
	B10385	T1-5-6								
	B10386	T1-10-2								
	B10387	T1-11-9								
	B10388	T1-14-3								
	B10389	T3-1-7								
	B10390	T3-1-13 *								
	B10391	T3-2-11								
	B10392	T3-3-10								
	B10393	T3-3-16								
	B10394	T3-4-6								

G361 0029
0315

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

* MS/MSD

Cooler #9347

QC: Home

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	Jennifer Rosa	6/20/97									

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 2-274
RFW Contact: Scott Grossman Phone: 321-4200 (906)

No: 05311

SHEET NO 2 OF 2

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TAL			
	B10395	T4-1-4 *	S	6-18-97	1	8oz glass/4°C	X			
	B10396	T4-1-10								
	B10397	T4-2-19								
	B10398	T4-3-3								
	B10399	T4-4-1								
	B10400	T4-5-6	↓	↓	↓	↓	↓			
	A10377	Field Blank	S	6-18-97	1	8oz glass/4°C	X			

G3700003

Special Instructions:

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

QC: None

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	Jennifer Royce	6/18/97									
									C Lyons	6/21/97	1515

FORM #4

8/94

REAC, E on, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHA JF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 2-2774 (PA) 03.347-142-001-2274-01 No: 05314
RFW Contact: Scott Grossman Phone: 321-4200 (908)

SHEET NO 1 OF 2

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Pesticide	PCB		
	D10371	T2-12-5	S	6-18-97	1	8oz glass/4°C	X	X		
	D10372	T2-7-1								
	D10373	T2-6-7								
	D10374	T2-2-1								
	D10375*	T2-5-6								
	D10380	T2-1-3								
	D10381	T1-1-4								
	D10382	T1-4-5								
	D10383	T1-7-2								
	D10384	T1-3-7								
	D10385	T1-5-6								
	D10386	T1-10-2								
0817	D10387	T1-11-9								
	D10388*	T1-14-3								
	D10389	T3-1-7								
	D10390	T3-1-13								
	D10391	T3-2-11								
	D10392	T3-3-10								
	D10393	T3-3-16								
	D10394	T3-4-6								

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:
*MS/MSD

QA: (PA)

Coder # 009338

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	[signature]	6/20/97									
									[signature]	6/24/97	1800

FORM #4

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 2-274
RFW Contact: Scott Grossman Phone: 321-4200

No: 05315

SHEET NO. 2 OF 2

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Pesticides	PCB		
	D10395	T4-1-4	S	6-18-97	1	8oz glass/4°C	X	X		
	D10396	T4-1-10	↓	↓	↓	↓	↓	↓		
	D10397*	T4-2-19								
	D10398	T4-3-3								
	D10399	T4-4-1								
	D10400	T4-5-6	↓	↓	↓	↓	↓	↓		
PC	X A10379	Field Blank	S	6/20/97	1	8oz glass/4°C	X	X		

0318

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

QA: PC

* MS/MSD

Cooler # 009338

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	[signature]	6/20/97									
										6/23/97	14:1[illegible]

8/94

REAC, Edis. , NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 2-2746 03347-142-001-2274-01
RFW Contact: Scott Grossman Phone: 321-4200 (908)

No: 05316

SHEET NO. 1 OF 2

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOA
	E10371	T2-12-5	S	6-18-97	1	4oz sp 4°C	X
	E10372	T2-7-1					
	E10373	T2-6-7					
	E10374	T2-2-1					
	E10375	T2-5-6					
	E10380	T2-1-3					
	E10381	T1-1-4					
	E10382	T1-4-5					
	E10383	T1-7-2					
	E10384	T1-3-7					
	E10385	T1-5-6					
	E10386	T1-10-2					
0316	E10387	T1-11-9					
	E10388	T1-14-3					
	E10389	T3-1-7					
	E10390	T3-1-13					
	E10391	T3-2-11					
	E10392	T3-3-10					
	E10393	T3-3-16					
	E10394	T3-4-6					

Special Instructions:

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

QA: (PW)

coder # 7175

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	[signature]	6/20/97									
									C Ryan	6/21/97	1538

FORM #4

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 2-274
RFW Contact: Scott Grossman Phone: 321-4200

No: 05317

SHEET NO 2 OF 2

Sample Identification							Analyses Requested			
REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOA			
	E10395	T4-1-4	S	6-18-97	1	4 oz septal 4°C	X			
	E10396	T4-1-10	↓	↓	↓	↓	↓			
	E10397	T4-2-19	↓	↓	↓	↓	↓			
	E10398	T4-3-3	↓	↓	↓	↓	↓			
	E10399	T4-4-1	↓	↓	↓	↓	↓			
	E10400	T4-5-6	↓	↓	↓	↓	↓			

0320

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	[signature]	6/20/97									
									[signature]	6/23/97	15:37

FORM #4

8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 2-2774 (R) 03347-142-001-2274-01
RFW Contact: Scott Grossman Phone: 321-4200 (908)

No: 05318

SHEET NO. 1 OF 2

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TOC
	F10371	T2-12-5	S	6-18-97	1	80z. glass / 4°C	X
	F10372	T2-7-1					
	F10373	T2-6-7					
	F10374	T2-2-1					
	F10375	T2-5-6					
	F10380	T2-1-3					
	F10381	T1-1-4					
	F10382	T1-4-5					
	F10383	T1-7-2					
	F10384	T1-3-7					
	F10385	T1-5-6					
	F10386	T1-10-2					
	F10387	T1-11-9					
	F10388	T1-14-3					
	F10389	T3-1-7					
	F10390	T3-1-13					
	F10391	T3-2-11					
	F10392	T3-3-10					
	F10393	T3-3-16					
	F10394	T3-4-6					

G-361 0030 0321

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

QA: (PIV)

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis		6/20/97									

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: ~~2-274~~ (PW) 03347-142-001-2274-01
RFW Contact: Scott Grossman Phone: 321-4200 (908)

No: 05319

SHEET NO 2 OF 2

Sample Identification							Analyses Requested			
REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TOC			
	F10395	T4-1-4	S	6-18-97	1	8oz glass/4°C	X			
	F10396	T4-1-10	↓	↓	↓	↓	↓			
	F10397	T4-2-19	↓	↓	↓	↓	↓			
	F10398	T4-3-3	↓	↓	↓	↓	↓			
	F10399	T4-4-1	↓	↓	↓	↓	↓			
	F10400	T4-5-6	↓	↓	↓	↓	↓			

G377 0003

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

QA (PW)

Special Instructions:

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	[signature]	6/20/97									
									C Lyon	6/23/97	15:00

FORM #4 8/94

REAC, E[illegible]n, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAI[illegible]F CUSTODY RECORD

Project Name: Cornell - Dubilier
Project Number: 2-274
RFW Contact: Scott Grossman Phone: 908 321-4200

No: 05321

SHEET NO. 1 OF 3

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TAL	PEST/PCB	% lipid	% Solid
	10434	A4-PS-1	X	6/18/97	1	Foil/8°C	X	X	X	X
	10435	A4-PS-2								
	10436	A4-PS-3								
	10437	A4-PS-4								
	10438	A4-PS-5								
	10439	A4-PS-6								
	10440	A4-PS-7								
	10441	A6-PS-4		6/17/97						
	10442	A6-PS-5								
	10443	A6-PS-6								
	10444	A6-PS-7								
	10445	A6-PS-8								
	10446	A6-PS-9								
	10447	A6-PS-10								
	10448	A6-PS-11								
	10449	A5-PS-4		6/17/97						
	10450	A5-PS-5								
	10451	A5-PS-6								
	10452	A5-PS-7								
	10453	A5-PS-8								

G341 0008
0323

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

X = Fish Tissue
QC: [signature]

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	M [illegible]	6/20/97									
									[signature]	6/25	14:02

8/94

REAC, Ec n, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN - CUSTODY RECORD

Project Name: Cornell - Dubilier
Project Number: 2-274
RFW Contact: Scott Grossman Phone: 908 321-4200

No: 05322

SHEET NO. 2 OF 3

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TAL	PEST/PCB	% lipid	% solid
	10454	A5-PS-9	x	6/17/97	1	foil/0°c	x	x	x	x
	10455	A5-PS-10		6/17/97						
	10456	A1-PS-1		6/18/97						
	10457	A1-PS-2								
	10458	A1-PS-3								
	10459	A1-PS-4								
	10460	A1-PS-5								
	10461	A1-PS-6								
	10462	A3-PS-1		6/18/97						
	10463	A3-PS-2								
	10464	A3-PS-3								
	10465	A3-PS-4								
	10466	A3-PS-5								
	10467	A3-PS-6								
	10468	A3-PS-7								
	10469	A3-PS-8								
	10470	A2-PS-1		6/17/97						
	10471	A2-PS-2								
	10472	A2-PS-3								
	10473	A2-PS-4								

0324

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

X = Fish Tissue
QC: Gn

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	M Horne	6/20/97									
									C [illegible]	6/23/97	14:02

FORM #4 8/94

REAC, E on, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHA OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03312-142-001-2274-01
RFW Contact: JOHN JOHNSON Phone: (908) 321-4200

No: 05330

SHEET NO. 2 OF 2

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	PCB	PESTICIDE	% MOIST	% LIPID
	B10421	T3-1-11	T	17 June 1997	1	FOIL/DRY ICE	✓	✓	✓	✓
	B10422	T3-4-20		↓						
	B10423	T3-4-1		13 June 1997						
	B10424	T3-3-15		17 June 1997						
	B10425	T3-1-5		↓						
	B10426	T4-2-23		18 June 1997						
	B10427	T4-1-1								
	B10428	T4-1-27								
	B10429	T4-5-3								
	B10430	T4-2-24		↓						
	B10431	T4-2-2		18 June 1997						
	B10432	T4-3-5		17 June 1997						
	B10433	T4-2-7	↓	↓	↓	↓	↓	↓	↓	↓

G341 0380

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

10% MS/MSD

QC: M Horne

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ALL/ANALYSD	[signature]	6/26/97									
									C Ryan	6/[illegible]	1905

FORM #4 8/94

REAC, E on, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Council Dustrict
Project Number: 03342-CHSS 142-001-2274-01
RFW Contact: JOHN JOHNSON Phone: (908) 321-4200

No: 05326

SHEET NO. 1 OF 2

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	PCB	PESTICIDES	% MOIST	% LIPIDS
	B10401	T1-14-2	T	17 June 1997	1	Foil / Dry Ice	✓	✓	✓	✓
	B10402	T1-14-4								
	B10403	T1-8-3								
	B10404	T1-10-6								
	B10405	T1-3-4								
	B10406	T1-14-10								
	B10407	T1-5-5		↓						
	B10408	T1-13-10		18 June 1997						
	B10409	T1-9-7		17 June 1997						
	B10410	T1-14-6		↓						
	B10411	T2-12-8		18 June 1997						
	B10412	T2-4-5		↓						
0325	B10413	T2-2-7		17 June 1997						
	B10414	T2-3-6								
	B10415	T2-12-3								
	B10416	T2-12-10								
	B10417	T2-2-1								
	B10418	T2-4-5		↓						
	B10419	T3-4-2		18 June 1997						
	B10420	T3-1-8	↓	17 June 1997	↓	↓	↓	↓	↓	↓

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

T - Tissue (Perumyscus leucopus)

Special Instructions:
10% MS/MSD
QC: MA

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ALL ANALYSES	[signature]	6/20/97									
									C Ryan	6/23/97	1615

FORM #4 8/94

son, NJ
200
ct 68-C4-0022

CHAIN OF CUSTO... RECORD

Project Name: Carnell - Dubilier
Project Number: 2-274
RFW Contact: Scott Grossman Phone: 908 321 4200

No: 05334

SHEET NO. 3 OF 3

Sample Identification						Analyses Requested			
Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TAL	PEST/PCB	% lipid	% Solid
0474	A2-PS-5	X	6/17/97	1	foil/0°C	X	X	X	X
0475	Ref-PS-1	↓	6/18/97	↓	↓	↓	↓	↓	↓
0476	Ref-PS-2	↓	↓	↓	↓	↓	↓	↓	↓
0477	Ref-PS-3	↓	↓	↓	↓	↓	↓	↓	↓
0478	Ref-PS-4	↓	↓	↓	↓	↓	↓	↓	↓
0479	Ref-PS-5	↓	↓	↓	↓	↓	↓	↓	↓

0327

Special Instructions:

ent	PW -	Potable Water	S -	Soil
Solids	GW -	Groundwater	W -	Water
Liquids	SW -	Surface Water	O -	Oil
	SL -	Sludge	A -	Air

X = fish Tissue
QC: G

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
M Thomas	6/20/97									
								C Fenn	6/23/97	14:02

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN CUSTODY RECORD

Project Name: Cornell-Dubilier
Project Number: 2-274
RFW Contact: Scott Grossman Phone: 908 321 4200

No: 07726

SHEET NO. 1 OF 1

6/19/97

Sample Identification — Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	PEST/PCB	TAL	% Lipid	% Solid
606	A6-LB-1	Area 6	X	6/17/97	1	foil/°C	X	X	X	X
607	A6-LB-2	Area 6	↓	↓	↓	↓	↓	↓	↓	↓
608	A6-LB-3	Area 6	↓	↓	↓	↓	↓	↓	↓	↓
609	A6-PS-1	Area 6	↓	↓	↓	↓	↓	↓	↓	↓
610	A6-PS-2	Area 6	↓	↓	↓	↓	↓	↓	↓	↓
611	A6-PS-3	Area 6	↓	↓	↓	↓	↓	↓	↓	↓
612	A6-CC-1	Area 6	↓	↓	↓	↓	↓	↓	↓	↓
613	A6-CC-2	Area 6	↓	↓	↓	↓	↓	↓	↓	↓
614	A6-CC-3	Area 6	↓	↓	↓	↓	↓	↓	↓	↓
615	A5-CC-1	Area 5	X	6/17/97	1	foil/°C	X	X	X	X

OK MTH

0330

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

X = Fish Tissue

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	M Hess	6/18/97	[signature]	6/18/97	1620	All/Analysis	[signature]		[signature]	6/19/97	9:30

FORM #4 8/94

REAC, Ed n, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN CUSTODY RECORD

Project Name: Cornell-Dubilier
Project Number: 2-274
RFW Contact: Scott Grossman Phone: 908-321-4200

No: 07727

SHEET NO. 1 OF 1

6/19/97

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Dioxin/PCB	TAL	% Liquid	% Solid
117	A1-CC-1	Area 1	X	6-17-97	1	foil/0°C	X	X	X	X
118	A1-CC-2	Area 1	X	6-17-97	1	foil/0°C	X	X	X	X
119	A1-CC-3	Area 1	X	6-17-97	1	foil/0°C	X	X	X	X
120	A1-WS-1	Area 1	X	6-17-97	1	foil/0°C	X	X	X	X
121	A1-WS-2	Area 1	X	6-17-97	1	foil/0°C	X	X	X	X
122	A1-WS-3	Area 1	X	6-17-97	1	foil/0°C	X	X	X	X
123	A1-PS-1	Area 1	X	6-17-97	1	foil/0°C	X	X	X	X
124	A1-PS-2	Area 1	X	6-17-97	1	foil/0°C	X	X	X	X
125	A1-PS-3	Area 1	X	6-17-97	1	foil/0°C	X	X	X	X
126	A2-WS-1	Area 2	X	6-17-97	1	foil/0°C	X	X	X	X
127	A2-WS-2	Area 2	X	6-17-97	1	foil/0°C	X	X	X	X
128	A2-WS-3	Area 2	X	6-17-97	1	foil/0°C	X	X	X	X
129	A2-PS-1	Area 2	X	6-17-97	1	foil/0°C	X	X	X	X
130	A2-PS-2	Area 2	X	6-17-97	1	foil/0°C	X	X	X	X
DUP	~~A2-PS-3~~	~~Area 2~~								

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:
QC: None

Fish
X = Tissue

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	[illegible]	6/18/97	[illegible]	6/19/97	1530	All/Analysis	[illegible]	6/23/97	[illegible]	6/23/97	[illegible]

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2274-01
RFW Contact: Scott Grossman Phone: (908) 321-4200

No: 05340

SHEET NO. 1 OF 1

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TAL			
	B10486	A1-1	Sd	6-18-97	1	8oz glass/ 4°C	X			
	B10487	A1-2								
	B10488	A1-3								
	B10489	A1-4								
	B10490	A1-5								
	B10491	A1-6								
	B10492	A2-1 *		6-19-97						
	B10493	A2-2								
	B10494	A4-1								
	B10495	A4-2								
	B10496	A5-1								
	B10497	A5-2								
	B10498	A6-1 *								
	B10262	A6-2								
	B10263	~~A7-1~~ A7-1								
	B10264	A3-1		6-20-97						
	B10265	A9-1								
	B10266	A9-2								
	B10267	A3-2								

G370 0004
0329

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

*-MS/MSD

cooler # ~~9335~~ 4642

QC: Hand

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	Jennifer Royce	6/20/97									
									C Lyons	6/23/97	1530

FORM #4 8/94

REAC, son, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142*001-2274-01
RFW Contact: Scott Grossman Phone: (908) 321-4200

No: 05344

SHEET NO. 1 OF 1

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Ammonia	TPH		
–	H10486	A1-1	Sd	6-18-97		8oz glass/4°C	X			
–	H10262	A6-2		6-19-97						
–	H10494	A4-1								
–	H10493	A2-2								
–	H10497	A5-2								
	H10264	A3-1		6-20-97						
	H10265	A9-1		6-20-97						
–	I10493	A2-2		6-19-97				X		
–	I10494	A4-1		6-19-97						
–	I10486	A1-1		6-18-97						
–	I10497	A5-2		6-19-97						
	I10262	A6-2		6-19-97						
	I10264	A3-1		6-20-97						
	I10265	A9-1		6-20-97						
16	A10396	Field Blank		6-19-97			X	X		
	A10378	Field Blank	X	6-20-97	X	X	X	X		

G370 0002
0332

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

QC:

cooler #2329

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All / Analysis	Jennifer Roya	6/20/97									
									C. Rigon	6/23/97	15:00

FORM #4

REAC, ison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CH. OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2273-01
RFW Contact: Scott Grossman Phone: (908) 321-4200

No: 05338

SHEET NO. 1 OF 1

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TOC			
	F10486	A1-1	Sd	6-18-97	1	8oz glass/4°C	X			
	F10487	A1-2								
	F10488	A1-3								
	F10489	A1-4								
	F10490	A1-5								
	F10491	A1-6								
	F10492	A2-1		6-19-97						
	F10493	A2-2								
	F10494	A4-1								
	F10495	A4-2								
	F10496	A5-1								
	F10497	A5-2								
	F10498	A6-1								
	F10262	A6-2								
	F10263	A7-1								
	F10264	A3-1		6-20-97						
	F10265	A9-1								
	F10266	A9-2								
	F10267	A3-2								

G370 0001
0328

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

cooler #6363

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

QC: Gm

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All / Analysis	Jennifer Rojas	6/20/97									
									C. [illegible]	6/23/97	1500

FORM #4 8/94

REAC, I ...ion, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHA ...DY CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2279-01
RFW Contact: Scott Grossman Phone: (908) 321-4200

No: 05341

SHEET NO. 1 OF 1

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Pest/PCB
	D10486	A1-1	Sd	6-18-97	1	802 glass 4°C	X
	D10487	A1-2					
	D10488	A1-3					
	D10489	A1-4					
	D10490	A1-5					
	D10491	A1-6					
	D10492	A2-1 *		6-19-97			
	D10493	A2-2					
	D10494	A4-1					
	D10495	A4-2					
	D10496	A5-1					
	D10497	A5-2					
	D10498	A6-1 *					
0830	D10262	A6-2					
	D10263	A7-1					
	D10264	A3-1		6-20-97			
	D10265	A9-1					
	D10266	A9-2					
	D10267	A3-2					

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:
*-MS/MSD

coder #9385

QC: None

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	Jennifer Rose	6/20/97									

CRM 04

REAC ...son, NJ
(908) 321-4200
EPA Contract 68-C4-0022

C... Or CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2274-01
RFW Contact: Scott Grossman Phone: (908) 321-4200

No: 05342

SHEET NO. 1 OF 1

Sample Identification / **Analyses Requested**

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	BNA			
	C10486	A1-1	Sd	6-18-97	1	8oz glass/4°C	X			
	C10487	A1-2								
	C10488	A1-3								
	C10489	A1-4								
	C10490	A1-5								
	C10491	A1-6								
	C10492	A2-1 *		6-19-97						
	C10493	A2-2								
	C10494	A4-1								
	C10495	A4-2								
	C10496	A5-1								
	C10497	A5-2								
	C10498	A6-1 *								
	C10262	A6-2								
	C10263	A7-1								
	C10264	A3-1		6-20-97						
	C10265	A9-1								
	C10266	A9-2								
	C10267	A3-2								

G386 0002

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

* - MS/MSD

Cooler # 2376

QC: None

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	Jennifer Kaya	6/20/97									
									C Lyon	6/22/97	14:30

FORM #4 8/94

REAC, Ed , NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2274-01
RFW Contact: Scott Grossman Phone (908) 321-4200

No: 05345

SHEET NO. 1 OF 3

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	VOA
	E10486	A1-1	SD	6-18-97	1	4oz sterile 4°C	X
	E10487	A1-2					
	E10488	A1-3					
	E10489	A1-4					
	E10490	A1-5					
	E10491	A1-6					
	E10492	A2-1		6-19-97			
	E10493	A2-2		6-19-97			
7	E10264	A3-1		6-20-97			
8	E10267	A3-2		6-20-97	3*		
	E10494	A4-1		6-19-97	1		
	E10495	A4-2					
	E10496	A5-1					
	E10497	A5-2					
	E10498	A6-1					
	E10262	A6-2					
	E10263	A7-1					
9	E10265	A9-1		6-20-97	3*		
7	E10266	A9-2		6-20-97	3*		

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:
*-MS/MSD

cooler #9335

QC: None

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analyses	Jennifer Pope	6/20/97									
										6/20/97	15:15

REAC ...son, NJ
(908) 321-4200
EPA Contract 68-C4-0022

C... Or CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2274-01
RFW Contact: Scott Grossman Phone: (908) 321-4200

No: 05342

SHEET NO. 1 OF 1

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	RNA			
	C10486	A1-1	Sd	6-18-97	1	8oz glass/4°C	X			
	C10487	A1-2								
	C10488	A1-3								
	C10489	A1-4								
	C10490	A1-5								
	C10491	A1-6								
	C10492	A2-1 *		6-19-97						
	C10493	A2-2								
	C10494	A4-1								
	C10495	A4-2								
	C10496	A5-1								
	C10497	A5-2								
	C10498	A6-1 *								
	C10262	A6-2								
	C10263	A7-1								
	C10264	A3-1		6-20-97						
	C10265	A9-1								
	C10266	A9-2								
	C10267	A3-2								

G386 0002

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

* - MS/MSD

Cooler # 2376

QC: None

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	Jennifer Rapa	6/20/97									
									C Lyon	6/23/97	14:30

FORM #4 8/94

REAC, Ed ., NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Criswell Dubuque
Project Number: 2-274
RFW Contact: Scott Grossman Phone:

No: 07299

SHEET NO. 1 OF 1

61897

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Pest/PCB	TAL	% Lipid	% Moist
349	AS-PS-1	Area 5	X	6/17/97	1	foil/0°C	X	X	X	X
350	AS-PS-2	Area 5	X	↓	↓	↓	↓	↓	↓	↓
351	AS-PS-3	Area 5	X							
352	AS-LB-1	Area 5	↓							
353	AS-LB-2	Area 5								
354	AS-LB-3	Area 5								
355	AS-WS-1	Area 5								
356	AS-WS-2	Area 5								
357	AS-WS-3	Area 5	↓	↓	↓	↓	↓	↓	↓	↓

0335

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

x = fish filler

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	Mike Thorn	6/18/97	[illegible]	6/18/97	0824	All Analysis	[illegible]	6/20/97	[illegible]	6/20/97	9:30 AM
9 TAL											
9 Pest/PCB											

FORM #4

REAC, Ed[illegible], NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell - Dubilier
Project Number: 2274
RFW Contact: Scott Grossman Phone: 908-321-4200

No: 07728

SHEET NO. 1 OF ___

62397

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Pest/PCB	TAL	% Lipid	% Solid
388	A3-WS-1	Area 3	X	6-18-97	1	foil/°C	X	X	X	X
389	A3-WS-2	Area 3	X	6-18-97	1	foil/°C	X	X	X	X
390	A3-WS-3	Area 3	X	6-18-97	1	foil/°C	X	X	X	X
391	A3-PS-1	Area 3	X	6-18-97	1	foil/°C	X	X	X	X
392	A3-PS-2	Area 3	X	6-18-97	1	foil/°C	X	X	X	X
393	A3-PS-3	Area 3	X	6-18-97	1	foil/°C	X	X	X	X
394	R-WS-1	REF ~~Area 3~~ (HH)	X	6-18-97	1	foil/°C	X	X	X	X
395	R-WS-2	Ref ~~Area 3~~ DH	X	6-18-97	1	foil/°C	X	X	X	X
396	R-WS-3	Ref ~~Area 3~~ DH	X	6-18-97	1	foil/°C	X	X	X	X
397	R-CC-1	Ref ~~Area 3~~ DH	X	6-18-97	1	foil/0°C	X	X	X	X
398	R-CC-2	Ref ~~Area 3~~ DH	X	6-18-97	1	foil/0°C	X	X	X	X
399	R-CC-3	Ref ~~Area 3~~ (HH)	X	6-18-97	1	foil/0°C	X	X	X	X
400	A4PS-1	Area 4	X	6-18-97	1	foil/0°C	X	X	X	X
401	A4-PS-2	Area 4	X	6-18-97	1	foil/0°C	X	X	X	X
402	A4-PS-3	Area 4	X	6-18-97	1	foil/0°C	X	X	X	X

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

X = Tissue

QC: Hawn

Special Instructions:

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	[illegible]	6/19/97	[illegible]	6/19/97	12 [illegible]	All/Analysis	[illegible]	6/23/97	[illegible]	6/23/97	9:45 [illegible]

FORM #4 8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 0237-044-JO - 142-001 - 2274-01
RFW Contact: JOHN JOHNSON Phone: (908) 321-4200

No: 07729

SHEET NO. 1 OF 3

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TAL Metals PCB / PEST	% Lipid	% Moist	% DNA
	B10219	A3-1	T	18 June 1997	1	Foil / 0°C	✓	✓	✓	
	B10220	A3-2								
	B10221	A3-3								
	B10222	A3-12								✓
	B10223	A3-13								✓
	B10224	A3-14								✓
	B10225	A3-15								
	B10226	A3-16								
	B10227	A2-17								
	B10228	A3-18								
	B10229	A3-19								
	B10230	A3-Comp *								
0839	B10231	A2-10								
	B10232	A2-2								
	B10233	A2-3								✓
	B10234	A2-4								
	B10235	A2-5								
	B10236	~~A2-6~~ A2-11								
	B10237	A2-Comp *								
	B10238	A2-12	↓	↓	↓	↓	↓	↓	↓	

Matrix:
SD - Sediment
DS - Drum Solids
DL - Drum Liquids
X - Other
PW - Potable Water
GW - Groundwater
SW - Surface Water
SL - Sludge
S - Soil
W - Water
O - Oil
A - Air

T - Crayfish

Special Instructions:

* MS/MSD (COMPOSITE SAMPLE)

Analyze all samples for TAL Metals, PCB's, PEST's % MOIST, % LIPID AND SELECT SAMPLES FOR DNA'S

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ALL ANALYSIS	[signature]	6/21/97									

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2274-01
RFW Contact: JOHN JOHNSON Phone: (908)321-4200

No: 07730

SHEET NO. 2 OF 3

Sample Identification

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Analyses Requested: TAL METALS PCB/PEST	% Lipid	% Moist	BNA
	B10239	A 2-13	T	18 June 1997	1	Foil / 0°C	✓	✓	✓	
	B10240	A9-1								
	B10241	A9-2								✓
	B10242	A9-3								✓
	B10243	A9-4								
	B10244	A9-5								
	B10245	A9-6								
	B10246	A9-7								
	B10247	A9-9								
	B10248	A9-13		20 June 1997						✓
	B10249	A9-14								✓
	B10250	A9-COMP *		18 June 1997						
0340	B10268	A4-1								✓
	B10269	A4-2								
	B08628	A4-3								✓
	B08629	A4-4								
	B08630	A4-COMP *								
	B08631	A1-1		20 June 1997						✓
	B08632	A1-2								✓
	B08633	A5-1								✓

C366 0002

Matrix:
SD - Sediment
DS - Drum Solids
DL - Drum Liquids
X - Other
PW - Potable Water
GW - Groundwater
SW - Surface Water
SL - Sludge
S - Soil
W - Water
O - Oil
A - Air

T - Crayfish

Special Instructions: ANALYZE ALL SAMPLES FOR TAL METAL, PCB, PEST, % MOIST, % LIPID
* MS/MSD
+ Select samples for BNA

COOLER 9045

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ALL ANALYSIS	[signature]	6/21/97									
									C. Ford	6/24/97	9:25

FORM

8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 0334.142-001-2274-01
RFW Contact: JOHN JOHNSON Phone: (908) 321-4200

No: 07731

SHEET NO. 3 OF 3

Sample Identification

Analyses Requested

TAL METALS

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	PCB/PEST	%LIPID	%MOIST	BNA
	B08634	A5-2	T	20 June 1997	1	Foil / 0°C	✓	✓	✓	✓
	B08635	A5-3	↓	↓	↓	↓	↓	↓	↓	✓

0341

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

T CRAYFISH

Special Instructions:

Analyze all samples for TAL Metals PEST, PCB, %MOIST, %LIPID and select samples for BNAs

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ALL/ANA-V1A		6/21/97									

ANALYTICAL REPORT

Prepared by
Roy F. Weston, Inc.

Cornell Dubilier Site
South Plainfield, New Jersey

October, 1997

EPA Work Assignment No. 2-274
WESTON Work Order No. 03347-142-001-2274-01
EPA Contract No. 68-C4-0022

Submitted to
M. Sprenger
EPA-ERTC

S. Grossman — Date 10/30/97
Task Leader

V. Kansal — Date 10/31/97
Analytical Section Leader

E. Gilardi — Date 10/31/97
Program Manager

Analysis by:
REAC
APPL

Prepared by:
M. Bernick

Reviewed by:
M. Barkley

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Appendices will be furnished on request.

Introduction

REAC in response to WA #2-274, provided analytical support for environmental samples collected from the Cornell Dubilier Site located in South Plainfield, New Jersey as described in the following table. The support also included QA/C , data review, and preparation of an analytical report containing a summary of analytical methods, results, and QA/QC results.

The samples were treated with procedures consistent with those specified in SOP #1008.

Chain of Custody	Number of Samples	Sampling Date	Date Received	Matrix	Analysis	Laboratory
05350	20	8/06/97	8/07/97	Tissue	Pest/PCB, TAL Metals, %Lipid & %Solids	REAC
05351	13	8/06/97	8/07/97			
	1	6/17/97				
05369	20	8/06/97	8/07/97			
274-9001	8	8/07/97	8/08/97	Soil	BNA	
	3	8/08/97				
274-9002	8	8/07/97			TAL Metals	
	3	8/08/97				
274-9003	8	8/07/97			Pest/PCB	
	3	8/08/97				
274-9004	8	8/07/97			VOA	
	3	8/08/97				
274-9005	8	8/07/97			Grain Size	APPL
	2	8/08/97				
275-9006	8	8/07/97			TOC	
	2	8/08/97				

CASE NARRATIVE

Data Package G438 - VOC Analysis - Soil

In the continuing calibration of 8/08/97, the percent difference for acetone (38%) and 2-butanone (37%), exceeded acceptable QC limits. These compounds were not detected in the associated samples; the data are not affected.

CASE NARRATIVE (Cont)

Data Package G448 - BNA Analysis - Soil

The data was reviewed and found to be acceptable.

Data Package G465 - Pest/PCB - Soil

In the end of sequence calibration check of 8/27/97, the percent difference for g-BHC (38%), b-BHC (36%), heptachlor (68%), d-BHC (27%), heptachlor-epoxide (30%), g-chlordane (37%), a-chlordane (40%), endosulfan I (36%), DDE (35%), dieldrin (33%), endrin (55%), DDD (30%), endosulfan II (51%), endrin aldehyde (46%), endosulfan sulfate (41%), endrin ketone (91%), and DCBP (69%) exceeded acceptable QC limits. DDT and Methoxychlor were not recovered. Since this was an end of sequence calibration check, no samples were quantitated, and the data are not affected.

In the end of sequence calibration check of 9/05/97, the percent difference for aroclor 1254 peak 2 (29%), peak 2 (29%), peak 4 (39%), and Peak 5 (40%) exceeded acceptable QC limits. Since this was an end of sequence calibration check, no samples were quantitated, and the data are not affected.

The following samples had one surrogate recovery exceeding the QC limits: 2274-1004, 2274-1007, 2274-1008, 2274-1009, an 2275-1010; the data are not affected.

Arochlor 1254 results should be consider estimated due to the weathered (W) chromatograph patterns observed.

Data Package G472 - Pest/PCB - Tissue

The three latest eluting arochlor 1248 peaks used in quantitation exhibited interference which may be partially attributed to arochlor 1254. This is based on the analyst's observation of two small peaks consistently appearing in the arochlor 1254 calibrations at approximately the same time as arochlor 1248 peaks used for quantitation (retention times 12.812 and 13.59 min.). Therefore, the arochlor 1248 results maybe biased high. Consequently, all arochlor 1248 results were recalculated utilizing the first arochlor 1248 peak. The recalculated arochlor 1248 results are presented in a separate table along with th intital results.

Both arochlor 1248 and 1254 results should be consider estimated due to the weathered (W) chromatograph patterns observed.

The identification and quantitation of all target pesticides, with the exception of d-BHC and endosulfan sulfate, should be considered estimated due to the high levels of arochlor 1248 and 1252, matrix interference (MI), and in some cases the probable presence of technical grade chloridane

Sample BH-AS-1 holding time criteria was exceeded because the sample was archived during the initial site visit because th species was not schedualed for analysis, and later submitted past hold time criteria for analysis at the request of the work assignment manager. All detected analytes are considered estimated and all non-detected analytes are considered unusable.

In the continuing calibration of 8/15/97, the percent difference for heptachlor (30%) and endrin ketone (28%) exceeded acceptable QC limits. This compound was not detected in the associated samples; the data are not affected.

In the continuing calibration of 8/19/97, the percent difference for heptachlor (39%) exceeded acceptable QC limits. This compound was not detected in the associated samples; the data are not affected.

The following samples had one surrogate recovery exceeding the QC limits: CC-A12-1, CC-A12-3, BS-A12-2, BH-A12-1, A11-1, CC-A11-2, PS-A11-1, BS-A11-2, BS-A11-3, MBLK080997, WS-A12-1, CC-A10-1, CC-A10-2, WS-A10-3, CC-A13-1, WS-A13-1, WS-A14-1, and WS-A14-1MSD; the data are not affected.

The following samples had two surrogate recoveries exceeding the QC limits: CC-A12-2, CC-A11-3, WS-A11-3, PS-A11-2, BS-A11-1, BH-A11-1, PS-A13-1, BS-A10-1, BS-A10-2, WS-A13-2, WS-A13-3, BS-A13-2, WS-A14-3, PS-A14-1, PS-A14-2, CC-A10-2MS, CC-A10-2MSD, BS-A11-1MS, BS-A11-1MSD, BH-A11-2MS, BH-A11-2MSD, WS-A14-1MS, WS-A11-1MS WS-A11-1MSD, CC-A12-3MS, and CC-A12-3MSD; all results are considered estimated.

Data Package G461 - TAL Metals - Soil

The method blank contained zinc (2.6 mg/kg). The zinc results for sample C2274-1012 (field blank) should be considered estimated since the zinc concentration is less than five times the blank concentration.

The field blank (C2274-1012) contained aluminum (17 mg/kg), calcium (70 mg/kg), iron (100 mg/kg), manganese (0.71 mg/kg), and zinc (4.0 mg/kg); all associated samples C2274-1001, C2274-1002, C2274-1003, C2274-1004, C2274-1005, C22 1006, C2274-1007, C2274-1008, C2274-1009, C2274-1010, had concentrations of these analytes greater than five times the field blank concentrations.

Data Package G467 - TAL Metals - Tissue

The mercury analysis holding time was exceeded for sample BH-A5-1; the mercury result is considered estimated.

The carbon dioxide blank contained aluminum (0.0039 mg/sample), calcium (0.016 mg/sample), chromium (0.00056 mg/sample), copper (0.003 mg/sample), iron (0.0054 mg/sample), nickel (0.0046 mg/sample), sodium (0.068mg/sample) an zinc (0.0016 mg/sample); associated samples BH-A12-1, CC-A10-3, WS-A10-1, WS-A10-2, WS-A10-3, BS-A10-1, BS-A10-2, BS-A10-3, PS-A10-1, PS-A10-2, CC-A13-1, PS-A13-1, PS-A13-2, WS-A13-1, WS-A13-2, WS-A13-3, BS-A13-1, BS-A13-2, BH-A5-1, WS-A14-1, WS-A14-2, WS-A14-3, BS-A14-1, BH-A14-1, PS-A14-1, and PS-A14-2 had aluminum, calcium, chromium, copper, iron, nickel, sodium, and zinc results either not detected or concentrations greater than five times the carbon dioxide blank concentrations.

Data Package G462 - TAL Metals - Tissue

The data was reviewed and found to be acceptable.

Data Package G459 - TOC and Grain Size

The data was reviewed and found to be acceptable.

Summary of Abbreviations

AA	Atomic Absorption
B	The analyte was found in the blank
BFB	Bromofluorobenzene
BPQL	Below the Practical Quantitation Limit
BS	Blank Spike
BSD	Blank Spike Duplicate
C	Centigrade
D	(Surrogate and MS/MSD Table) this value is from a diluted sample and was not calculated (Result Table) this result was obtained from a diluted sample
Dioxin	Denotes Polychlorinated Dibenzo-p-dioxins and Polychlorinated Dibenzofurans and/or PCDD and PCDF
CLP	Contract Laboratory Protocol
COC	Chain of Custody
CONC	Concentration
CRDL	Contract Required Detection Limit
CRQL	Contract Required Quantitation Limit
DFTPP	Decafluorotriphenylphosphine
DL	Detection Limit
E	The value is greater than the highest linear standard and is estimated
EMPC	Estimated maximum possible concentration
ICAP	Inductively Coupled Argon Plasma
ISTD	Internal Standard
J	The value is below the method detection limit and is estimated
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MDL	Method Detection Limit
MI	Matrix Interference
MS	Matrix Spike
MSD	Matrix Spike Duplicate
MW	Molecular Weight
NA	either Not Applicable or Not Available
NC	Not Calculated
NR	Not Requested
NS	Not Spiked
% D	Percent Difference
% REC	Percent Recovery
PQL	Practical Quantitation Limit
PPBV	Parts per billion by volume
PPPA	Parts per billion in air
QL	Quantitation Limit
RPD	Relative Percent Difference
RSD	Relative Standard Deviation
SIM	Selected Ion Mode
TCLP	Toxic Characteristics Leaching Procedure
U	Denotes not detected
W	Weathered sample; the value should be regarded as estimated

m^3	cubic meter	kg	kilogram	µg	microgram
L	liter	g	gram	pg	picogram
mL	milliliter	mg	milligram		
µL	microliter				

* denotes a value that exceeds the acceptable QC limit

Abbreviations that are specific to a particular table are explained in footnotes on that table

Revision 3/5/97

The results are in Table 1.1; the tentatively identified compounds (TIC) are listed in Table 1.2. The concentration the analytes were calculated using the following equation:

$$C_u = \frac{A_x \times I_{is}}{A_{is} \times RF \text{ (or } RF_{ave}) \times V_o}$$

where

C_u = Concentration of target analyte (µg/L)
A_x = Area of the target analyte
I_{is} = mass of specific internal standard (ng)
A_{is} = Area of the specific internal standard
RF = Response Factor
RF_{ave} = average Response Factor
V_o = Volume of sample purged (mL), taking into account dilutions

The average Response Factor is used when a sample is associated with an initial calibration curve. The Response Factor is used when a sample is associated with a continuing calibration curve.

Response Factor calculation:

The response factor (RF) for each specific analyte is quantitated based on the area response from the continuing calibration check as follows:

$$RF = \frac{A_c \times I_{is}}{A_{is} \times I_c}$$

where,

RF = Response factor for a specific analyte
A_c = Area of the analyte in the standard
I_{is} = Mass of the specific internal standard
A_{is} = Area of the specific internal standard
I_c = Mass of the analyte in the standard

$$RF_{ave} = \frac{RF_1 + \ldots + RF_n}{n}$$

and

n = number of Samples

Revision of 1/27/97

Analytical Procedure for VOC in Soil

A modified 524.2 method was used for the analysis of Volatile Organic Compounds in water. Samples were purged trapped, and desorbed to a GC/MS system. Prior to purging, the samples were spiked with a three component surrogate mixture consisting of toluene-d_8 , 4-bromofluorobenzene and 1,2-dichloroethane-d_4 and a three component internal standard mixture consisting of bromochloromethane, 1,4-difluorobenzene, and chlorobenzene-d_5 . The following conditions and parameters were utilized:

The purge and trap unit consisted of: A Tekmar concentrator (3000 series) equipped with an autosampler (Dynatech) and a trap consisting of a VOCARB 4000 (Supelco), which itself contained of four adsorbent beds: Carbopack B (graphitized carbon 60/80 mesh), Carbopack C (graphitized carbon 60/80 mesh), Carboxen-1000 (60/80 mesh), and Carboxen-1001 (60/80 mesh).

The purge and trap instrument conditions were:

Purge	10 min at 25° C
Dry Purge	2 min at 25° C
Desorb Preheat	230° C
Desorb	4 min at 230° C
Purge Flow Rate	40 mL/min
Bake	8 min at 250° C

A Hewlett Packard 5970 GC/MSD equipped with an RTE-A data system was used to analyze the data.

The instrument conditions were:

Column:	30 meter x 0.53mm ID, RTx-Volatiles (Restek Corp.) column with 3.0µm thickness.
Temperature:	5 min at 10° C 6° C/min to 140° C 0.1 min at 140° C 12° C/min to 160° C 5 min at 160° C
Flow Rate	Helium at 10 mL/min
GC/MS Interface	Glass jet separator with 30 mL/min helium make-up gas at 250° C.

GC/MS Interface:	Glass jet separator with 30 mL make-up gas at 250° C.
Mass Spectrometer:	Electron Impact Ionization at a nominal electron energy of 70 electron volts scanning from 35-300 amu at one scan/sec.

Computer: Preprogrammed to plot Extracted Ion Current Profile (EICP); capable of integrating ions and plotting abundances vs time or scan number. A library search (NBS-Wiley) for tentatively identified compounds was performed on samples.

The GC/MS system was calibrated using 6 VOC standards at 5, 20, 50, 100, 150, and 200 µg/L. Before analysis each day, the system was tuned with 50 ng BFB and passed a continuing calibration check when analyzing a 50 µg/L standard mixture in which the responses were evaluated by comparison to the average response of the calibration curve

Analytical Procedure for BNA in Soil

Extraction Procedure

Prior to extraction each sample was spiked with a six component surrogate mixture consisting of nitrobenzene-d_5, 2-fluorobiphenyl, terphenyl-d_{14}, phenol-d_5, 2-fluorophenol, and 2,4,6-tribromophenol. Thirty grams of sample was mixed with 30 g anhydrous sodium sulfate, and Soxhlet extracted for 16 hours with 300 mL of 1:1 acetone:methylene chloride. After the extracts were concentrated to 1.0 mL., they were spiked with an internal standard mixture consisting of 1,4-dichlorobenzene-d_4, naphthalene-d_8, acenaphthene-d_{10}, phenanthrene-d_{10}, chrysene-d_{12}, and perylene-d_{12}. Following this preparation, the extracts were analyzed.

Analysis Procedure

An HP 6890 Gas Chromatograph/Mass Spectrometer (GC/MSD), equipped with an autosampler and controlled by a Window-95 driven chemstation computer was used to analyze the samples.

The instrument conditions were:

Column	Restek Rtx-5 MS (crossbonded SE-54) 30 meter x 0.25mm ID, 0.50 µm film thickness
Injection Temperature	290° C
Transfer Temperature	290° C
Source Temperature	240° C
Analyzer Temperature	240° C
Temperature Program	50°C for 1 min 10° C/min to 305° C hold for 15 min
Splitless Injection	Pulsed Split time = 0.5 min.
Injection Volume	1 µL

The GC/MS system was calibrated using 5 BNA standard mixtures at 20, 50, 80, 120, and 160 µg/mL. Before analysis each day, the system was tuned with 50 ng decafluorotriphenylphosphine (DFTPP) passed a continuing calibration check when analyzing a 50 µg/mL standard mixture in which the responses were evaluated by comparison to the average response of the calibration curve.

The BNA results, based on dry weight, are listed in Table 1.3; the tentatively identified compounds are listed in Table 1.4.

The concentration of the detected compounds was calculated using the following equation:

$$C_u = \frac{DF \times A_u \times I_{is} \times V_t}{A_{is} \times RF(\text{ or } RF_{ave}) \times V_i \times W \times D}$$

where

C_u	=	Concentration of target analyte (µg/kg)
DF	=	Dilution Factor
A_u	=	Area of target analyte
I_{is}	=	Mass of specific internal standard (ng)
V_t	=	Volume of extract (µL)
A_{is}	=	Area of specific internal standard
RF	=	Response Factor (unitless)
RF_{ave}	=	average Response Factor
V_i	=	Volume of extract injected (µL)
W	=	Weight of sample (g)
D	=	Decimal per cent solids

The RF_{ave} is used when a sample is associated with an initial calibration curve. The RF is used when a sample is associated with a continuing calibration.

Response Factor calculation:

The RF for each specific analyte is quantitated based on the area response from the continuing calibration check as follows:

$$RF = \frac{A_c \times I_{is}}{A_{is} \times I_c}$$

where

RF	=	Response factor for a specific analyte
A_c	=	Area of the analyte in the standard
I_{is}	=	Mass of the specific internal standard
A_{is}	=	Area of the specific internal standard
I_c	=	Mass of the analyte in the standard

$$RF_{ave} = \frac{RF_1 + \ldots + RF_n}{n}$$

and

n = number of Samples

Revision of 7/08/94

Analytical Procedure for Pesticide/PCB in Soil

Extraction Procedure

The soil samples were extracted by the Soxhlet method. A thirty gram aliquot was spiked with a surrogate solution consisting of tetrachloro-m-xylene and decachlorobiphenyl, mixed with 30 g anhydrous sodium sulfate and Soxhlet extracted for 16 hours with 300 mL 1:1 hexane: acetone. The extract was concentrated to 5 mL.

Gas Chromatographic Analysis

The extract was analyzed for pesticides and PCBs using simultaneous dual column injections. The analysis was done on an HP 5890 GC/ECD, equipped with an HP7673A automatic sampler, and controlled with an HP-ChemStation. The following conditions were employed:

First Column	DB-608, 30 meter, 0.32mm fused silica capillary, 0.50 µm film thickness
Injector Temperature	200° C
Detector Temperature	325° C
Second Column	Rtx-CLPesticides, 30 meter, 0.32mm fused silica capillary, 0.50 µm film thickness
Injector Temperature	200° C
Detector Temperature	325° C
Temperature Program-(both columns)	70 ° C for 1 minute 30 °C/min to 150°C, 0.5 min at 150°C 8 °C/min to 275°C, 10 min at 275°C

The gas chromatographs were calibrated using 5 pesticide standards at 20, 50, 100, 200, and 500 µg/L. The results from each mixture were used to calculate the response factor (RF) of each analyte and the average Response Factor was used to calculate the concentration of pesticide in the sample. Quantification was based on the DB-608 column (signal 1) and the identity of the analyte was confirmed using the Rtx-CLPesticides column (signal 2). A fingerprint chromatogram was run using each of the seven Aroclor mixtures and toxaphene; calibration curves were run only if a particular Aroclor or toxaphene was found in the sample.

The pesticide/PCB results, listed in Table 1.5, are calculated by using the following formula:

$$C_u = \frac{DF x A_u x V_t}{RF_{ave} x V_i x W x D}$$

where

C_u = Concentration of analyte (μg/kg)
DF = Dilution Factor
A_u = Area or peak height
V_t = Volume of sample (mL)
RF_{ave} = Average response factor
V_i = Volume of extract injected (μL)
W = Weight of sample (g)
D = Decimal percent solids

Response Factor calculation:

The RF for each specific analyte is quantitated based on the area response from the continuing calibration check as follows:

$$RF = \frac{A_u}{total\ pg\ injected}$$

where

A_u = Area or peak height

and

$$RF_{ave} = \frac{RF_1 + \ldots + RF_n}{n}$$

where

n = number of samples

Revision 7/23/97

Analytical Procedure for Pesticides and PCBs in Tissue

Extraction Procedure

The entire sample was homogenized with dry ice using a variable speed laboratory blender. After homogenization was completed, the contents of the blender, (tissue or vegetation and dry ice) were quantitatively transferred to clean jars and the dry ice was allowed to sublime overnight in a freezer at -10° C. Homogenization of tissue or vegetation mass greater than 20 grams was carried out in several steps. Smaller insects were cut apart prior to extraction. Sample extraction, percent lipids, and percent solids were performed according to ERTC/REAC SOP 1822, Rev. 0.0, 11/28/94.

Gas Chromatographic Analysis

The extract was analyzed for pesticides and PCBs using simultaneous dual column injections. A surrogate mixture consisting of tetrachloro-m-xylene and decachlorobiphenyl was added. The analysis was done on an HP 5890 GC/ECD system, equipped with an HP 7673A automatic sampler, and controlled with an HP-CHEM STATION. The following conditions were employed:

First Column	DB-608, 30 meter, 0.32mm fused silica capillary, 0.50µm film thickness
Injector Temperature	250° C
Detector Temperature	325° C
Temperature Program	150°C for 1 minute 7°C/min to 265°C 18 min at 265°
Second Column	RTxCLPest, 30 meter, 0.32mm fused silica capillary, 0.50µm film thickness
Injector Temperature	250° C
Detector Temperature	325° C
Temperature Program	150° C for 1 minute 7°C/min to 265°C 18 min at 265°

The gas chromatographs were calibrated using 5 pesticide standards at 20, 50, 100, 200, and 500µg/L. The results from each mixture were used to calculate the response factor (RF) of each analyte and the average Response Factor was used to calculate the concentration of pesticide in the sample. Quantification was based on the DB-608 column (signal 1) and the identity of the analyte was confirmed using the RTxCLPest column (signal 2). A fingerprint chromatogram was run using each of the seven Aroclor mixtures; calibration curves were run only if a particular Aroclor was found in the sample.

The results, listed in Table 1.6, are calculated by using the following formula:

$$C_{ug/Kg} = \frac{A \times V_f \times DF}{RF_{ave} \times V \times W_s \times D}$$

where

A	= Area or Peak Height
V_f	= Volume of Extract (mL)
DF	= Dilution Factor
RF_{ave}	= Average Response Factor
V	= Volume injected (μL)
W	= Weight of Sample (g)
D	= Decimal percent solids

where

$$RF = \frac{A}{\text{total pg injected}}$$

$$RF_{ave} = \frac{RF_1 + \ldots + RF_n}{n}$$

and

A = Area of Peak
n = number of samples

The percent lipid results, also listed in Table 1.6, are calculated using the following equation:

$$\% \ Lipid = \frac{W_E \times V_E}{V_s \times W_S \times \frac{\% \ solids}{100}} \times 100$$

where: W_E = weight of residue after solvent evaporation, in grams
V_E = final volume of extract in mL
W_S = weight of sample extracted, in grams
V_S = volume of extract used in mL

The three latest eluting arochlor 1248 peaks used in quantitation exhibited interference which may be partially attributed to arochlor 1254. This is based on the analyst's observation of two small peaks consistently appearing in the arochlor 1254 calibrations at approximately the same time as arochlor 1248 peaks used for quantitation (retention times 12.812 and 13.5 min.). Therefore, the arochlor 1248 results may be biased high. Consequently, all arochlor 1248 results were recalculated utilizing only the first peak. The recalculated arochlor 1248 results are presented along with the initial results in Table 1.7.

Revision of 6/30/94

Analytical Procedure for TAL Metals in Soil

Sample Preparation

A representative 1-2 g (wet weight) sample, weighed to 0.01 g accuracy, was mixed with 10 mL 1:1 nitric acid, placed i a clean beaker and digested in nitric acid and hydrogen peroxide according to SW-846, Method 3050. The final reflux was either nitric acid or hydrochloric acid depending on the metals to be determined. After digestion, the samples were allowed to cool to room temperature and transferred to polyethylene bottles. The samples were analyzed for all metals, except mercury, by USEPA SW-846, Method 7000 (Atomic absorption) or Method 6010 Inductively Coupled Argon Plasma (ICAP) procedures.

A representative 0.5-0.6g (wet weight) sample was prepared and analyzed separately for mercury on a Varian SpectrAA-300 Atomic Absorption Spectrophotometer equipped with a Varian VGA-76 vapor gas analyzer according t SW-846, Method 7471.

A separate sample was weighed and dried for total solids determination. A reagent blank and a blank spike sample were carried through the sample preparation procedure for each analytical batch of samples processed. One matrix spike (MS) and one matrix spike duplicate (MSD) were analyzed for each analytical batch or every ten samples.

Analysis and Calculations

The AA and ICAP instruments were calibrated and operated according to SW-846, Method 7000/7471/6010 and the manufacturers operating instructions. After calibration, initial calibration verification (ICV), initial calibration blank (ICB) and quality control check standards were run to verify proper calibration. The continuing calibration verificatio (CCV) and continuing calibration blank (CCB) were run after every ten samples to assure proper operation during sample analysis.

The metal concentrations in solution, in micrograms per liter (µg/L) were taken from the read-out systems of the Atomic Absorption instuments. The results were converted to milligrams per kilogram (mg/kg) by correcting the reading for the sample weight and percent solids. The ICAP results were corrected for sample weight prior to instument read-out; the mg/kg instrument read-out was then corrected for percent solids.

Final concentrations, based on wet weight are given by:

$$\text{mg metal/kg sample} = [(A \times V)/W] \times DF \times CF$$

where: A = Insrument read-out (µg/L, AA; mg/kg,ICAP)
V = final volume of processed sample (mL,AA; 1.00 ICAP)
W = weight of sample (g,AA; 1.00 ICAP)
DF = Dilution Factor (1.00 for no dilution)
CF = conversion factor (0.001, AA; 1.00, ICAP)

For samples that required dilution to be within the instrument calibration range, DF is given by:

$$DF = (C+B)/C$$

where: B = acid blank matrix used for dilution (mL)
C = sample blank aliquot (mL)

Final concentrations, based on dry weight, are given by:

$$\text{mg/kg(dry basis)} = \text{mg/kg (wet)} \times [100/S]$$

where: S = percent solids

Results of the analyses are listed in Table 1.8.

Analytical Procedure for TAL Metals in Tissue

Sample Preparation

A representative 0.5 to 1.5 g (wet weight) sample, weighed to 0.01 g accuracy, was thoroughly mixed with 10 mL 1:1 nitric acid, placed in an acid rinsed Teflon container, and heated on a hot plate for 60-90 minutes at 60-65 °C. The container was capped with a Teflon lined cap, and digested in a CEM MDS-2100 microwave oven, which was programmed in different stages. After digestion, samples were allowed to cool to room temperature, and transferred to 50-mL volumetric flasks and diluted to 50 mL with ASTM Type II water. Samples were analyzed for all metals, except mercury, by USEPA SW-846, Method 7000 (Atomic absorption) or Method 6010 (Inductively Coupled Argon Plasma-ICAP) procedures.

A representative 0.5-0.6g (wet weight) sample, weighed to 0.01 g accuracy, was prepared and analyzed separately for mercury on a Varian SpectrAA-300 Atomic Absorption Spectrophotometer equipped with a Varian VGA-76 vapor gas analyzer according to SW-846, Method 7471.

A separate sample was weighed and dried for total solids determination. A reagent blank and a blank spike sample were carried through the sample preparation procedure for each batch of samples processed. One matrix spike (MS) and one matrix spike duplicate (MSD) were analyzed for each batch or for every ten samples.

Analysis and Calculations

The instruments were calibrated and operated according to SW-846, Method 7000/7471/6010 and the manufacturers operating instructions. After calibration, initial calibration verification (ICV), initial calibration blank (ICB) and quality control check standards were run to verify proper calibration. The continuing calibration verification (CCV) and continuing calibration blank (CCB) were run after every ten samples to assure proper operation during sample analysis.

The metal concentrations in solution, in micrograms per liter (µg/L) were taken from the read-out systems of the Atomic Absorption instuments. The results were converted to milligrams per kilogram (mg/kg) by correcting the reading for the sample weight and percent solids. The ICAP results were corrected for sample weight prior to instument read-out; the mg/kg instrument read-out was then corrected for percent solids.

Final concentrations, based on wet weight are given by:

$$\text{mg metal/kg sample} = [(A \times V)/W] \times DF \times CF$$

where:
A = Instrument read-out (µg/L, AA; mg/kg,ICAP)
V = final volume of processed sample (mL,AA; 1.00 ICAP)
W = weight of sample (g,AA; 1.00 ICAP)
DF = Dilution Factor (1.00 for no dilution)
CF = conversion factor (0.001, AA; 1.00, ICAP)

For samples that required dilution to be within the instrument calibration range, DF is given by:

$$DF = (C+B)/C$$

where: B = acid blank matrix used for dilution (mL), C = sample blank aliquot (mL)

Final concentrations, based on dry weight, are given by:

$$mg/kg(dry) = [mg/kg\ (wet) \times 100] / S$$

where: S = percent solids

Results are listed in Table 1 9.

Analytical Procedure for TOC in Soil

The total organic content (TOC) of the samples were determined by TOC (loss on ignition) AASHTO T267-86. The results are listed in Table 1.10.

Analytical Procedure for Grain Size

The grain size of the samples were determined by ASTM Method D422. The results are listed in Table 1.11.

Table 1.1 Results of the Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Site
Based on Dry Weight

SAMPLE # :	SAND BLANK		2274-1011		2274-1001		2274-1002		2274-1004	
LOCATION :			TB		A12-1		A12-2		A13-2	
COLLECTED :			08/08/97		08/07/97		08/07/97		08/07/97	
ANALYZED :	08/08/97		08/08/97		08/08/97		08/08/97		08/08/97	
DIL. FACT.:	1		1		1		1		1	
% SOLID :	100		100		77		72		69	
UNIT :	µg/kg		µg/kg		µg/kg		µg/kg		µg/kg	
COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL
Dichlorodifluoromethane	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Chloromethane	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Vinyl Chloride	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Bromomethane	U	2.0	U	2.0	U	2.6	U	2.8	U	2.9
Chloroethane	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Trichlorofluoromethane	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Acetone	U	2.0	U	2.0	U	2.6	U	2.8	U	2.9
1,1-Dichloroethene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Carbon Disulfide	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Methylene Chloride	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Methyl-tertiary-butylether	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
trans-1,2-Dichloroethene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
1,1-Dichloroethane	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
2-Butanone	U	4.0	U	4.0	U	5.2	U	5.6	U	5.8
2,2-Dichloropropane	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
cis-1,2-Dichloroethene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Chloroform	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
1,1-Dichloropropene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
1,2-Dichloroethane	U	1.0	U	1.0	U	1.3	U	1.4	2.7	1.4
1,1,1-Trichloroethane	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Carbon Tetrachloride	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Benzene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Trichloroethene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
1,2-Dichloropropane	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Dibromomethane	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Bromodichloromethane	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
cis-1,3-Dichloropropene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
trans-1,3-Dichloropropene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
1,1,2-Trichloroethane	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
1,3-Dichloropropane	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Dibromochloromethane	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
1,2-Dibromoethane	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Bromoform	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
4-Methyl-2-Pentanone	U	2.0	U	2.0	U	2.6	U	2.8	U	2.9
Toluene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
2-Hexanone	U	2.0	U	2.0	U	2.6	U	2.8	U	2.9
Tetrachloroethene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Chlorobenzene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
1,1,1,2-Tetrachloroethane	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Ethylbenzene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
p & m-Xylene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
o-Xylene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Styrene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Isopropylbenzene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
1,1,2,2-Tetrachloroethane	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
1,2,3-Trichloropropane	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Bromobenzene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
n-Propylbenzene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
2-Chlorotoluene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
4-Chlorotoluene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
1,3,5-Trimethylbenzene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
tert-Butylbenzene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
1,2,4-Trimethylbenzene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
sec-Butylbenzene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
1,3-Dichlorobenzene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
p-Isopropyltoluene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
1,4-Dichlorobenzene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
1,2-Dichlorobenzene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
n-Butylbenzene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
1,2-Dibromo-3-Chloropropane	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
1,2,4-Trichlorobenzene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Naphthalene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
Hexachlorobutadiene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4
1,2,3-Trichlorobenzene	U	1.0	U	1.0	U	1.3	U	1.4	U	1.4

RV0831

Table 1.1 (Cont) Results of the Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Site
Based on Dry Weight

SAMPLE # :	SAND BLANK	2274-1005	2274-1006	
LOCATION :		A14-1	A14-2	
COLLECTED :		08/07/97	08/07/97	
ANALYZED :	08/08/97	08/08/97	08/08/97	
DIL. FACT.:	1	1	1	
% SOLID :	100	63	78	
UNIT :	µg/kg	µg/kg	µg/kg	

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL
Dichlorodifluoromethane	U	1.0	U	1.6	U	1.3				
Chloromethane	U	1.0	U	1.6	U	1.3				
Vinyl Chloride	U	1.0	U	1.6	U	1.3				
Bromomethane	U	2.0	U	3.2	U	2.6				
Chloroethane	U	1.0	U	1.6	U	1.3				
Trichlorofluoromethane	U	1.0	U	1.6	U	1.3				
Acetone	U	2.0	U	3.2	U	2.6				
1,1-Dichloroethene	U	1.0	U	1.6	U	1.3				
Carbon Disulfide	U	1.0	U	1.6	U	1.3				
Methylene Chloride	U	1.0	U	1.6	U	1.3				
Methyl-tertiary-butylether	U	1.0	U	1.6	U	1.3				
trans-1,2-Dichloroethene	U	1.0	U	1.6	U	1.3				
1,1-Dichloroethane	U	1.0	U	1.6	U	1.3				
2-Butanone	U	4.0	U	6.3	U	5.1				
2,2-Dichloropropane	U	1.0	U	1.6	U	1.3				
cis-1,2-Dichloroethene	U	1.0	U	1.6	U	1.3				
Chloroform	U	1.0	U	1.6	U	1.3				
1,1-Dichloropropene	U	1.0	U	1.6	U	1.3				
1,2-Dichloroethane	U	1.0	U	1.6	U	1.3				
1,1,1-Trichloroethane	U	1.0	U	1.6	U	1.3				
Carbon Tetrachloride	U	1.0	U	1.6	U	1.3				
Benzene	U	1.0	U	1.6	U	1.3				
Trichloroethene	U	1.0	U	1.6	U	1.3				
1,2-Dichloropropane	U	1.0	U	1.6	U	1.3				
Dibromomethane	U	1.0	U	1.6	U	1.3				
Bromodichloromethane	U	1.0	U	1.6	U	1.3				
cis-1,3-Dichloropropene	U	1.0	U	1.6	U	1.3				
trans-1,3-Dichloropropene	U	1.0	U	1.6	U	1.3				
1,1,2-Trichloroethane	U	1.0	U	1.6	U	1.3				
1,3-Dichloropropane	U	1.0	U	1.6	U	1.3				
Dibromochloromethane	U	1.0	U	1.6	U	1.3				
1,2-Dibromoethane	U	1.0	U	1.6	U	1.3				
Bromoform	U	1.0	U	1.6	U	1.3				
4-Methyl-2-Pentanone	U	2.0	U	3.2	U	2.6				
Toluene	U	1.0	U	1.6	U	1.3				
2-Hexanone	U	2.0	U	3.2	U	2.6				
Tetrachloroethene	U	1.0	U	1.6	U	1.3				
Chlorobenzene	U	1.0	U	1.6	U	1.3				
1,1,1,2-Tetrachloroethane	U	1.0	U	1.6	U	1.3				
Ethylbenzene	U	1.0	U	1.6	U	1.3				
p & m-Xylene	U	1.0	U	1.6	U	1.3				
o-Xylene	U	1.0	U	1.6	U	1.3				
Styrene	U	1.0	U	1.6	U	1.3				
Isopropylbenzene	U	1.0	U	1.6	U	1.3				
1,1,2,2-Tetrachloroethane	U	1.0	U	1.6	U	1.3				
1,2,3-Trichloropropane	U	1.0	U	1.6	U	1.3				
Bromobenzene	U	1.0	U	1.6	U	1.3				
n-Propylbenzene	U	1.0	U	1.6	U	1.3				
2-Chlorotoluene	U	1.0	U	1.6	U	1.3				
4-Chlorotoluene	U	1.0	U	1.6	U	1.3				
1,3,5-Trimethylbenzene	U	1.0	U	1.6	U	1.3				
tert-Butylbenzene	U	1.0	U	1.6	U	1.3				
1,2,4-Trimethylbenzene	U	1.0	U	1.6	U	1.3				
sec-Butylbenzene	U	1.0	U	1.6	U	1.3				
1,3-Dichlorobenzene	U	1.0	U	1.6	U	1.3				
p-Isopropyltoluene	U	1.0	U	1.6	U	1.3				
1,4-Dichlorobenzene	U	1.0	U	1.6	U	1.3				
1,2-Dichlorobenzene	U	1.0	U	1.6	U	1.3				
n-Butylbenzene	U	1.0	U	1.6	U	1.3				
1,2-Dibromo-3-Chloropropane	U	1.0	U	1.6	U	1.3				
1,2,4-Trichlorobenzene	U	1.0	U	1.6	U	1.3				
Naphthalene	U	1.0	U	1.6	U	1.3				
Hexachlorobutadiene	U	1.0	U	1.6	U	1.3				
1,2,3-Trichlorobenzene	U	1.0	U	1.6	U	1.3				

RV0832

Table 1.1 (Cont) Results of the Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Site
Based on Dry Weight

SAMPLE # :	SAND BLANK		2274-1003		2274-1007		2274-1008		2274-1009	
LOCATION :			A13-1		A11-1		A11-2		A10-1	
COLLECTED :			08/07/97		08/07/97		08/07/97		08/08/97	
ANALYZED :	08/11/97		08/11/97		08/11/97		08/11/97		08/11/97	
DIL. FACT.:	1		1		1		1		1	
% SOLID :	100		54		61		67		66	
UNIT :	µg/kg		µg/kg		µg/kg		µg/kg		µg/kg	
COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL
Dichlorodifluoromethane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Chloromethane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Vinyl Chloride	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Bromomethane	U	2.0	U	3.7	U	3.3	U	3.0	U	3.0
Chloroethane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Trichlorofluoromethane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Acetone	U	2.0	31	3.7	8.1	3.3	33	3.0	10	3.0
1,1-Dichloroethene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Carbon Disulfide	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Methylene Chloride	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Methyl-tertiary-butylether	U	1.0	U	1.9	2.0	1.6	U	1.5	U	1.5
trans-1,2-Dichloroethene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
1,1-Dichloroethane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
2-Butanone	U	4.0	11	7.4	U	6.6	11	6.0	3.9 J	6.1
2,2-Dichloropropane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
cis-1,2-Dichloroethene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Chloroform	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
1,1-Dichloropropene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
1,2-Dichloroethane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
1,1,1-Trichloroethane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Carbon Tetrachloride	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Benzene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Trichloroethene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
1,2-Dichloropropane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Dibromomethane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Bromodichloromethane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
cis-1,3-Dichloropropene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
trans-1,3-Dichloropropene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
1,1,2-Trichloroethane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
1,3-Dichloropropane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Dibromochloromethane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
1,2-Dibromoethane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Bromoform	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
4-Methyl-2-Pentanone	U	2.0	U	3.7	U	3.3	U	3.0	U	3.0
Toluene	U	1.0	U	1.9	U	1.6	U	1.5	2.2	1.5
2-Hexanone	U	2.0	U	3.7	U	3.3	U	3.0	U	3.0
Tetrachloroethene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Chlorobenzene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
1,1,1,2-Tetrachloroethane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Ethylbenzene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
p & m-Xylene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
o-Xylene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Styrene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Isopropylbenzene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
1,1,2,2-Tetrachloroethane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
1,2,3-Trichloropropane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Bromobenzene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
n-Propylbenzene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
2-Chlorotoluene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
4-Chlorotoluene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
1,3,5-Trimethylbenzene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
tert-Butylbenzene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
1,2,4-Trimethylbenzene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
sec-Butylbenzene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
1,3-Dichlorobenzene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
p-Isopropyltoluene	U	1.0	U	1.9	1.0 J	1.6	U	1.5	U	1.5
1,4-Dichlorobenzene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
1,2-Dichlorobenzene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
n-Butylbenzene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
1,2-Dibromo-3-Chloropropane	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
1,2,4-Trichlorobenzene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Naphthalene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
Hexachlorobutadiene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5
1,2,3-Trichlorobenzene	U	1.0	U	1.9	U	1.6	U	1.5	U	1.5

RV0833

Table 1.1 (Cont) Results of the Analysis for VOC in Soil
WA # 2-274 Cornell Dubilier Site
Based on Dry Weight

SAMPLE #	:	SAND BLANK	2274-1010
LOCATION	:		A10-2
COLLECTED	:		08/08/97
ANALYZED	:	08/11/97	08/11/97
DIL. FACT.	:	1	1
% SOLID	:	100	44
UNIT	:	µg/kg	µg/kg

COMPOUND	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL	CONC.	MDL
Dichlorodifluoromethane	U	1.0	U	2.3						
Chloromethane	U	1.0	U	2.3						
Vinyl Chloride	U	1.0	U	2.3						
Bromomethane	U	2.0	U	4.5						
Chloroethane	U	1.0	U	2.3						
Trichlorofluoromethane	U	1.0	U	2.3						
Acetone	U	2.0	16	4.5						
1,1-Dichloroethene	U	1.0	U	2.3						
Carbon Disulfide	U	1.0	U	2.3						
Methylene Chloride	U	1.0	U	2.3						
Methyl-tertiary-butylether	U	1.0	U	2.3						
trans-1,2-Dichloroethene	U	1.0	U	2.3						
1,1-Dichloroethane	U	1.0	U	2.3						
2-Butanone	U	4.0	6.8 J	9.1						
2,2-Dichloropropane	U	1.0	U	2.3						
cis-1,2-Dichloroethene	U	1.0	U	2.3						
Chloroform	U	1.0	U	2.3						
1,1-Dichloropropene	U	1.0	U	2.3						
1,2-Dichloroethane	U	1.0	U	2.3						
1,1,1-Trichloroethane	U	1.0	U	2.3						
Carbon Tetrachloride	U	1.0	U	2.3						
Benzene	U	1.0	U	2.3						
Trichloroethene	U	1.0	U	2.3						
1,2-Dichloropropane	U	1.0	U	2.3						
Dibromomethane	U	1.0	U	2.3						
Bromodichloromethane	U	1.0	U	2.3						
cis-1,3-Dichloropropene	U	1.0	U	2.3						
trans-1,3-Dichloropropene	U	1.0	U	2.3						
1,1,2-Trichloroethane	U	1.0	U	2.3						
1,3-Dichloropropane	U	1.0	U	2.3						
Dibromochloromethane	U	1.0	U	2.3						
1,2-Dibromoethane	U	1.0	U	2.3						
Bromoform	U	1.0	U	2.3						
4-Methyl-2-Pentanone	U	2.0	U	4.5						
Toluene	U	1.0	92	2.3						
2-Hexanone	U	2.0	U	4.5						
Tetrachloroethene	U	1.0	U	2.3						
Chlorobenzene	U	1.0	U	2.3						
1,1,1,2-Tetrachloroethane	U	1.0	U	2.3						
Ethylbenzene	U	1.0	U	2.3						
p & m-Xylene	U	1.0	U	2.3						
o-Xylene	U	1.0	U	2.3						
Styrene	U	1.0	U	2.3						
Isopropylbenzene	U	1.0	U	2.3						
1,1,2,2-Tetrachloroethane	U	1.0	U	2.3						
1,2,3-Trichloropropane	U	1.0	U	2.3						
Bromobenzene	U	1.0	U	2.3						
n-Propylbenzene	U	1.0	U	2.3						
2-Chlorotoluene	U	1.0	U	2.3						
4-Chlorotoluene	U	1.0	U	2.3						
1,3,5-Trimethylbenzene	U	1.0	U	2.3						
tert-Butylbenzene	U	1.0	U	2.3						
1,2,4-Trimethylbenzene	U	1.0	U	2.3						
sec-Butylbenzene	U	1.0	U	2.3						
1,3-Dichlorobenzene	U	1.0	U	2.3						
p-Isopropyltoluene	U	1.0	4.6	2.3						
1,4-Dichlorobenzene	U	1.0	U	2.3						
1,2-Dichlorobenzene	U	1.0	U	2.3						
n-Butylbenzene	U	1.0	U	2.3						
1,2-Dibromo-3-Chloropropane	U	1.0	U	2.3						
1,2,4-Trichlorobenzene	U	1.0	U	2.3						
Naphthalene	U	1.0	U	2.3						
Hexachlorobutadiene	U	1.0	U	2.3						
1,2,3-Trichlorobenzene	U	1.0	U	2.3						

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Table 1. 2 Results of TIC for VOC in Soil
WA# 2-274 Cornell Dubilier Site

Sample # SAND BLANK Unit µg/kg

LabFile# B3882 Con. Factor 1

	CAS#	Compound	Q	RT	Conc
1		UNKNOWN SILOXANE		7.67	6
2		UNKNOWN SILOXANE		16.12	6
3					0
4					0
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1 0)

Table 1. 2 (Cont) Results of TIC for VOC in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1011 Unit µg/kg

LabFile# B3883 Con. Factor 1

	CAS#	Compound	Q	RT	Conc
1		UNKNOWN SILOXANE		16.15	6
2					0
3					0
4					0
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1 0)

Table 1. 2 (Cont) Results of TIC for VOC in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1001 Unit µg/kg

LabFile# B3884 Con. Factor 1.2987

	CAS#	Compound	Q	RT	Conc
1		UNKNOWN SILOXANE		16.14	12
2					0
3					0
4					0
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1.0)

Table 1. 2 (Cont) Results of TIC for VOC in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1002 Unit µg/kg

LabFile# B3885 Con. Factor 1.3889

	CAS#	Compound	Q	RT	Conc
1		UNKNOWN SILOXANE		16.14	8
2					0
3					0
4					0
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1 0)

Table 1. 2 (Cont) Results of TIC for VOC in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1004 Unit µg/kg

LabFile# B3887 Con. Factor 1.4493

	CAS#	Compound	Q	RT	Conc
1		NO PEAKS FOUND			0
2					0
3					0
4					0
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1 0)

Table 1. 2 (Cont) Results of TIC for VOC in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1005 Unit µg/kg

LabFile# B3888 Con. Factor 1.5873

	CAS#	Compound	Q	RT	Conc
1		UNKNOWN SILOXANE		16.16	14
2					0
3					0
4					0
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1 0)

Table 1. 2 (Cont) Results of TIC for VOC in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1006 Unit µg/kg

LabFile# B3889 Con. Factor 1.2821

	CAS#	Compound	Q	RT	Conc
1		UNKNOWN SILOXANE		16.15	15
2					0
3					0
4					0
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1.0)

Table 1. 2 (Cont) Results of TIC for VOC in Soil
WA# 2-274 Cornell Dubilier Site

Sample # SAND BLANK Unit µg/kg

LabFile# B3898 Con. Factor 1

	CAS#	Compound	Q	RT	Conc
1		UNKNOWN SILOXANE		16.15	14
2					0
3					0
4					0
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1.0)

Table 1. 2 (Cont) Results of TIC for VOC in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1003 Unit µg/kg

LabFile# B3899 Con. Factor 1.8519

	CAS#	Compound	Q	RT	Conc
1		UNKNOWN SILOXANE		16.14	24
2					0
3					0
4					0
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1.0)

Table 1. 2 (Cont) Results of TIC for VOC in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1007 Unit µg/kg

LabFile# B3900 Con. Factor 1.6393

	CAS#	Compound	Q	RT	Conc
1		NO PEAKS FOUND			0
2					0
3					0
4					0
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1 0)

Table 1. 2 (Cont) Results of TIC for VOC in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1008 Unit µg/kg

LabFile# B3901 Con. Factor 1 4925

	CAS#	Compound	Q	RT	Conc
1		UNKNOWN SILOXANE		16.16	12
2					0
3					0
4					0
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1 0)

Table 1. 2 (Cont) Results of TIC for VOC in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1009 Unit µg/kg

LabFile# B3902 Con. Factor 1.5385

	CAS#	Compound	Q	RT	Conc
1		NO PEAKS FOUND			0
2					0
3					0
4					0
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1.0)

Table 1. 2 (Cont) Results of TIC for VOC in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1010 Unit µg/kg

LabFile# B3903 Con. Factor 2.2727

	CAS#	Compound	Q	RT	Conc
1		NO PEAKS FOUND			0
2					0
3					0
4					0
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1.0)

Table 1.3 Results of the Analysis for BNA in Soil
WA# 2-274 Cornell Dubilier Site
(Based on Dry Weight)

Sample No	SBLK08119701	2274-1001	2274-1002	2274-1003	2274-1004
Sample Location	SOIL BLANK	A12-1	A12-2	A13-1	A13-2
GC/MS File Name	CD001	CD006	CD007	CD008	CD009
Matrix	Soil	Soil	Soil	Soil	Soil
Dilution Factor	1	1	5	5	5
% Solid	100	78	77	53	72

Compound Name	Conc. µg/kg	MDL µg/kg	Conc. µg/kg	MDL µg/kg	Conc. µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc. µg/kg	MDL µg/kg
Phenol	U	330	U	420	U	2200	U	3100	U	2300
bis(-2-Chloroethyl)Ether	U	330	U	420	U	2200	U	3100	U	2300
2-Chlorophenol	U	330	U	420	U	2200	U	3100	U	2300
1 3-Dichlorobenzene	U	330	U	420	U	2200	U	3100	U	2300
1,4-Dichlorobenzene	U	330	U	420	U	2200	U	3100	U	2300
Benzyl alcohol	U	330	U	420	U	2200	U	3100	U	2300
1,2-Dichlorobenzene	U	330	U	420	U	2200	U	3100	U	2300
2-Methylphenol	U	330	U	420	U	2200	U	3100	U	2300
bis(2-Chloroisopropyl)ether	U	330	U	420	U	2200	U	3100	U	2300
4-Methylphenol	U	330	U	420	U	2200	U	3100	U	2300
N-Nitroso-Di-n-propylamine	U	330	U	420	U	2200	U	3100	U	2300
Hexachloroethane	U	330	U	420	U	2200	U	3100	U	2300
Nitrobenzene	U	330	U	420	U	2200	U	3100	U	2300
Isophorone	U	330	U	420	U	2200	U	3100	U	2300
2-Nitrophenol	U	330	U	420	U	2200	U	3100	U	2300
2 4-Dimethylphenol	U	330	U	420	U	2200	U	3100	U	2300
bis(2-Chloroethoxy)methane	U	330	U	420	U	2200	U	3100	U	2300
2:4-Dichlorophenol	U	330	U	420	U	2200	U	3100	U	2300
1,2 4-Trichlorobenzene	U	330	U	420	U	2200	U	3100	U	2300
Naphthalene	U	330	U	420	U	2200	U	3100	U	2300
4-Chloroaniline	U	330	U	420	U	2200	U	3100	U	2300
Hexachlorobutadiene	U	330	U	420	U	2200	U	3100	U	2300
4-Chloro-3-methylphenol	U	330	U	420	U	2200	U	3100	U	2300
2-Methylnaphthalene	U	330	U	420	U	2200	U	3100	U	2300
Hexachlorocyclopentadiene	U	330	U	420	U	2200	U	3100	U	2300
2 4 6-Trichlorophenol	U	330	U	420	U	2200	U	3100	U	2300
2 4,5-Trichlorophenol	U	330	U	420	U	2200	U	3100	U	2300
2-Chloronaphthalene	U	330	U	420	U	2200	U	3100	U	2300
2-Nitroaniline	U	330	U	420	U	2200	U	3100	U	2300
Dimethylphthalate	U	330	U	420	U	2200	U	3100	U	2300
Acenaphthylene	U	330	U	420	U	2200	U	3100	U	2300
2 6-Dinitrotoluene	U	330	U	420	U	2200	U	3100	U	2300
3-Nitroaniline	U	330	U	420	U	2200	U	3100	U	2300
Acenaphthene	U	330	U	420	U	2200	U	3100	U	2300
2 4-Dinitrophenol	U	330	U	420	U	2200	U	3100	U	2300
4-Nitrophenol	U	330	U	420	U	2200	U	3100	U	2300
Dibenzofuran	U	330	U	420	U	2200	U	3100	U	2300
2,4-Dinitrotoluene	U	330	U	420	U	2200	U	3100	U	2300
Diethylphthalate	U	330	U	420	U	2200	U	3100	U	2300
4-Chlorophenyl-phenylether	U	330	U	420	U	2200	U	3100	U	2300
Fluorene	U	330	U	420	U	2200	U	3100	U	2300
4-Nitroaniline	U	330	U	420	U	2200	U	3100	U	2300
4,6-Dinitro-2-methylphenol	U	330	U	420	U	2200	U	3100	U	2300
N-Nitrosodiphenylamine	U	330	U	420	U	2200	U	3100	U	2300
4-Bromophenyl-phenylether	U	330	U	420	U	2200	U	3100	U	2300
Hexachlorobenzene	U	330	U	420	U	2200	U	3100	U	2300
Pentachlorophenol	U	330	U	420	U	2200	U	3100	U	2300
Phenanthrene	U	330	U	420	1600 (J)	2200	3500	3100	1500 (J)	2300
Anthracene	U	330	U	420	U	2200	U	3100	U	2300
Carbazole	U	330	U	420	U	2200	U	3100	U	2300
Di-n-butylphthalate	U	330	U	420	U	2200	U	3100	U	2300
Fluoranthene	U	330	U	420	3700	2200	6800	3100	3900	2300
Pyrene	U	330	U	420	3300	2200	6200	3100	3100	2300
Butylbenzylphthalate	U	330	U	420	U	2200	U	3100	U	2300
Benzo(a)anthracene	U	330	U	420	1700 (J)	2200	2500 (J)	3100	1500 (J)	2300
3,3'-Dichlorobenzidine	U	330	U	420	U	2200	U	3100	U	2300
Chrysene	U	330	U	420	1900 (J)	2200	3600	3100	1600 (J)	2300
Bis(2-Ethylhexyl)phthalate	U	330	U	420	1400 (J)	2200	U	3100	950 (J)	2300
Di-n-octylphthalate	U	330	U	420	U	2200	U	3100	U	2300
Benzo(b)fluoranthene	U	330	U	420	1700 (J)	2200	3200	3100	1200 (J)	2300
Benzo(k)fluoranthene	U	330	U	420	1700 (J)	2200	3300	3100	1200 (J)	2300
Benzo(a)pyrene	U	330	U	420	2100 (J)	2200	3500	3100	1400 (J)	2300
Indeno(1 2,3-cd)pyrene	U	330	U	420	1100 (J)	2200	2100 (J)	3100	U	2300
Dibenzo(a h)anthracene	U	330	U	420	U	2200	U	3100	U	2300
Benzo(g,h i)perylene	U	330	U	420	1200 (J)	2200	2300 (J)	3100	U	2300

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Table 1.3 (Cont) Results of the Analysis for BNA in Soil
WA# 2-274 Cornell Dubilier Site
(Results are Based on Dry Weight)

Sample No.	2274-1005		2274-1006		2274-1007		2274-1008		2274-1009	
Sample Location	A14-1		A14-2		A11-1		A11-2		A10-1	
GC/MS File Name	CD002		CD010		CD011		CD012		CD013	
Matrix	Soil		Soil		Soil		Soil		Soil	
Dilution Factor	1		1		5		5		5	
% Solid	66		81		79		70		65	
Compound Name	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
Phenol	U	500	U	410	U	2100	U	2300	U	2600
bis(-2-Chloroethyl)Ether	U	500	U	410	U	2100	U	2300	U	2600
2-Chlorophenol	U	500	U	410	U	2100	U	2300	U	2600
1 3-Dichlorobenzene	U	500	U	410	U	2100	U	2300	U	2600
1 4-Dichlorobenzene	U	500	U	410	U	2100	U	2300	U	2600
Benzyl alcohol	U	500	U	410	U	2100	U	2300	U	2600
1 2-Dichlorobenzene	U	500	U	410	U	2100	U	2300	U	2600
2-Methylphenol	U	500	U	410	U	2100	U	2300	U	2600
bis(2-Chloroisopropyl)ether	U	500	U	410	U	2100	U	2300	U	2600
4-Methylphenol	U	500	U	410	U	2100	U	2300	U	2600
N-Nitroso-Di-n-propylamine	U	500	U	410	U	2100	U	2300	U	2600
Hexachloroethane	U	500	U	410	U	2100	U	2300	U	2600
Nitrobenzene	U	500	U	410	U	2100	U	2300	U	2600
Isophorone	U	500	U	410	U	2100	U	2300	U	2600
2-Nitrophenol	U	500	U	410	U	2100	U	2300	U	2600
2 4-Dimethylphenol	U	500	U	410	U	2100	U	2300	U	2600
bis(2-Chloroethoxy)methane	U	500	U	410	U	2100	U	2300	U	2600
2 4-Dichlorophenol	U	500	U	410	U	2100	U	2300	U	2600
1,2,4-Trichlorobenzene	U	500	U	410	U	2100	U	2300	U	2600
Naphthalene	U	500	U	410	U	2100	970 (J)	2300	U	2600
4-Chloroaniline	U	500	U	410	U	2100	U	2300	U	2600
Hexachlorobutadiene	U	500	U	410	U	2100	U	2300	U	2600
4-Chloro-3-methylphenol	U	500	U	410	U	2100	U	2300	U	2600
2-Methylnaphthalene	U	500	U	410	U	2100	U	2300	U	2600
Hexachlorocyclopentadiene	U	500	U	410	U	2100	U	2300	U	2600
2 4 6-Trichlorophenol	U	500	U	410	U	2100	U	2300	U	2600
2,4,5-Trichlorophenol	U	500	U	410	U	2100	U	2300	U	2600
2-Chloronaphthalene	U	500	U	410	U	2100	U	2300	U	2600
2-Nitroaniline	U	500	U	410	U	2100	U	2300	U	2600
Dimethylphthalate	U	500	U	410	U	2100	U	2300	U	2600
Acenaphthylene	U	500	U	410	U	2100	3100	2300	U	2600
2 6-Dinitrotoluene	U	500	U	410	U	2100	U	2300	U	2600
3-Nitroaniline	U	500	U	410	U	2100	U	2300	U	2600
Acenaphthene	U	500	U	410	U	2100	U	2300	U	2600
2 4-Dinitrophenol	U	500	U	410	U	2100	U	2300	U	2600
4-Nitrophenol	U	500	U	410	U	2100	U	2300	U	2600
Dibenzofuran	U	500	U	410	U	2100	U	2300	U	2600
2,4-Dinitrotoluene	U	500	U	410	U	2100	U	2300	U	2600
Diethylphthalate	U	500	U	410	U	2100	U	2300	U	2600
4-Chlorophenyl-phenylether	U	500	U	410	U	2100	U	2300	U	2600
Fluorene	U	500	U	410	U	2100	U	2300	U	2600
4-Nitroaniline	U	500	U	410	U	2100	U	2300	U	2600
4,6-Dinitro-2-methylphenol	U	500	U	410	U	2100	U	2300	U	2600
N-Nitrosodiphenylamine	U	500	U	410	U	2100	U	2300	U	2600
4-Bromophenyl-phenylether	U	500	U	410	U	2100	U	2300	U	2600
Hexachlorobenzene	U	500	U	410	U	2100	U	2300	U	2600
Pentachlorophenol	U	500	U	410	U	2100	U	2300	U	2600
Phenanthrene	U	500	U	410	2600	2100	5900	2300	1100 (J)	2600
Anthracene	U	500	U	410	U	2100	2100 (J)	2300	U	2600
Carbazole	U	500	U	410	U	2100	U	2300	U	2600
Di-n-butylphthalate	U	500	U	410	U	2100	U	2300	U	2600
Fluoranthene	U	500	200 (J)	410	5400	2100	16000	2300	2300 (J)	2600
Pyrene	U	500	180 (J)	410	5000	2100	15000	2300	2100 (J)	2600
Butylbenzylphthalate	U	500	U	410	U	2100	U	2300	U	2600
Benzo(a)anthracene	U	500	U	410	2200	2100	8300	2300	1000 (J)	2600
3,3 Dichlorobenzidine	U	500	U	410	U	2100	U	2300	U	2600
Chrysene	U	500	U	410	2800	2100	9400	2300	1400 (J)	2600
Bis(2-Ethylhexyl)phthalate	U	500	U	410	1200 (J)	2100	U	2300	870 (J)	2600
Di-n-octylphthalate	U	500	U	410	U	2100	U	2300	U	2600
Benzo(b)fluoranthene	U	500	U	410	2400	2100	11000	2300	1500 (J)	2600
Benzo(k)fluoranthene	U	500	U	410	2500	2100	9100	2300	1400 (J)	2600
Benzo(a)pyrene	U	500	140 (J)	410	3000	2100	13000	2300	1400 (J)	2600
Indeno(1,2,3-cd)pyrene	U	500	U	410	1400 (J)	2100	7500	2300	970 (J)	2600
Dibenzo(a,h)anthracene	U	500	U	410	U	2100	2400	2300	U	2600
Benzo(g,h,i)perylene	U	500	U	410	1700 (J)	2100	9000	2300	1000 (J)	2600

Table 1.3 (Cont) Results of the Analysis for BNA in Soil
WA# 2-274 Cornell Dubilier Site
(Results are Based on Dry Weight)

Sample No	2274-1010		2274-1012	
Sample Location	A10-2		Field Blank	
GC/MS File Name	CD014		CD005	
Matrix	Soil		Soil	
Dilution Factor	5		1	
% Solid	47		100	
Compound Name	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
Phenol	U	3500	U	330
bis(-2-Chloroethyl)Ether	U	3500	U	330
2-Chlorophenol	U	3500	U	330
1,3-Dichlorobenzene	U	3500	U	330
1,4-Dichlorobenzene	U	3500	U	330
Benzyl alcohol	U	3500	U	330
1,2-Dichlorobenzene	U	3500	U	330
2-Methylphenol	U	3500	U	330
bis(2-Chloroisopropyl)ether	U	3500	U	330
4-Methylphenol	U	3500	U	330
N-Nitroso-Di-n-propylamine	U	3500	U	330
Hexachloroethane	U	3500	U	330
Nitrobenzene	U	3500	U	330
Isophorone	U	3500	U	330
2-Nitrophenol	U	3500	U	330
2,4-Dimethylphenol	U	3500	U	330
bis(2-Chloroethoxy)methane	U	3500	U	330
2,4-Dichlorophenol	U	3500	U	330
1,2,4-Trichlorobenzene	U	3500	U	330
Naphthalene	U	3500	U	330
4-Chloroaniline	U	3500	U	330
Hexachlorobutadiene	U	3500	U	330
4-Chloro-3-methylphenol	U	3500	U	330
2-Methylnaphthalene	U	3500	U	330
Hexachlorocyclopentadiene	U	3500	U	330
2,4,6-Trichlorophenol	U	3500	U	330
2,4,5-Trichlorophenol	U	3500	U	330
2-Chloronaphthalene	U	3500	U	330
2-Nitroaniline	U	3500	U	330
Dimethylphthalate	U	3500	U	330
Acenaphthylene	U	3500	U	330
2,6-Dinitrotoluene	U	3500	U	330
3-Nitroaniline	U	3500	U	330
Acenaphthene	U	3500	U	330
2,4-Dinitrophenol	U	3500	U	330
4-Nitrophenol	U	3500	U	330
Dibenzofuran	U	3500	U	330
2,4-Dinitrotoluene	U	3500	U	330
Diethylphthalate	U	3500	U	330
4-Chlorophenyl-phenylether	U	3500	U	330
Fluorene	U	3500	U	330
4-Nitroaniline	U	3500	U	330
4,6-Dinitro-2-methylphenol	U	3500	U	330
N-Nitrosodiphenylamine	U	3500	U	330
4-Bromophenyl-phenylether	U	3500	U	330
Hexachlorobenzene	U	3500	U	330
Pentachlorophenol	U	3500	U	330
Phenanthrene	4100	3500	U	330
Anthracene	U	3500	U	330
Carbazole	U	3500	U	330
Di-n-butylphthalate	U	3500	U	330
Fluoranthene	9300	3500	U	330
Pyrene	8200	3500	U	330
Butylbenzylphthalate	U	3500	U	330
Benzo(a)anthracene	3900	3500	U	330
3,3-Dichlorobenzidine	U	3500	U	330
Chrysene	4900	3500	U	330
Bis(2-Ethylhexyl)phthalate	1600 (J)	3500	U	330
Di-n-octylphthalate	U	3500	U	330
Benzo(b)fluoranthene	5400	3500	U	330
Benzo(k)fluoranthene	5200	3500	U	330
Benzo(a)pyrene	5800	3500	U	330
Indeno(1,2,3-cd)pyrene	3200 (J)	3500	U	330
Dibenzo(a,h)anthracene	1300 (J)	3500	U	330
Benzo(g,h,i)perylene	3500	3500	U	330

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Table 1 4 Results of TIC for BNA in Soil
WA# 2-274 Cornell Dubilier Site

Sample # SBLK08119701 Unit µg/kg

LabFile# CD001 Con. Factor 33.3

	CAS#	Compound	Q	RT	Conc
1		Unknown		5.84	190
2		Alcohol		5.99	310
3		Alkene		7.13	160
4		Cycloalkane		7.28	130
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1.0)

Table 1. 4 (Cont) Results of TIC for BNA in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1001 Unit µg/kg
LabFile# CD006 Con. Factor 42.4

	CAS#	Compound	Q	RT	Conc
1		Unknown		5.83	200
2		Alcohol		5.99	330
3					
4					0
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1.0)

Table 1. 4 (Cont) Results of TIC for BNA in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1002 Unit µg/kg
LabFile# CD007 Con. Factor 215.0

	CAS#	Compound	Q	RT	Conc
1		PAH Compound		23.56	900
2		PAH Compound		29.22	1500
3					0
4					0
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1.0)

Table 1 4 (Cont) Results of TIC for BNA in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1003 Unit µg/kg
LabFile# CD008 Con. Factor 311.1

	CAS#	Compound	Q	RT	Conc
1		Unknown		16.16	4600
2		PAH Compound		20.72	1400
3		PAH Compound		23.56	2000
4		Pentachloro Biphenyl isomer		23.73	1300
5		Aldehyde		27.94	1300
6		PAH Compound		29.23	2900
7		Alkane		30.65	2000
8		Unknown		40.41	1800
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1 0)

Table 1. 4 (Cont) Results of TIC for BNA in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1004 Unit µg/kg
LabFile# CD009 Con. Factor 228.6

	CAS#	Compound	Q	RT	Conc
1		No TICs Found			
2					0
3					0
4					0
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1.0)

Table 1. 4 (Cont) Results of TIC for BNA in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1005 Unit µg/kg
LabFile# CD002 Con. Factor 50.4

	CAS#	Compound	Q	RT	Conc
1		Unknown		5.84	260
2		Alcohol		5.99	430
3		Unknown		25.27	700
4		Alcohol		26.81	360
5		Alkane		28.41	420
6		Unknown		30.03	260
7		Alkane		30.65	400
8		Unknown		32.95	230
9		Unknown		34.44	710
10		Unknown		34.96	240
11		Unknown		35.80	210
12		Unknown		37.39	220
13		Unknown		38.83	230
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1.0)

Table 1 4 (Cont) Results of TIC for BNA in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1006 Unit µg/kg
LabFile# CD010 Con Factor 41.0

	CAS#	Compound	Q	RT	Conc
1		Unknown		5.84	180
2		Alcohol		6.00	310
3		Unknown		28.42	380
4		Unknown		32.96	200
5					
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1 0)

Table 1 4 (Cont) Results of TIC for BNA in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1007 Unit µg/kg
LabFile# CD011 Con. Factor 211.2

	CAS#	Compound	Q	RT	Conc
1		PAH Compound		20.50	990
2		PAH Compound		20.72	1000
3		PAH Compound		23.56	1100
4		PAH Compound		29.22	2300
5		Unknown		30.65	1000
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1.0)

Table 1. 4 (Cont) Results of TIC for BNA in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1008 Unit µg/kg
LabFile# CD012 Con. Factor 232.4

	CAS#	Compound	Q	RT	Conc
1		PAH Compound		20.50	1600
2		PAH Compound		20.73	2900
3	84-65-1	9.10-Athracenedione	99	21.22	1400
4		Alkyl Phenanthrene isomer		21.82	1600
5		PAH Compound		23.29	2500
6		PAH Compound		23.56	6200
7		PAH Compound		23.71	2000
8		PAH Compound		23.82	2300
9		Benzo[b] naphtho thiophene isomer		25.08	1900
10		Unknown		25.16	1700
11		PAH Compound		25.21	1700
12		PAH Compound		25.97	2300
13		PAH Compound		26.65	2500
14		Unknown		26.90	1300
15		Unknown		26.99	2400
16		Unknown		27.94	2300
17		PAH Compound		28.71	3000
18		PAH Compound		29.24	8400
19		PAH Compound		29.67	2700
20		PAH Compound		34.51	1700

*Estimated Concentration (Response Factor = 1.0)

Table 1 4 (Cont) Results of TIC for BNA in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1009 Unit µg/kg
LabFile# CD013 Con. Factor 256.3

	CAS#	Compound	Q	RT	Conc
1	000057-10-3	Hexadecanoic acid	91	20.48	1200
2		Alkane		23.57	2400
3		Alkane		25.21	1600
4		Unknown		25.27	2400
5		Unknown		25.52	1300
6		Unknown		25.98	1300
7		Alkane		26.72	1400
8		Alcohol		26.81	1900
9		Aldehyde		27.92	2900
10		Unknown		28.54	4300
11		PAH Compound		29.22	1600
12		Aldehyde		30.04	2500
13		Alkane		30.64	2900
14		Unknown		30.89	2700
15		Aldehyde		32.96	2400
16		Unknown		37.40	1400
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1.0)

Table 1 4 (Cont) Results of TIC for BNA in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1010 Unit µg/kg
LabFile# CD015 Con. Factor 349.6

	CAS#	Compound	Q	RT	Conc
1	000057-10-3	Hexadecanoic acid	97	20.50	3300
2		PAH Compound		20.74	1800
3		PAH Compound		23.57	2500
4		Alkane		25.23	3800
5		Unknown		25.98	1500
6		Alkane		26.74	4100
7		Alcohol		26.82	2700
8		Unknown		26.92	1400
9		Unknown		27.01	2700
10		Alkane		27.54	1600
11		Aldehyde		27.95	6300
12		Alcohol		28.56	4700
13		Unknown		29.00	2300
14		PAH Compound		29.25	4700
15		Aldehyde		30.06	6300
16		Alkane		30.67	8800
17		Aldehyde		32.99	6000
18		Unknown		35.82	4300
19		Unknown		37.03	1800
20		Unknown		37.46	3600

*Estimated Concentration (Response Factor = 1.0)

Table 1 4 (Cont) Results of TIC for BNA in Soil
WA# 2-274 Cornell Dubilier Site

Sample # 2274-1012 Unit µg/kg
LabFile# CD005 Con Factor 33 4

	CAS#	Compound	Q	RT	Conc
1		Unknown		5.84	170
2		Alcohol		5.99	260
3		Alkyl alkene		7.13	130
4		Unknown		39.69	530
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0

*Estimated Concentration (Response Factor = 1 0)

Table 1.5 Results of the Analysis for Pesticide/PCB in Soil
WA# 2-274 Cornell Dubilier Site
Based on Dry-Weight

Client ID	SBLK08149701		2274-1001		2274-1002		2274-1003		2274-1004	
Location	-		A12-1		A12-2		A13-1		A13-2	
Percent Solid	100				77		53		72	
Analyte	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg	Conc µg/kg	MDL µg/kg
a-BHC	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
g-BHC	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
b-BHC	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
Heptachlor	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
d-BHC	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
Aldrin	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
Heptachlor Epoxide	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
g-Chlordane	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
a-Chlordane	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
Endosulfan (I)	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
p,p'-D D E	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
Dieldrin	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
Endrin	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
p,p'-D D D	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
Endosulfan (II)	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
p,p'-D D T	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
Endrin Aldehyde	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
Endosulfan Sulfate	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
Methoxychlor	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
Endrin Ketone	U	3.3	U	4.2	U	4.3	U	6.3	U	4.6
Toxaphene	U	83	U	110	U	110	U	160	U	120
Aroclor 1016	U	42	U	53	U	54	U	78	U	58
Aroclor 1221	U	83	U	110	U	110	U	160	U	120
Aroclor 1232	U	42	U	53	U	54	U	78	U	58
Aroclor 1242	U	42	U	53	U	54	U	78	U	58
Aroclor 1248	U	42	U	53	U	54	U	78	U	58
Aroclor 1254	U	42	30 W	53	250 W	54	11000 W	78	690 W	58
Aroclor 1260	U	42	U	53	U	54	U	78	U	58

Table 1.5 (Cont) Results of the Analysis for Pesticide/PCB in Soil
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Client ID	2274-1005		2274-1006		2274-1007		2274-1008		2274-1009	
Location	A14-1		A14-2		A11-1		A11-2		A10-1	
Percent Solid	66				79		70		65	
Analyte	Conc. µg/kg	MDL µg/kg	Conc. µg/kg	MDL µg/kg	Conc. µg/kg	MDL µg/kg	Conc. µg/kg	MDL µg/kg	Conc. µg/kg	MDL µg/kg
a-BHC	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
g-BHC	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
b-BHC	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
Heptachlor	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
d-BHC	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
Aldrin	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
Heptachlor Epoxide	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
g-Chlordane	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
a-Chlordane	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
Endosulfan (I)	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
p,p'-D D E	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
Dieldrin	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
Endrin	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
p,p'-D D D	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
Endosulfan (II)	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
p,p'-D D T	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
Endrin Aldehyde	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
Endosulfan Sulfate	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
Methoxychlor	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
Endrin Ketone	U	5.0	U	4.1	U	4.2	U	4.7	U	5.2
Toxaphene	U	130	U	100	U	100	U	120	U	130
Aroclor 1016	U	63	U	52	U	52	U	59	U	64
Aroclor 1221	U	130	U	100	U	100	U	120	U	130
Aroclor 1232	U	63	U	52	U	52	U	59	U	64
Aroclor 1242	U	63	U	52	U	52	U	59	U	64
Aroclor 1248	U	63	U	52	U	52	U	59	U	64
Aroclor 1254	U	63	U	52	1200 W	52	U	59	U	64
Aroclor 1260	U	63	U	52	U	52	U	59	U	64

Table 1.5 (Cont) Results of the Analysis for Pesticide/PCB in Soil
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Client ID	2274-1010		2274-1012	
Location	A10-2		Field Blank	
Percent Solid	47		100	
Analyte	Conc µg/kg	MDL µg/kg	Conc. µg/kg	MDL µg/kg
a-BHC	U	7.1	U	3.3
g-BHC	U	7.1	U	3.3
b-BHC	U	7.1	U	3.3
Heptachlor	U	7.1	U	3.3
d-BHC	U	7.1	U	3.3
Aldrin	U	7.1	U	3.3
Heptachlor Epoxide	U	7.1	U	3.3
g-Chlordane	U	7.1	U	3.3
a-Chlordane	U	7.1	U	3.3
Endosulfan (I)	U	7.1	U	3.3
p,p'-D D E	U	7.1	U	3.3
Dieldrin	U	7.1	U	3.3
Endrin	U	7.1	U	3.3
p,p'-D D D	U	7.1	U	3.3
Endosulfan (II)	U	7.1	U	3.3
p,p'-D D T	U	7.1	U	3.3
Endrin Aldehyde	U	7.1	U	3.3
Endosulfan Sulfate	U	7.1	U	3.3
Methoxychlor	U	7.1	U	3.3
Endrin Ketone	U	7.1	U	3.3
Toxaphene	U	180	U	84
Aroclor 1016	U	88	U	42
Aroclor 1221	U	180	U	84
Aroclor 1232	U	88	U	42
Aroclor 1242	U	88	U	42
Aroclor 1248	U	88	U	42
Aroclor 1254	U	88	U	42
Aroclor 1260	U	88	U	42

Table 1.6 Results of the Analysis for Pesticide/PCB in Tissue
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Client ID	MBLK 080897		CC-A12-1		CC-A12-2		CC-A12-3		BS-A12-2	
Location	N/A		A-12		A-12		A-12		A-12	
Percent Solid	100		35		25		23		20	
Percent Lipids	N/A		58		33		18		2	
Analyte	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg
a-BHC	U	4.0	U MI	11	U MI	15	U MI	16	U MI	20
g-BHC	U	4.0	U MI	11	U MI	15	U MI	16	U MI	20
b-BHC	U	4.0	U MI	11	U MI	15	U MI	16	U MI	20
Heptachlor	U	4.0	U MI	11	U MI	15	U MI	16	U MI	20
d-BHC	U	4.0	U	11	U	15	U	16	U	20
Aldrin	U	4.0	U MI	11	U MI	15	U MI	16	U MI	20
Heptachlor Epoxide	U	4.0	U MI	11	U MI	15	U MI	16	U MI	20
g-Chlordane	U	4.0	U MI	11	U MI	15	U MI	16	U MI	20
a-Chlordane	U	4.0	U MI	11	480 E,MI	15	270 MI	16	U MI	20
Endosulfan (I)	U	4.0	U MI	11	U MI	15	U MI	16	U MI	20
p,p'-D D E	U	4.0	U MI	11	U MI	15	U MI	16	61 MI	20
Dieldrin	U	4.0	U MI	11	U MI	15	U MI	16	U MI	20
Endrin	U	4.0	U MI	11	U MI	15	160 MI	16	U MI	20
p,p'-D D D	U	4.0	U MI	11	U MI	15	U MI	16	U MI	20
Endosulfan (II)	U	4.0	U MI	11	U MI	15	U MI	16	U MI	20
p,p'-D D T	U	4.0	U MI	11	U MI	15	U MI	16	U MI	20
Endrin Aldehyde	U	4.0	U MI	11	U MI	15	U MI	16	U MI	20
Endosulfan Sulfate	U	4.0	U	11	U	15	U	16	U	20
Methoxychlor	U	4.0	U MI	11	U MI	15	U MI	16	U MI	20
Endrin Ketone	U	4.0	U MI	11	U MI	15	U MI	16	U MI	20
Toxaphene	U	40	U MI	110	U MI	150	U MI	160	U MI	200
Aroclor 1016	U	20	U	57	U	73	U	82	U	98
Aroclor 1221	U	40	U	110	U	150	U	160	U	200
Aroclor 1232	U	20	U	57	U	73	U	82	U	98
Aroclor 1242	U	20	U	57	U	73	U	82	U	98
Aroclor 1248	U	20	22000 W	57	10000 W	73	5300 W	82	370 W	98
Aroclor 1254	U	20	120000 W	57	69000 W	73	52000 W	82	3600 W	98
Aroclor 1260	U	20	U	57	U	73	U	82	U	98

Table 1.6 (Cont) Results of the Analysis for Pesticide/PCB in Tissue
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Client ID	BH-A12-1			CC-A11-1			CC-A11-2			CC-A11-3			WS-A11-3		
Location	A-12			A-11			A-11			A-11			A-11		
Percent Solid	17			22			22			23			18		
Percent Lipids	6			17			11			21			6		
Analyte	µg/kg		MDL µg/kg	µg/kg		MDL µg/kg	µg/kg		MDL µg/kg	µg/kg		MDL µg/kg	µg/kg		MDL µg/kg
a-BHC	U	MI	24	U	MI	17	U	MI	17	U	MI	17	U	MI	21
g-BHC	U	MI	24	U	MI	17	U	MI	17	U	MI	17	U	MI	21
b-BHC	U	MI	24	U	MI	17	U	MI	17	U	MI	17	U	MI	21
Heptachlor	U	MI	24	U	MI	17	U	MI	17	U	MI	17	U	MI	21
d-BHC	U		24	U		17	U		17	U		17	U		21
Aldrin	U	MI	24	U	MI	17	U	MI	17	U	MI	17	U	MI	21
Heptachlor Epoxide	U	MI	24	U	MI	17	U	MI	17	U	MI	17	U	MI	21
g-Chlordane	U	MI	24	U	MI	17	U	MI	17	U	MI	17	U	MI	21
a-Chlordane	120	MI	24	300	MI	17	130	MI	17	390	E,MI	17	U	MI	21
Endosulfan (I)	U	MI	24	U	MI	17	U	MI	17	U	MI	17	U	MI	21
p,p'-D D E	80	MI	24	680	E,MI	17	140	MI	17	650	E,MI	17	67	MI	21
Dieldrin	U	MI	24	U	MI	17	U	MI	17	U	MI	17	U	MI	21
Endrin	U	MI	24	U	MI	17	U	MI	17	U	MI	17	U	MI	21
p,p'-D D D	U	MI	24	U	MI	17	U	MI	17	U	MI	17	U	MI	21
Endosulfan (II)	U	MI	24	U	MI	17	U	MI	17	U	MI	17	U	MI	21
p,p'-D D T	U	MI	24	U	MI	17	U	MI	17	U	MI	17	U	MI	21
Endrin Aldehyde	U	MI	24	U	MI	17	U	MI	17	U	MI	17	U	MI	21
Endosulfan Sulfate	U		24	U		17	U		17	U		17	U		21
Methoxychlor	U	MI	24	U	MI	17	U	MI	17	U	MI	17	U	MI	21
Endrin Ketone	U	MI	24	U	MI	17	U	MI	17	U	MI	17	U	MI	21
Toxaphene	U	MI	240	U	MI	170	U	MI	170	U	MI	170	U	MI	210
Aroclor 1016	U		120	U		87	U		86	U		84	U		110
Aroclor 1221	U		240	U		170	U		170	U		170	U		210
Aroclor 1232	U		120	U		87	U		86	U		84	U		110
Aroclor 1242	U		120	U		87	U		86	U		84	U		110
Aroclor 1248	710	W	120	8700	W	87	1400	W	86	7400	W	84	880	W	110
Aroclor 1254	3400	W	120	71000	W	87	6100	W	86	71000	W	84	5800	W	110
Aroclor 1260	U		120	U		87	U		86	U		84	U		110

Table 1.6 (Cont) Results of the Analysis for Pesticide/PCB in Tissue
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Client ID	PS-A11-1			PS-A11-2			BS-A11-1			BS-A11-2			BS-A11-3		
Location	A-11			A-11			A-11			A-11			A-11		
Percent Solid	20			20			19			21			21		
Percent Lipids	4			3			2			8			5		
Analyte	µg/kg		MDL µg/kg	µg/kg		MDL µg/kg	µg/kg		MDL µg/kg	µg/kg		MDL µg/kg	µg/kg		MDL µg/kg
a-BHC	U	MI	20	U	MI	20	U	MI	19	U	MI	19	U	MI	18
g-BHC	U	MI	20	U	MI	20	U	MI	19	U	MI	19	U	MI	18
b-BHC	U	MI	20	U	MI	20	U	MI	19	U	MI	19	U	MI	18
Heptachlor	U	MI	20	U	MI	20	U	MI	19	U	MI	19	U	MI	18
d-BHC	U		20	U		20	U		19	U		19	U		18
Aldrin	U	MI	20	U	MI	20	U	MI	19	U	MI	19	U	MI	18
Heptachlor Epoxide	U	MI	20	U	MI	20	U	MI	19	U	MI	19	U	MI	18
g-Chlordane	U	MI	20	U	MI	20	U	MI	19	U	MI	19	U	MI	18
a-Chlordane	U	MI	20	U	MI	20	U	MI	19	U	MI	19	U	MI	18
Endosulfan (I)	U	MI	20	U	MI	20	U	MI	19	U	MI	19	U	MI	18
p,p'-D D E	U	MI	20	U	MI	20	97	MI	19	270	MI	19	170	MI	18
Dieldrin	U	MI	20	U	MI	20	U	MI	19	U	MI	19	U	MI	18
Endrin	U	MI	20	U	MI	20	U	MI	19	U	MI	19	U	MI	18
p,p'-D D D	U	MI	20	U	MI	20	U	MI	19	160	MI	19	U	MI	18
Endosulfan (II)	U	MI	20	U	MI	20	U	MI	19	U	MI	19	U	MI	18
p,p'-D D T	U	MI	20	U	MI	20	U	MI	19	U	MI	19	U	MI	18
Endrin Aldehyde	U	MI	20	U	MI	20	U	MI	19	U	MI	19	U	MI	18
Endosulfan Sulfate	U		20	U		20	U		19	U		19	U		18
Methoxychlor	U	MI	20	U	MI	20	U	MI	19	U	MI	19	U	MI	18
Endrin Ketone	U	MI	20	U	MI	20	U	MI	19	U	MI	19	U	MI	18
Toxaphene	U	MI	200	U	MI	200	U	MI	190	U	MI	190	U	MI	180
Aroclor 1016	U		99	U		98	U		97	U		94	U		91
Aroclor 1221	U		200	U		200	U		190	U		190	U		180
Aroclor 1232	U		99	U		98	U		97	U		94	U		91
Aroclor 1242	U		99	U		98	U		97	U		94	U		91
Aroclor 1248	460	W	99	280	W	98	260	W	97	1900	W	94	920	W	91
Aroclor 1254	4200	W	99	2200	W	98	1600	W	97	14000	W	94	8900	W	91
Aroclor 1260	U		99	U		98	U		97	U		94	U		91

Table 1.6 (Cont) Results of the Analysis for Pesticide/PCB in Tissue
WA# 2-274 Cornell Dubilier
Based on Dry Weight

Client ID	BH-A11-1		BS-A10-3		PS-A10-1		PS-A10-2		PS-A13-1	
Location	A-11		A-10		A-10		A-10		A-13	
Percent Solid	17		20		20		19		19	
Percent Lipids	2		3		5		3		5	
Analyte	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg
a-BHC	U MI	23	U MI	20	U MI	20	U MI	20	U MI	21
g-BHC	U MI	23	U MI	20	U MI	20	U MI	20	U MI	21
b-BHC	U MI	23	U MI	20	U MI	20	U MI	20	U MI	21
Heptachlor	U MI	23	U MI	20	U MI	20	U MI	20	U MI	21
d-BHC	U	23	U	20	U	20	U	20	U	21
Aldrin	U MI	23	U MI	20	U MI	20	U MI	20	U MI	21
Heptachlor Epoxide	U MI	23	U MI	20	25 MI	20	U MI	20	U MI	21
g-Chlordane	U MI	23	U MI	20	U MI	20	U MI	20	U MI	21
a-Chlordane	U MI	23	U MI	20	U MI	20	U MI	20	U MI	21
Endosulfan (I)	U MI	23	U MI	20	U MI	20	U MI	20	U MI	21
p,p'-D D E	38 MI	23	37 MI	20	49 MI	20	29 MI	20	69 MI	21
Dieldrin	U MI	23	U MI	20	39 MI	20	U MI	20	U MI	21
Endrin	U MI	23	U MI	20	U MI	20	U MI	20	U MI	21
p,p'-D D D	U MI	23	U MI	20	59 MI	20	U MI	20	U MI	21
Endosulfan (II)	U MI	23	U MI	20	U MI	20	U MI	20	U MI	21
p,p'-D D T	U MI	23	U MI	20	U MI	20	U MI	20	U MI	21
Endrin Aldehyde	U MI	23	U MI	20	U MI	20	U MI	20	U MI	21
Endosulfan Sulfate	U	23	U	20	U	20	U	20	U	21
Methoxychlor	U MI	23	U MI	20	U MI	20	U MI	20	U MI	21
Endrin Ketone	U MI	23	U MI	20	U MI	20	U MI	20	U MI	21
Toxaphene	U MI	230	U MI	200	U MI	200	U MI	200	U MI	210
Aroclor 1016	U	120	U	98	U	99	U	98	U	100
Aroclor 1221	U	230	U	200	U	200	U	200	U	210
Aroclor 1232	U	120	U	98	U	99	U	98	U	100
Aroclor 1242	U	120	U	98	U	99	U	98	U	100
Aroclor 1248	320 W	120	120 W	98	230 W	99	120 W	98	530 W	100
Aroclor 1254	1100 W	120	470 W	98	1100 W	99	370 W	98	3800 W	100
Aroclor 1260	U	120	U	98	U	99	U	98	U	100

Table 1.6 (Cont) Results of the Analysis for Pesticide/PCB in Tissue
WA# 2-274 Cornell Dubilier
Based on Dry Weight

Client ID	PS-A13-2		BS-A13-1		BH-A5-1		BS-A14-1		MBLK 080997	
Location	A-13		A-13		A-5		A-14		N/A	
Percent Solid	21		19		20		20		100	
Percent Lipids	7		2		7		3		N/A	
Analyte	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg
a-BHC	U MI	19	U MI	21	U MI	20	U MI	19	U MI	4.0
g-BHC	U MI	19	U MI	21	U MI	20	U MI	19	U MI	4.0
b-BHC	U MI	19	U MI	21	U MI	20	U MI	19	U MI	4.0
Heptachlor	U MI	19	U MI	21	U MI	20	U MI	19	U MI	4.0
d-BHC	U	19	U	21	U	20	U	19	U	4.0
Aldrin	U MI	19	U MI	21	U MI	20	U MI	19	U MI	4.0
Heptachlor Epoxide	U MI	19	U MI	21	U MI	20	U MI	19	U MI	4.0
g-Chlordane	U MI	19	U MI	21	U MI	20	U MI	19	U MI	4.0
a-Chlordane	U MI	19	U MI	21	U MI	20	U MI	19	U MI	4.0
Endosulfan (I)	U MI	19	U MI	21	U MI	20	U MI	19	U MI	4.0
p,p'-D D E	69 MI	19	56 MI	21	220 MI	20	31 MI	19	U MI	4.0
Dieldrin	U MI	19	U MI	21	U MI	20	U MI	19	U MI	4.0
Endrin	U MI	19	U MI	21	U MI	20	U MI	19	U MI	4.0
p,p'-D D D	U MI	19	U MI	21	U MI	20	U MI	19	U MI	4.0
Endosulfan (II)	U MI	19	U MI	21	U MI	20	U MI	19	U MI	4.0
p,p'-D D T	U MI	19	U MI	21	U MI	20	U MI	19	U MI	4.0
Endrin Aldehyde	U MI	19	U MI	21	U MI	20	U MI	19	U MI	4.0
Endosulfan Sulfate	U	19	U	21	U	20	U	19	U	4.0
Methoxychlor	U MI	19	U MI	21	U MI	20	U MI	19	U MI	4.0
Endrin Ketone	U MI	19	U MI	21	U MI	20	U MI	19	U MI	4.0
Toxaphene	U MI	190	U MI	210	U MI	200	U MI	190	U MI	40
Aroclor 1016	U	94	U	100	U	99	U	95	U	20
Aroclor 1221	U	190	U	210	U	200	U	190	U	40
Aroclor 1232	U	94	U	100	U	99	U	95	U	20
Aroclor 1242	U	94	U	100	U	99	U	95	U	20
Aroclor 1248	470 W	94	320 W	100	1400 W	99	98 W	95	U	20
Aroclor 1254	3700 W	94	2600 W	100	8700 W	99	480 W	95	U	20
Aroclor 1260	U	94	U	100	U	99	U	95	U	20

Table 1.6 (Cont) Results of the Analysis for Pesticide/PCB in Tissue
WA# 2-274 Cornell Dubilier
Based on Dry Weight

Client ID	WS-A12-1		WS-A12-2		WS-A12-3		PS-A12-1		PS-A12-2	
Location	A-12		A-12		A-12		A-12		A-12	
Percent Solid	20		18		20		19		19	
Percent Lipids	10		9		9		4		4	
Analyte	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg
a-BHC	U MI	20	U MI	21	U MI	19	U MI	21	U MI	21
g-BHC	U MI	20	U MI	21	U MI	19	U MI	21	U MI	21
b-BHC	U MI	20	U MI	21	U MI	19	U MI	21	U MI	21
Heptachlor	U MI	20	U MI	21	U MI	19	U MI	21	U MI	21
d-BHC	U	20	U	21	U	19	U	21	U	21
Aldrin	U MI	20	U MI	21	U MI	19	U MI	21	U MI	21
Heptachlor Epoxide	U MI	20	U MI	21	U MI	19	U MI	21	U MI	21
g-Chlordane	U MI	20	U MI	21	U MI	19	U MI	21	U MI	21
a-Chlordane	130 MI	20	U MI	21	100 MI	19	U MI	21	U MI	21
Endosulfan (I)	U MI	20	U MI	21	U MI	19	U MI	21	U MI	21
p,p'-D D E	140 MI	20	230 MI	21	120 MI	19	51 MI	21	U MI	21
Dieldrin	U MI	20	U MI	21	U MI	19	U MI	21	U MI	21
Endrin	U MI	20	U MI	21	U MI	19	U MI	21	U MI	21
p,p'-D D D	U MI	20	U MI	21	U MI	19	U MI	21	U MI	21
Endosulfan (II)	U MI	20	U MI	21	U MI	19	U MI	21	U MI	21
p,p'-D D T	U MI	20	U MI	21	U MI	19	U MI	21	U MI	21
Endrin Aldehyde	U MI	20	U MI	21	U MI	19	U MI	21	U MI	21
Endosulfan Sulfate	U	20	U	21	U	19	U	21	U	21
Methoxychlor	U MI	20	U MI	21	U MI	19	U MI	21	U MI	21
Endrin Ketone	U MI	20	U MI	21	U MI	19	U MI	21	U MI	21
Toxaphene	U MI	200	U MI	210	U MI	190	U MI	210	U MI	210
Aroclor 1016	U	100	U	110	U	95	U	100	U	100
Aroclor 1221	U	200	U	210	U	190	U	210	U	210
Aroclor 1232	U	100	U	110	U	95	U	100	U	100
Aroclor 1242	U	100	U	110	U	95	U	100	U	100
Aroclor 1248	1400 W	100	1800 W	110	1500 W	95	270 W	100	300 W	100
Aroclor 1254	8000 W	100	13000 W	110	5800 W	95	4200 W	100	4200 W	100
Aroclor 1260	U	100	U	110	U	95	U	100	U	100

Table 1.6 (Cont) Results of the Analysis for Pesticide/PCB in Tissue
WA# 2-274 Cornell Dubilier
Based on Dry Weight

Client ID	PS-A12-3		BS-A12-1		WS-A11-1		WS-A11-2		PS-A11-3	
Location	A-12		A-12		A-11		A-11		A-11	
Percent Solid	19		18		19		16		19	
Percent Lipids	3		5		6		3		4	
Analyte	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg
a-BHC	U MI	20	U MI	22	U MI	21	U MI	24	U MI	21
g-BHC	U MI	20	U MI	22	U MI	21	U MI	24	U MI	21
b-BHC	U MI	20	U MI	22	U MI	21	U MI	24	U MI	21
Heptachlor	U MI	20	U MI	22	U MI	21	U MI	24	U MI	21
d-BHC	U	20	U	22	U	21	U	24	U	21
Aldrin	U MI	20	U MI	22	U MI	21	U MI	24	U MI	21
Heptachlor Epoxide	24 MI	20	U MI	22	U MI	21	U MI	24	U MI	21
g-Chlordane	U MI	20	U MI	22	U MI	21	U MI	24	U MI	21
a-Chlordane	U MI	20	U MI	22	120 MI	21	U MI	24	U MI	21
Endosulfan (I)	U MI	20	U MI	22	U MI	21	U MI	24	U MI	21
p,p'-D D E	58 MI	20	120 MI	22	170 MI	21	67 MI	24	29 MI	21
Dieldrin	U MI	20	U MI	22	U MI	21	U MI	24	U MI	21
Endrin	U MI	20	U MI	22	U MI	21	U MI	24	U MI	21
p,p'-D D D	U MI	20	U MI	22	U MI	21	U MI	24	U MI	21
Endosulfan (II)	U MI	20	U MI	22	U MI	21	U MI	24	U MI	21
p,p'-D D T	U MI	20	U MI	22	U MI	21	U MI	24	U MI	21
Endrin Aldehyde	U MI	20	U MI	22	U MI	21	U MI	24	U MI	21
Endosulfan Sulfate	U	20	U	22	U	21	U	24	U	21
Methoxychlor	U MI	20	U MI	22	U MI	21	U MI	24	U MI	21
Endrin Ketone	U MI	20	U MI	22	U MI	21	U MI	24	U MI	21
Toxaphene	U MI	200	U MI	220	U MI	210	U MI	240	U MI	210
Aroclor 1016	U	99	U	110	U	100	U	120	U	100
Aroclor 1221	U	200	U	220	U	210	U	240	U	210
Aroclor 1232	U	99	U	110	U	100	U	120	U	100
Aroclor 1242	U	99	U	110	U	100	U	120	U	100
Aroclor 1248	290 W	99	760 W	110	1300 W	100	370 W	120	260 W	100
Aroclor 1254	4300 W	99	7200 W	110	9100 W	100	8300 W	120	1400 W	100
Aroclor 1260	U	99	U	110	U	100	U	120	U	100

Table 1.6 (Cont) Results of the Analysis for Pesticide/PCB in Tissue
WA# 2-274 Cornell Dubilier
Based on Dry Weight

Client ID	BH-A11-2		BH-A11-3		CC-A10-1		CC-A10-2		CC-A10-3	
Location	A-11		A-11		A-10		A-10		A-10	
Percent Solid	18		19		30		23		21	
Percent Lipids	9		10		45		14		12	
Analyte	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg
a-BHC	U MI	21	U MI	21	U MI	13	U MI	17	U MI	18
g-BHC	U MI	21	U MI	21	U MI	13	U MI	17	U MI	18
b-BHC	U MI	21	U MI	21	U MI	13	U MI	17	U MI	18
Heptachlor	U MI	21	U MI	21	U MI	13	U MI	17	U MI	18
d-BHC	U	21	U	21	U	13	U	17	U	18
Aldrin	U MI	21	U MI	21	U MI	13	U MI	17	U MI	18
Heptachlor Epoxide	U MI	21	U MI	21	150 MI	13	54 MI	17	38 MI	18
g-Chlordane	U MI	21	U MI	21	540 E,MI	13	220 MI	17	170 MI	18
a-Chlordane	U MI	21	270 MI	21	830 E,MI	13	410 E,MI	17	350 MI	18
Endosulfan (I)	U MI	21	U MI	21	U MI	13	U MI	17	U MI	18
p,p'-D D E	140 MI	21	200 MI	21	380 E,MI	13	220 MI	17	210 MI	18
Dieldrin	U MI	21	U MI	21	190 MI	13	U MI	17	58 MI	18
Endrin	U MI	21	U MI	21	U MI	13	U MI	17	U MI	18
p,p'-D D D	U MI	21	U MI	21	330 E,MI	13	190 MI	17	190 MI	18
Endosulfan (II)	U MI	21	U MI	21	U MI	13	U MI	17	U MI	18
p,p'-D D T	U MI	21	U MI	21	U MI	13	U MI	17	U MI	18
Endrin Aldehyde	U MI	21	U MI	21	U MI	13	U MI	17	U MI	18
Endosulfan Sulfate	U	21	U	21	U	13	U	17	U	18
Methoxychlor	U MI	21	U MI	21	U MI	13	U MI	17	U MI	18
Endrin Ketone	U MI	21	U MI	21	U MI	13	U MI	17	U MI	18
Toxaphene	U MI	210	U MI	210	U MI	130	U MI	170	U MI	180
Aroclor 1016	U	110	U	100	U	65	U	84	U	91
Aroclor 1221	U	210	U	210	U	130	U	170	U	180
Aroclor 1232	U	110	U	100	U	65	U	84	U	91
Aroclor 1242	U	110	U	100	U	65	U	84	U	91
Aroclor 1248	900 W	110	1600 W	100	2000 W	65	570 W	84	280 W	91
Aroclor 1254	6100 W	110	9400 W	100	6700 W	65	3300 W	84	1800 W	91
Aroclor 1260	U	110	U	100	U	65	U	84	U	91

Table 1.6 (Cont) Results of the Analysis for Pesticide/PCB in Tissue
WA# 2-274 Cornell Dubilier
Based on Dry Weight

Client ID	WS-A10-1		WS-A10-2		WS-A10-3		BS-A10-1		BS-A10-2	
Location	A-10		A-10		A-10		A-10		A-10	
Percent Solid	20		19		20		21		20	
Percent Lipids	13		11		15		4		3	
Analyte	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg
a-BHC	U MI	19	U MI	20	U MI	20	U MI	18	U MI	19
g-BHC	U MI	19	U MI	20	U MI	20	U MI	18	U MI	19
b-BHC	U MI	19	U MI	20	U MI	20	U MI	18	U MI	19
Heptachlor	U MI	19	U MI	20	U MI	20	U MI	18	U MI	19
d-BHC	U	19	U	20	U	20	U	18	U	19
Aldrin	U MI	19	U MI	20	U MI	20	U MI	18	U MI	19
Heptachlor Epoxide	U MI	19	U MI	20	U MI	20	34 MI	18	U MI	19
g-Chlordane	200 MI	19	170 MI	20	180 MI	20	U MI	18	U MI	19
a-Chlordane	290 MI	19	370 MI	20	370 MI	20	U MI	18	U MI	19
Endosulfan (I)	U MI	19	U MI	20	U MI	20	U MI	18	U MI	19
p,p'-D D E	150 MI	19	160 MI	20	160 MI	20	73 MI	18	22 MI	19
Dieldrin	U MI	19	63 MI	20	U MI	20	U MI	18	U MI	19
Endrin	U MI	19	U MI	20	U MI	20	U MI	18	U MI	19
p,p'-D D D	U MI	19	U MI	20	U MI	20	U MI	18	U MI	19
Endosulfan (II)	U MI	19	U MI	20	U MI	20	U MI	18	U MI	19
p,p'-D D T	U MI	19	U MI	20	U MI	20	U MI	18	U MI	19
Endrin Aldehyde	U MI	19	U MI	20	U MI	20	U MI	18	U MI	19
Endosulfan Sulfate	U	19	U	20	U	20	U	18	U	19
Methoxychlor	U MI	19	U MI	20	U MI	20	U MI	18	U MI	19
Endrin Ketone	U MI	19	U MI	20	U MI	20	U MI	18	U MI	19
Toxaphene	U MI	190	U MI	200	U MI	200	U MI	180	U MI	190
Aroclor 1016	U	97	U	100	U	98	U	92	U	96
Aroclor 1221	U	190	U	200	U	200	U	180	U	190
Aroclor 1232	U	97	U	100	U	98	U	92	U	96
Aroclor 1242	U	97	U	100	U	98	U	92	U	96
Aroclor 1248	770 W	97	600 W	100	1000 W	98	370 W	92	98 W	96
Aroclor 1254	6400 W	97	3300 W	100	4600 W	98	6100 W	92	930 W	96
Aroclor 1260	U	97	U	100	U	98	U	92	U	96

Table 1.6 (Cont) Results of the Analysis for Pesticide/PCB in Tissue
WA# 2-274 Cornell Dubilier
Based on Dry Weight

Client ID	CC-A13-1		WS-A13-1		WS-A13-2		MBLK 081197		WS-A13-3	
Location	A-13		A-13		A-13		N/A		A-13	
Percent Solid	29		20		19		100		21	
Percent Lipids	39		8		16		N/A		10	
Analyte	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg
a-BHC	U MI	14	U MI	19	U MI	21	U MI	4.0	U MI	17
g-BHC	U MI	14	U MI	19	U MI	21	U MI	4.0	U MI	17
b-BHC	U MI	14	U MI	19	U MI	21	U MI	4.0	U MI	17
Heptachlor	U MI	14	U MI	19	U MI	21	U MI	4.0	U MI	17
d-BHC	U	14	U	19	U	21	U	4.0	U	17
Aldrin	U MI	14	U MI	19	U MI	21	U MI	4.0	U MI	17
Heptachlor Epoxide	U MI	14	U MI	19	U MI	21	U MI	4.0	U MI	17
g-Chlordane	U MI	14	120 MI	19	28 MI	21	U MI	4.0	U MI	17
a-Chlordane	U MI	14	U MI	19	U MI	21	U MI	4.0	85 MI	17
Endosulfan (I)	U MI	14	U MI	19	U MI	21	U MI	4.0	U MI	17
p,p'-D D E	U MI	14	130 MI	19	41 MI	21	U MI	4.0	89 MI	17
Dieldrin	U MI	14	U MI	19	U MI	21	U MI	4.0	U MI	17
Endrin	U MI	14	U MI	19	U MI	21	U MI	4.0	U MI	17
p,p'-D D D	U MI	14	U MI	19	23 MI	21	U MI	4.0	U MI	17
Endosulfan (II)	U MI	14	U MI	19	U MI	21	U MI	4.0	U MI	17
p,p'-D D T	U MI	14	U MI	19	U MI	21	U MI	4.0	U MI	17
Endrin Aldehyde	U MI	14	U MI	19	U MI	21	U MI	4.0	U MI	17
Endosulfan Sulfate	U	14	U	19	U	21	U	4.0	U	17
Methoxychlor	U MI	14	U MI	19	U MI	21	U MI	4.0	U MI	17
Endrin Ketone	U MI	14	U MI	19	U MI	21	U MI	4.0	U MI	17
Toxaphene	U MI	140	U MI	190	U MI	210	U MI	40	U MI	170
Aroclor 1016	U	69	U	94	U	110	U	20	U	87
Aroclor 1221	U	140	U	190	U	210	U	40	U	170
Aroclor 1232	U	69	U	94	U	110	U	20	U	87
Aroclor 1242	U	69	U	94	U	110	U	20	U	87
Aroclor 1248	11000 W	69	1200 W	94	380 W	110	U	20	2900 W	87
Aroclor 1254	95000 W	69	8000 W	94	640 W	110	U	20	6800 W	87
Aroclor 1260	U	69	U	94	U	110	U	20	U	87

Table 1.6 (Cont) Results of the Analysis for Pesticide/PCB in Tissue
WA# 2-274 Cornell Dubilier
Based on Dry Weight

Client ID	BS-A13-2		WS-A14-1		WS-A14-2		WS-A14-3		BH-A14-1	
Location	A-13		A-14		A-14		A-14		A-14	
Percent Solid	21		23		21		21		17	
Percent Lipids	4		20		21		10		3	
Analyte	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg	µg/kg	MDL µg/kg
a-BHC	U MI	18	U MI	16	U MI	19	U MI	18	U MI	24
g-BHC	U MI	18	U MI	16	U MI	19	U MI	18	U MI	24
b-BHC	U MI	18	U MI	16	U MI	19	U MI	18	U MI	24
Heptachlor	U MI	18	U MI	16	U MI	19	U MI	18	U MI	24
d-BHC	U	18	U	16	U	19	U	18	U	24
Aldrin	U MI	18	U MI	16	U MI	19	U MI	18	U MI	24
Heptachlor Epoxide	U MI	18	U MI	16	U MI	19	U MI	18	U MI	24
g-Chlordane	U MI	18	27 MI	16	U MI	19	40 MI	18	U MI	24
a-Chlordane	U MI	18	U MI	16	U MI	19	U MI	18	U MI	24
Endosulfan (I)	U MI	18	U MI	16	U MI	19	U MI	18	U MI	24
p,p'-D D E	57 MI	18	160 MI	16	120 MI	19	53 MI	18	27 MI	24
Dieldrin	U MI	18	U MI	16	U MI	19	U MI	18	U MI	24
Endrin	U MI	18	U MI	16	U MI	19	U MI	18	U MI	24
p,p'-D D D	U MI	18	54 MI	16	37 MI	19	26 MI	18	U MI	24
Endosulfan (II)	U MI	18	U MI	16	U MI	19	U MI	18	U MI	24
p,p'-D D T	U MI	18	U MI	16	U MI	19	U MI	18	U MI	24
Endrin Aldehyde	U MI	18	U MI	16	U MI	19	U MI	18	U MI	24
Endosulfan Sulfate	U	18	U	16	U	19	U	18	U	24
Methoxychlor	U MI	18	U MI	16	U MI	19	U MI	18	U MI	24
Endrin Ketone	U MI	18	U MI	16	U MI	19	U MI	18	U MI	24
Toxaphene	U MI	180	U MI	160	U MI	190	U MI	180	U MI	240
Aroclor 1016	U	90	U	80	U	93	U	91	U	120
Aroclor 1221	U	180	U	160	U	190	U	180	U	240
Aroclor 1232	U	90	U	80	U	93	U	91	U	120
Aroclor 1242	U	90	U	80	U	93	U	91	U	120
Aroclor 1248	280 W	90	330 W	80	230 W	93	280 W	91	140 W	120
Aroclor 1254	2700 W	90	1500 W	80	1500 W	93	1500 W	91	710 W	120
Aroclor 1260	U	90	U	80	U	93	U	91	U	120

Table 1.6 (Cont) Results of the Analysis for Pesticide/PCB in Tissue
WA# 2-274 Cornell Dubilier
Based on Dry Weight

Client ID	PS-A14-1			PS-A14-2		
Location	A-14			A-14		
Percent Solid	19			19		
Percent Lipids	4			4		
Analyte	µg/kg		MDL µg/kg	µg/kg		MDL µg/kg
a-BHC	U	MI	21	U	MI	21
g-BHC	U	MI	21	U	MI	21
b-BHC	U	MI	21	U	MI	21
Heptachlor	U	MI	21	U	MI	21
d-BHC	U		21	U		21
Aldrin	U	MI	21	U	MI	21
Heptachlor Epoxide	U	MI	21	U	MI	21
g-Chlordane	U	MI	21	U	MI	21
a-Chlordane	U	MI	21	U	MI	21
Endosulfan (I)	U	MI	21	U	MI	21
p,p'-D D E	32	MI	21	21	MI	21
Dieldrin	U	MI	21	U	MI	21
Endrin	U	MI	21	U	MI	21
p,p'-D D D	U	MI	21	U	MI	21
Endosulfan (II)	U	MI	21	U	MI	21
p,p'-D D T	U	MI	21	U	MI	21
Endrin Aldehyde	U	MI	21	U	MI	21
Endosulfan Sulfate	U		21	U		21
Methoxychlor	U	MI	21	U	MI	21
Endrin Ketone	U	MI	21	U	MI	21
Toxaphene	U	MI	210	U	MI	210
Aroclor 1016	U		100	U		100
Aroclor 1221	U		210	U		210
Aroclor 1232	U		100	U		100
Aroclor 1242	U		100	U		100
Aroclor 1248	160	W	100	150	W	100
Aroclor 1254	910	W	100	520	W	100
Aroclor 1260	U		100	U		100

Table 1.7 Summary of the Arochlor 1248 Conventionally Reported Results and Arochlor 1248 Results Based on Only the First Peak, in Tissue
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Sample #	Reported Results µg/kg	Results Based on First Peak µg/kg
BH-A5-1	1400 W	880 W
CC-A10-1	2000 W	1000 W
CC-A10-2	570 W	190 W
CC-A10-3	280 W	59 W
WS-A10-1	770 W	360 W
WS-A10-2	600 W	150 W
WS-A10-3	1000 W	460 W
BS-A10-1	370 W	150 W
BS-A10-2	98 W	22 W
BS-A10-3	120 W	39 W
PS-A10-1	230 W	42 W
PS-A10-2	120 W	32 W
CC-A11-1	8700 W	4800 W
CC-A11-2	1400 W	1100 W
CC-A11-3	7400 W	4000 W
WS-A11-1	1300 W	790 W
WS-A11-2	370 W	230 W
WS-A11-3	880 W	550 W
PS-A11-1	460 W	360 W
PS-A11-2	280 W	220 W
PS-A11-1	260 W	220 W
BS-A11-1	260 W	180 W
BS-A11-2	1900 W	1000 W
BS-A11-3	920 W	530 W
BH-A11-1	320 W	230 W
BH-A11-2	900 W	450 W
BH-A11-3	1600 W	650 W

Table 1.7 (Cont) Summary of the Arochlor 1248 Conventionally Reported Results and Arochlor 1248 Results Based on Only the First Peak, in Tissue
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Sample #	Reported Results µg/kg	Results Based on First Peak µg/kg
CC-A12-1	22000 W	12000 W
CC-A12-2	10000 W	5900 W
CC-A12-3	5300 W	2600 W
WS-A12-1	1400 W	820 W
WS-A12-2	1800 W	950 W
WS-A12-3	1500 W	1100 W
PS-A12-1	270 W	210 W
PS-A12-2	300 W	210 W
PS-A12-3	290 W	200 W
BS-A12-1	760 W	340 W
BS-A12-2	370 W	220 W
BH-A12-1	710 W	380 W
CC-A13-1	11000 W	6200 W
PS-A13-1	530 W	330 W
PS-A13-2	470 W	330 W
WS-A13-1	1200 W	540 W
WS-A13-2	380 W	260 W
WS-A13-3	2900 W	2800 W
BS-A13-1	320 W	210 W
BS-A13-2	280 W	140 W
WS-A14-1	330 W	190 W
WS-A14-2	230 W	98 W
WS-A14-3	280 W	110 W
BS-A14-1	98 W	39 W
BH-A14-1	140 W	41 W
PS-A14-1	160 W	57 W
PS-A14-2	150 W	61 W

Table 1.8 Results of the Analysis for TAL Metals in Soil
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Client ID		Method Blank		C2274-1001		C2274-1002		C2274-1003		C2274-1004		C2274-1005	
Location		Lab		A12-1		A12-2		A13-1		A13-2		A14-1	
% Solids		100		79		78		50		73		68	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	U	17	6700	13	4600	15	18000	22	3400	13	17000	17
Antimony	ICAP	U	6.0	U	4.5	U	5.3	U	7.8	U	4.4	U	5.8
Arsenic	AA-Fur	U	0.50	0.82	0.45	1.3	0.45	23	0.56	1.5	0.39	2.4	0.98
Barium	ICAP	U	0.60	62	0.45	43	0.53	320	0.78	62	0.44	230	0.58
Beryllium	ICAP	U	0.40	0.47	0.30	U	0.36	1.4	0.52	U	0.29	0.92	0.39
Cadmium	ICAP	U	0.50	U	0.38	0.76	0.44	3.4	0.65	1.4	0.37	U	0.49
Calcium	ICAP	U	50	1100	38	2400	44	3500	65	930	37	2500	49
Chromium	ICAP	U	0.50	12	0.38	12	0.44	24	0.65	12	0.37	35	0.49
Cobalt	ICAP	U	0.50	5.7	0.38	5.1	0.44	30	0.65	6	0.37	11	0.49
Copper	ICAP	U	0.90	13	0.68	23	0.80	120	1.2	38	0.66	12	0.88
Iron	ICAP	U	9.0	14000	6.8	12000	8.0	24000	12	8500	6.6	18000	8.8
Lead	ICAP	U	4.0	68	3.0	54	3.6	190	5.2	47	2.9	9.2	3.9
Magnesium	ICAP	U	50	2700	38	2400	44	3200	65	1300	37	3200	49
Manganese	ICAP	U	0.50	240	0.38	210	0.44	650	0.65	180	0.37	260	0.49
Mercury	Cold Vapor	U	0.04	0.04	0.04	U	0.04	0.36	0.05	0.05	0.03	0.04	0.04
Nickel	ICAP	U	1.0	13	0.76	13	0.89	46	1.3	15	0.74	18	0.97
Potassium	ICAP	U	200	920	150	530	180	1100	260	440	150	510	190
Selenium	AA-Fur	U	0.50	U	0.45	U	0.45	0.67	0.56	U	0.39	U	0.98
Silver	ICAP	U	0.50	U	0.38	U	0.44	1.7	0.65	0.6	0.37	U	0.49
Sodium	ICAP	U	50	62	38	180	44	160	65	74	37	93	49
Thallium	AA-Fur	U	0.50	U	0.45	U	0.45	U	0.56	U	0.39	U	0.49
Vanadium	ICAP	U	1.0	18	0.76	17	0.89	35	1.3	9.5	0.74	47	0.97
Zinc	ICAP	2.6	2.0	130	1.5	99	1.8	600	2.6	100	1.5	58	1.9

Table 1.8 (Cont) Results of the Analysis for TAL Metals in Soil
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Client ID		C2274-1006		C2274-1007		C2274-1008		C2274-1009		C2274-1010		C2274-1012	
Location		A14-2		A11-1		A11-2		A10-1		A10-2		Field Blank	
% Solids		78		68		69		61		41		100	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	3600	12	8400	10	17000	15	5300	22	9800	29	17	16
Antimony	ICAP	U	4.3	U	3.5	U	5.2	U	7.8	U	10	U	5.6
Arsenic	AA-Fur	0.96	0.30	1.5	0.29	3.0	0.91	2.4	0.59	3.3	0.95	U	0.47
Barium	ICAP	26	0.43	110	0.35	220	0.52	87	0.78	110	1.0	U	0.56
Beryllium	ICAP	U	0.28	0.58	0.23	1.3	0.35	U	0.52	U	0.68	U	0.37
Cadmium	ICAP	U	0.35	1.6	0.29	0.75	0.43	0.67	0.65	2.5	0.85	U	0.46
Calcium	ICAP	670	35	2800	29	5000	43	4000	65	5300	85	70	46
Chromium	ICAP	8.9	0.35	38	0.29	24	0.43	16	0.65	41	0.85	U	0.46
Cobalt	ICAP	4.0	0.35	11	0.29	21	0.43	3.6	0.65	8.0	0.85	U	0.46
Copper	ICAP	7.9	0.64	57	0.53	74	0.78	20	1.2	81	1.5	U	0.83
Iron	ICAP	10000	6.4	24000	5.3	25000	7.8	9200	12	19000	15	100	8.3
Lead	ICAP	17	2.8	170	2.3	260	3.5	53	5.2	290	6.8	U	3.7
Magnesium	ICAP	1600	35	4300	29	6900	43	2700	65	3600	85	U	46
Manganese	ICAP	110	0.35	400	0.29	370	0.43	130	0.65	220	0.85	0.71	0.46
Mercury	Cold Vapor	U	0.03	0.04	0.04	0.54	0.04	0.08	0.04	0.43	0.05	U	0.04
Nickel	ICAP	8.4	0.71	26	0.59	38	0.87	8.5	1.3	25	1.7	U	0.93
Potassium	ICAP	280	140	1100	120	1500	170	370	260	870	340	U	190
Selenium	AA-Fur	U	0.30	U	0.29	U	0.45	U	0.59	U	0.95	U	0.47
Silver	ICAP	U	0.35	0.47	0.29	U	0.43	U	0.65	1.1	0.85	U	0.46
Sodium	ICAP	50	35	160	29	480	43	74	65	200	85	U	46
Thallium	AA-Fur	U	0.30	U	0.29	U	0.45	U	0.59	U	0.95	U	0.47
Vanadium	ICAP	12	0.71	26	0.59	41	0.87	20	1.3	39	1.7	U	0.93
Zinc	ICAP	51	1.4	200	1.2	430	1.7	73	2.6	300	3.4	4.0	1.9

Table 1.9 Results of the Analysis for TAL Metals in Tissue
WA# 2-274 Cornell Dubilier site
Based on Dry Weight

Client ID		Method Blank		CO2 Blank		BH-A12-1		CC-A10-3		WS-A10-1		WS-A10-2	
Location		Lab		Lab		A12		A10		A10		A10	
% Solids		100		NA		17		21		20		19	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/sampl	MDL mg/sample	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	U	5.0	0.0039	0.0025	29	20	26	18	41	18	24	19
Antimony	AA-Fur	U	0.20	U	0.0001	U	0.80	U	0.72	U	0.73	U	0.75
Arsenic	AA-Fur	U	0.20	U	0.0001	U	0.80	U	0.72	U	0.73	U	0.75
Barium	ICAP	U	0.30	U	0.00015	U	1.2	1.5	1.1	U	1.1	U	1.1
Beryllium	ICAP	U	0.20	U	0.0001	U	0.80	U	0.72	U	0.73	U	0.75
Cadmium	ICAP	U	0.30	U	0.00015	U	1.2	U	1.1	U	1.1	U	1.1
Calcium	ICAP	U	10	0.016	0.005	510	40	2400	36	840	36	1900	37
Chromium	ICAP	U	0.50	0.00056	0.00025	4.5	2.0	2.2	1.8	2.9	1.8	U	1.9
Cobalt	ICAP	U	0.50	U	0.00025	2.4	2.0	U	1.8	2.0	1.8	U	1.9
Copper	ICAP	U	0.50	0.003	0.00025	10	2.0	2.1	1.8	2.7	1.8	2.7	1.9
Iron	ICAP	U	2.5	0.0054	0.0013	28	10	58	9.0	20	9.1	27	9.3
Lead	AA-Fur	U	0.20	U	0.0001	U	0.80	U	0.72	U	0.73	0.97	0.75
Magnesium	ICAP	U	50	U	0.025	1500	200	1200	180	1300	180	1500	190
Manganese	ICAP	U	0.20	U	0.0001	1.4	0.80	1.4	0.72	U	0.73	1.8	0.75
Mercury	Cold Vapor	U	0.04	U	0.00002	0.34	0.17	0.58	0.12	0.56	0.16	0.52	0.15
Nickel	ICAP	U	1.0	0.0046	0.0005	U	4.0	U	3.6	U	3.6	U	3.7
Potassium	ICAP	U	200	U	0.1	21000	800	16000	720	19000	730	21000	750
Selenium	AA-Fur	U	0.20	U	0.0001	1.1	0.80	1.9	0.72	1.9	0.73	1.5	0.75
Silver	ICAP	U	0.50	U	0.00025	2.4	2.0	U	1.8	U	1.8	U	1.9
Sodium	ICAP	U	50	0.068	0.025	1700	200	1800	180	1500	180	2200	190
Thallium	AA-Fur	U	0.20	U	0.0001	U	0.80	U	0.72	U	0.73	U	0.75
Vanadium	ICAP	U	0.50	U	0.00025	2.6	2.0	U	1.8	2.0	1.8	U	1.9
Zinc	ICAP	U	0.50	0.0016	0.00025	22	2.0	68	1.8	42	1.8	60	1.9

Table 1.9 (Cont) Results of the Analysis for TAL Metals in Tissue
WA# 2-274 Cornell Dubilier site
Based on Dry Weight

Client ID		WS-A10-3		BS-A10-1		BS-A10-2		BS-A10-3		PS-A10-1		PS-A10-2	
Location		A10		A10		A10		A10		A10		A10	
% Solids		20		21		20		23		20		19	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	29	17	23	15	27	18	48	14	29	18	21	18
Antimony	AA-Fur	U	0.68	U	0.61	U	0.71	U	0.58	U	0.71	U	0.72
Arsenic	AA-Fur	0.76	0.68	U	0.61	U	0.71	U	0.58	U	0.71	U	0.72
Barium	ICAP	U	1.0	U	0.92	U	1.1	U	0.87	1.4	1.1	1.3	1.1
Beryllium	ICAP	U	0.68	U	0.61	U	0.71	U	0.58	U	0.71	U	0.72
Cadmium	ICAP	U	1.0	U	0.92	U	1.1	U	0.87	U	1.1	U	1.1
Calcium	ICAP	1500	34	830	31	4100	36	6700	29	18000	36	14000	36
Chromium	ICAP	2.8	1.7	U	1.5	3.3	1.8	2.9	1.4	2.7	1.8	4.4	1.8
Cobalt	ICAP	1.7	1.7	U	1.5	U	1.8	U	1.4	U	1.8	U	1.8
Copper	ICAP	2.8	1.7	U	1.5	2.6	1.8	1.5	1.4	2.9	1.8	9.8	1.8
Iron	ICAP	27	8.5	12	7.6	15	8.9	17	7.2	26	8.9	31	9.0
Lead	AA-Fur	U	0.68	U	0.61	U	0.71	0.84	0.58	U	0.71	1.1	0.72
Magnesium	ICAP	1100	170	1100	150	1300	180	1200	140	1500	180	1500	180
Manganese	ICAP	0.73	0.68	U	0.61	U	0.71	1.1	0.58	4.8	0.71	5.3	0.72
Mercury	Cold Vapor	0.77	0.15	1.1	0.14	1.2	0.13	0.32	0.13	0.28	0.14	0.30	0.15
Nickel	ICAP	U	3.4	U	3.1	U	3.6	U	2.9	U	3.6	U	3.6
Potassium	ICAP	16000	680	15000	610	17000	710	14000	580	15000	710	16000	720
Selenium	AA-Fur	1.6	0.68	1.9	0.61	1.4	0.71	1.2	0.58	1.7	0.71	1.5	0.72
Silver	ICAP	U	1.7	U	1.5	U	1.8	U	1.4	U	1.8	U	1.8
Sodium	ICAP	1800	170	1900	150	1800	180	2200	140	2300	180	2500	180
Thallium	AA-Fur	U	0.68	U	0.61	U	0.71	U	0.58	U	0.71	U	0.72
Vanadium	ICAP	2.2	1.7	U	1.5	U	1.8	U	1.4	U	1.8	U	1.8
Zinc	ICAP	51	1.7	32	1.5	33	1.8	42	1.4	63	1.8	73	1.8

Table 1.9 (Cont) Results of the Analysis for TAL Metals in Tissue
WA# 2-274 Cornell Dubilier site
Based on Dry Weight

Client ID		CC-A13-1		PS-A13-1		PS-A13-2		WS-A13-1		WS-A13-2		WS-A13-3	
Location		A13		A13		A13		A13		A13		A13	
% Solids		29		19		21		20		19		21	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	21	11	26	19	22	18	62	17	1300	16	24	17
Antimony	AA-Fur	U	0.45	U	0.77	U	0.70	U	0.68	U	0.66	U	0.69
Arsenic	AA-Fur	0.67	0.45	U	0.77	U	0.70	U	0.68	U	0.66	U	0.69
Barium	ICAP	U	0.68	2.0	1.2	2.8	1.1	1.4	1.0	U	0.99	1.9	1.0
Beryllium	ICAP	U	0.45	U	0.77	U	0.70	U	0.68	U	0.66	U	0.69
Cadmium	ICAP	U	0.68	U	1.2	U	1.1	U	1.0	U	0.99	U	1.0
Calcium	ICAP	1200	23	17000	38	31000	35	2300	34	840	33	6400	34
Chromium	ICAP	1.5	1.1	7.2	1.9	7.2	1.8	2.4	1.7	2.3	1.6	2.8	1.7
Cobalt	ICAP	U	1.1	U	1.9	2.0	1.8	1.7	1.7	U	1.6	U	1.7
Copper	ICAP	2.9	1.1	2.3	1.9	3.7	1.8	1.9	1.7	3.3	1.6	3.5	1.7
Iron	ICAP	55	5.7	61	9.6	48	8.8	19	8.4	26	8.2	28	8.6
Lead	AA-Fur	U	0.45	U	0.77	U	0.70	U	0.68	U	0.66	U	0.69
Magnesium	ICAP	720	110	1500	190	1700	180	1300	170	1200	160	1200	170
Manganese	ICAP	0.84	0.45	9.2	0.77	14	0.70	2.6	0.68	1.3	0.66	4.9	0.69
Mercury	Cold Vapor	0.29	0.10	0.28	0.14	0.35	0.14	0.48	0.14	0.31	0.15	0.22	0.15
Nickel	ICAP	U	2.3	U	3.8	4.3	3.5	U	3.4	U	3.3	U	3.4
Potassium	ICAP	9600	450	15000	770	15000	700	19000	680	17000	660	14000	690
Selenium	AA-Fur	1.8	0.45	2.7	0.77	2.1	0.70	1.6	0.68	2.4	0.66	1.7	0.69
Silver	ICAP	U	1.1	U	1.9	U	1.8	U	1.7	U	1.6	U	1.7
Sodium	ICAP	1100	110	2500	190	2400	180	1600	170	1800	160	1800	170
Thallium	AA-Fur	U	0.45	U	0.77	U	0.70	U	0.68	U	0.66	U	0.69
Vanadium	ICAP	U	1.1	U	1.9	2.0	1.8	U	1.7	1.6	1.6	U	1.7
Zinc	ICAP	42	1.1	62	1.9	76	1.8	64	1.7	63	1.6	62	1.7

Table 1.9 (Cont) Results of the Analysis for TAL Metals in Tissue
WA# 2-274 Cornell Dubilier site
Based on Dry Weight

Client ID		BS-A13-1		BS-A13-2		BH-A5-1		WS-A14-1		WS-A14-2		WS-A14-3	
Location		A13		A13		A5		A14		A14		A14	
% Solids		19		21		20		23		21		21	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	35	18	51	14	U	17	U	13	35	13	22	14
Antimony	AA-Fur	U	0.70	U	0.57	U	0.67	U	0.53	U	0.50	U	0.54
Arsenic	AA-Fur	U	0.70	U	0.57	U	0.67	U	0.53	U	0.50	U	0.54
Barium	ICAP	U	1.1	U	0.86	U	1.0	U	0.79	0.77	0.75	1.1	0.82
Beryllium	ICAP	U	0.70	U	0.57	U	0.67	U	0.53	U	0.50	U	0.54
Cadmium	ICAP	U	1.1	U	0.86	U	1.0	U	0.79	U	0.75	U	0.82
Calcium	ICAP	2800	35	1200	29	1100	34	1700	26	690	25	2600	27
Chromium	ICAP	14	1.8	2.2	1.4	4.6	1.7	2.4	1.3	2.0	1.3	2.0	1.4
Cobalt	ICAP	U	1.8	U	1.4	U	1.7	U	1.3	U	1.3	U	1.4
Copper	ICAP	3.0	1.8	2.4	1.4	12	1.7	4.0	1.3	16	1.3	2.3	1.4
Iron	ICAP	68	8.8	20	7.2	34	8.4	23	6.6	25	6.3	24	6.8
Lead	AA-Fur	U	0.70	U	0.57	U	0.67	U	0.53	U	0.50	1.5	0.54
Magnesium	ICAP	1400	180	1300	140	1300	170	1100	130	1000	130	1200	140
Manganese	ICAP	2.3	0.70	1.2	0.57	1.3	0.67	2.4	0.53	0.95	0.50	2.5	0.54
Mercury	Cold Vapor	0.86	0.17	1.9	0.15	U	0.19	0.54	0.13	0.28	0.14	0.43	0.14
Nickel	ICAP	7.0	3.5	U	2.9	4.3	3.4	U	2.6	U	2.5	U	2.7
Potassium	ICAP	17000	700	17000	570	19000	670	15000	530	14000	500	16000	540
Selenium	AA-Fur	2.0	0.70	1.6	0.57	U	0.67	0.93	0.53	1.3	0.50	1.4	0.54
Silver	ICAP	U	1.8	U	1.4	U	1.7	U	1.3	U	1.3	U	1.4
Sodium	ICAP	2100	180	1800	140	2000	170	1200	130	1600	130	1500	140
Thallium	AA-Fur	U	0.70	U	0.57	U	0.67	U	0.53	U	0.50	U	0.54
Vanadium	ICAP	U	1.8	U	1.4	U	1.7	U	1.3	U	1.3	U	1.4
Zinc	ICAP	60	1.8	46	1.4	29	1.7	69	1.3	69	1.3	61	1.4

Table 1.9 (Cont) Results of the Analysis for TAL Metals in Tissue
WA# 2-274 Cornell Dubilier site
Based on Dry Weight

Client ID		BS-A14-1		BH-A14-1		PS-A14-1		PS-A14-2	
Location		A14		A14		A14		A14	
% Solids		20		17		19		19	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	23	16	34	17	16	16	16	14
Antimony	AA-Fur	U	0.63	U	0.70	U	0.62	U	0.56
Arsenic	AA-Fur	U	0.63	U	0.70	U	0.62	U	0.56
Barium	ICAP	U	0.94	U	1.0	1.7	0.94	3.6	0.85
Beryllium	ICAP	U	0.63	U	0.70	U	0.62	U	0.56
Cadmium	ICAP	U	0.94	U	1.0	U	0.94	U	0.85
Calcium	ICAP	1100	31	540	35	16000	31	35000	28
Chromium	ICAP	5.8	1.6	4.5	1.7	8.4	1.6	3.4	1.4
Cobalt	ICAP	U	1.6	U	1.7	U	1.6	U	1.4
Copper	ICAP	8.3	1.6	2.1	1.7	3.0	1.6	2.4	1.4
Iron	ICAP	31	7.9	49	8.7	45	7.8	20	7.1
Lead	AA-Fur	U	0.63	U	0.70	U	0.62	U	0.56
Magnesium	ICAP	1300	160	1500	170	1400	160	1600	140
Manganese	ICAP	1.4	0.63	1.7	0.70	6.8	0.62	17	0.56
Mercury	Cold Vapor	0.94	0.17	0.45	0.18	0.39	0.16	0.57	0.16
Nickel	ICAP	3.8	3.1	U	3.5	4.4	3.1	U	2.8
Potassium	ICAP	18000	630	21000	700	15000	620	14000	560
Selenium	AA-Fur	1.7	0.63	0.82	0.70	2.4	0.62	1.4	0.56
Silver	ICAP	U	1.6	U	1.7	U	1.6	U	1.4
Sodium	ICAP	2200	160	2300	170	2600	160	2800	140
Thallium	AA-Fur	U	0.63	U	0.70	U	0.62	U	0.56
Vanadium	ICAP	U	1.6	U	1.7	1.8	1.6	U	1.4
Zinc	ICAP	45	1.6	24	1.7	84	1.6	70	1.4

Table 1.9 (Cont) Results of the Analysis of TAL Metals in Tissue
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Client ID		Method Blank		CC-A12-1		CC-A12-2		CC-A12-3		WS-A12-1		WS-A12-2	
Location		Lab		A12		A12		A12		A12		A12	
% Solids		100		35		26		23		20		18	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	U	5.0	26	6.5	13	13	80	13	21	13	21	14
Antimony	AA-Fur	U	0.20	U	0.26	U	0.52	U	0.53	U	0.52	U	0.57
Arsenic	AA-Fur	U	0.20	0.30	0.26	U	0.52	U	0.53	U	0.52	U	0.57
Barium	ICAP	U	0.30	U	0.39	U	0.78	U	0.79	0.92	0.78	2.9	0.86
Beryllium	ICAP	U	0.20	U	0.26	U	0.52	U	0.53	U	0.52	U	0.57
Cadmium	ICAP	U	0.30	U	0.39	U	0.78	U	0.79	U	0.78	U	0.86
Calcium	ICAP	U	10	650	13	1500	26	1200	26	1500	26	3700	29
Chromium	ICAP	U	0.50	1.0	0.65	1.8	1.3	2.2	1.3	2.1	1.3	U	1.4
Cobalt	ICAP	U	0.50	U	0.65	U	1.3	U	1.3	U	1.3	U	1.4
Copper	ICAP	U	0.50	2.5	0.65	2.4	1.3	3.1	1.3	3.1	1.3	2.6	1.4
Iron	ICAP	U	2.5	22	3.2	38	6.5	38	6.6	22	6.5	25	7.2
Lead	AA-Fur	U	0.20	U	0.26	U	0.52	U	0.53	U	0.52	U	0.57
Magnesium	ICAP	U	50	600	65	850	130	980	130	1200	130	1400	140
Manganese	ICAP	U	0.20	0.58	0.26	0.93	0.52	1.1	0.53	2.6	0.52	6.0	0.57
Mercury	Cold Vapor	U	0.04	0.17	0.09	0.31	0.15	0.36	0.18	0.28	0.19	0.23	0.23
Nickel	ICAP	U	1.0	U	1.3	U	2.6	U	2.6	U	2.6	U	2.9
Potassium	ICAP	U	200	7500	260	12000	520	14000	530	17000	520	18000	570
Selenium	AA-Fur	U	0.20	0.93	0.26	2.2	0.52	2.5	0.53	1.8	0.52	1.3	0.57
Silver	ICAP	U	0.50	U	0.65	U	1.3	U	1.3	U	1.3	U	1.4
Sodium	ICAP	U	50	810	65	1400	130	1700	130	1800	130	2200	140
Thallium	AA-Fur	U	0.20	U	0.26	U	0.52	U	0.53	U	0.52	U	0.57
Vanadium	ICAP	U	0.50	U	0.65	U	1.3	U	1.3	U	1.3	U	1.4
Zinc	ICAP	U	0.50	34	0.65	44	1.3	63	1.3	56	1.3	71	1.4

Table 1.9 (Cont) Results of the Analysis of TAL Metals in Tissue
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Client ID		WS-A12-3		PS-A12-1		PS-A12-2		PS-A12-3		BS-A12-1		BS-A12-2	
Location		A12		A12		A12		A12		A12		A12	
% Solids		20		19		19		19		18		20	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	32	15	31	14	49	16	43	16	31	17	78	15
Antimony	AA-Fur	U	0.60	U	0.58	U	0.65	U	0.63	U	0.67	U	0.59
Arsenic	AA-Fur	U	0.60	U	0.58	U	0.65	U	0.63	U	0.67	U	0.59
Barium	ICAP	1.7	0.90	0.91	0.87	1.1	0.98	1.2	0.94	U	1.0	U	0.89
Beryllium	ICAP	U	0.60	U	0.58	U	0.65	U	0.63	U	0.67	U	0.59
Cadmium	ICAP	U	0.90	U	0.87	U	0.98	U	0.94	U	1.0	0.92	0.89
Calcium	ICAP	3300	30	8600	29	7900	33	7800	31	2800	33	1500	30
Chromium	ICAP	U	1.5	2.2	1.4	U	1.6	U	1.6	3.1	1.7	2.8	1.5
Cobalt	ICAP	U	1.5	U	1.4	U	1.6	U	1.6	2.2	1.7	U	1.5
Copper	ICAP	1.9	1.5	12	1.4	2.0	1.6	3.0	1.6	2.9	1.7	2.8	1.5
Iron	ICAP	23	7.5	26	7.2	22	8.2	22	7.9	22	8.4	22	7.4
Lead	AA-Fur	U	0.60	U	0.58	U	0.65	U	0.63	U	0.67	U	0.59
Magnesium	ICAP	1400	150	1500	140	1500	160	1400	160	1500	170	1300	150
Manganese	ICAP	6.4	0.60	4.5	0.58	4.9	0.65	3.3	0.63	1.5	0.67	1.4	0.59
Mercury	Cold Vapor	0.19	0.19	0.28	0.19	0.20	0.20	0.88	0.18	1.1	0.21	0.39	0.20
Nickel	ICAP	U	3.0	U	2.9	U	3.3	U	3.1	U	3.3	U	3.0
Potassium	ICAP	18000	600	17000	580	17000	650	17000	630	19000	670	16000	590
Selenium	AA-Fur	1.5	0.60	2.3	0.58	1.7	0.65	1.9	0.63	2.2	0.67	1.8	0.59
Silver	ICAP	U	1.5	U	1.4	U	1.6	U	1.6	1.9	1.7	U	1.5
Sodium	ICAP	1900	150	2800	140	3200	160	3300	160	2400	170	2100	150
Thallium	AA-Fur	U	0.60	U	0.58	U	0.65	U	0.63	U	0.67	U	0.59
Vanadium	ICAP	U	1.5	U	1.4	U	1.6	U	1.6	U	1.7	U	1.5
Zinc	ICAP	67	1.5	77	1.4	72	1.6	100	1.6	66	1.7	50	1.5

Table 1.9 (Cont) Results of the Analysis of TAL Metals in Tissue
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Client ID		CC-A11-1		CC-A11-2		CC-A11-3		WS-A11-1		WS-A11-2		WS-A11-3	
Location		A11		A11		A11		A11		A11		A11	
% Solids		22		22		23		19		16		18	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	41	13	17	14	89	14	29	14	35	19	18	14
Antimony	AA-Fur	U	0.51	U	0.56	U	0.56	U	0.58	U	0.77	U	0.57
Arsenic	AA-Fur	U	0.51	U	0.56	U	0.56	U	0.58	U	0.77	U	0.57
Barium	ICAP	1.1	0.76	U	0.83	U	0.84	1.7	0.86	1.9	1.2	1.8	0.85
Beryllium	ICAP	U	0.51	U	0.56	U	0.56	U	0.58	U	0.77	U	0.57
Cadmium	ICAP	U	0.76	U	0.83	U	0.84	U	0.86	U	1.2	U	0.85
Calcium	ICAP	3900	25	1700	28	1800	28	2900	29	3600	39	3600	28
Chromium	ICAP	2.2	1.3	U	1.4	1.5	1.4	2.1	1.4	2.6	1.9	2.2	1.4
Cobalt	ICAP	U	1.3	U	1.4	U	1.4	U	1.4	U	1.9	U	1.4
Copper	ICAP	5.2	1.3	2.0	1.4	2.7	1.4	2.6	1.4	3.5	1.9	2.6	1.4
Iron	ICAP	84	6.4	42	6.9	55	7.0	27	7.2	39	9.7	25	7.1
Lead	AA-Fur	U	0.51	U	0.56	U	0.56	U	0.58	U	0.77	U	0.57
Magnesium	ICAP	970	130	1000	140	870	140	1300	140	1400	190	1400	140
Manganese	ICAP	1.3	0.51	1.4	0.56	1.4	0.56	6.0	0.58	4.0	0.77	8.5	0.57
Mercury	Cold Vapor	0.15	0.15	U	0.13	0.17	0.17	0.23	0.16	0.22	0.22	0.29	0.19
Nickel	ICAP	U	2.5	U	2.8	U	2.8	U	2.9	U	3.9	U	2.8
Potassium	ICAP	13000	510	16000	560	13000	560	19000	580	20000	770	19000	570
Selenium	AA-Fur	2.6	0.51	2.1	0.56	2.6	0.56	1.6	0.58	2.2	0.77	1.4	0.57
Silver	ICAP	U	1.3	U	1.4	U	1.4	U	1.4	U	1.9	U	1.4
Sodium	ICAP	1800	130	2000	140	1700	140	1800	140	2000	190	1900	140
Thallium	AA-Fur	U	0.51	U	0.56	U	0.56	U	0.58	U	0.77	U	0.57
Vanadium	ICAP	U	1.3	U	1.4	U	1.4	U	1.4	U	1.9	U	1.4
Zinc	ICAP	53	1.3	35	1.4	64	1.4	55	1.4	120	1.9	83	1.4

Table 1.9 (Cont) Results of the Analysis of TAL Metals in Tissue
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Client ID		PS-A11-1		PS-A11-2		PS-A11-3		BS-A11-1		BS-A11-2		BS-A11-3	
Location		A11		A11		A11		A11		A11		A11	
% Solids		20		20		19		19		21		21	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	49	15	35	14	29	14	U	17	17	12	24	14
Antimony	AA-Fur	U	0.59	U	0.57	U	0.55	U	0.66	U	0.46	U	0.55
Arsenic	AA-Fur	U	0.59	U	0.57	U	0.55	U	0.66	U	0.46	U	0.55
Barium	ICAP	0.97	0.89	0.97	0.86	1.4	0.84	U	1.0	U	0.69	U	0.83
Beryllium	ICAP	U	0.59	U	0.57	U	0.56	U	0.66	U	0.46	U	0.55
Cadmium	ICAP	U	0.89	U	0.86	U	0.84	U	1.0	U	0.69	U	0.83
Calcium	ICAP	8000	30	9700	29	15000	28	7300	33	4600	23	4700	28
Chromium	ICAP	2.3	1.5	U	1.4	1.9	1.4	2.4	1.7	U	1.2	U	1.4
Cobalt	ICAP	U	1.5	U	1.4	U	1.4	U	1.7	U	1.2	U	1.4
Copper	ICAP	2.3	1.5	1.7	1.4	3.3	1.4	2.4	1.7	2.5	1.2	3.8	1.4
Iron	ICAP	18	7.4	17	7.2	19	7.0	32	8.3	18	5.8	16	6.9
Lead	AA-Fur	0.95	0.59	U	0.57	U	0.55	U	0.66	U	0.46	U	0.55
Magnesium	ICAP	1400	150	1400	140	1600	140	1300	170	1200	120	1300	140
Manganese	ICAP	11	0.59	4.2	0.57	12	0.56	3.0	0.66	1.2	0.46	1.4	0.55
Mercury	Cold Vapor	0.17	0.17	0.33	0.17	0.31	0.16	0.89	0.20	0.92	1.1	0.87	0.17
Nickel	ICAP	U	3.0	U	2.9	U	2.8	U	3.3	U	2.3	U	2.8
Potassium	ICAP	16000	590	15000	570	15000	560	16000	660	15000	460	17000	550
Selenium	AA-Fur	1.4	0.59	2.0	0.57	1.8	0.55	0.87	0.66	1.5	0.46	1.5	0.55
Silver	ICAP	1.5	1.5	U	1.4	U	1.4	U	1.7	U	1.2	U	1.4
Sodium	ICAP	2200	150	2200	140	2400	140	2200	170	2100	120	2100	140
Thallium	AA-Fur	U	0.59	U	0.57	U	0.55	U	0.66	U	0.46	U	0.55
Vanadium	ICAP	U	1.5	U	1.4	U	1.4	U	1.7	U	1.2	U	1.4
Zinc	ICAP	81	1.5	74	1.4	110	1.4	65	1.7	57	1.2	55	1.4

Table 1.9 (Cont) Results of the Analysis of TAL Metals in Tissue
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Client ID		BH-A11-1		BH-A11-2		BH-A11-3		CC-A10-1		CC-A10-2	
Location		A11		A11		A11		A10		A10	
% Solids		17		18		19		30		23	
Parameter	Analysis Method	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg	Conc mg/kg	MDL mg/kg
Aluminum	ICAP	49	17	130	16	79	16	22	10	30	12
Antimony	AA-Fur	U	0.70	U	0.65	U	0.65	U	0.40	U	0.49
Arsenic	AA-Fur	U	0.70	U	0.65	U	0.65	U	0.40	U	0.49
Barium	ICAP	U	1.0	1.4	0.98	U	0.98	U	0.60	U	0.73
Beryllium	ICAP	U	0.70	U	0.65	U	0.65	U	0.40	U	0.49
Cadmium	ICAP	U	1.0	U	0.98	U	0.98	U	0.60	U	0.73
Calcium	ICAP	3000	35	5500	33	2900	33	560	20	1000	24
Chromium	ICAP	6.2	1.7	U	1.6	3.0	1.6	1.4	1.0	1.4	1.2
Cobalt	ICAP	U	1.7	U	1.6	U	1.6	U	1.0	U	1.2
Copper	ICAP	5.7	1.7	50	1.6	10	1.6	12	1.0	1.2	1.2
Iron	ICAP	49	8.7	42	8.2	28	8.1	25	5.0	32	6.1
Lead	AA-Fur	U	0.70	U	0.65	U	0.65	U	0.40	U	0.49
Magnesium	ICAP	1400	170	1500	160	1500	160	780	100	1100	120
Manganese	ICAP	3.1	0.70	3.4	0.65	3.8	0.65	0.84	0.40	1.1	0.49
Mercury	Cold Vapor	0.52	0.21	0.31	0.20	0.16	0.16	0.29	0.12	0.58	0.17
Nickel	ICAP	3.6	3.5	U	3.3	U	3.3	6.0	2.0	U	2.4
Potassium	ICAP	22000	700	20000	650	20000	650	9500	400	14000	490
Selenium	AA-Fur	U	0.70	0.97	0.65	1.1	0.65	0.79	0.40	1.5	0.49
Silver	ICAP	U	1.7	U	1.6	1.8	1.6	U	1.0	U	1.2
Sodium	ICAP	2100	170	1700	160	1900	160	1200	100	1500	120
Thallium	AA-Fur	U	0.70	U	0.65	U	0.65	U	0.40	U	0.49
Vanadium	ICAP	U	1.7	U	1.6	U	1.6	U	1.0	U	1.2
Zinc	ICAP	25	1.7	120	1.6	27	1.6	67	1.0	75	1.2

Table 1.10 Results of the Analysis for TOC in Soil
WA # 2-274 Cornell Dubilier Site
Based on Dry Weight

Sample ID	Location		MDL		MDL		MDL		MDL		MDL		MDL
E2274-1001	A12-1	%	%	%	%	%	%	%	%	%	%	%	%
		1.2	0.1	1.7	0.1	8.8	0.1	1.6	0.1	3.6	0.1	0.32	0.1

Sample ID	Location		MDL		MDL		MDL		MDL
E2274-1007	A11-1	%	%	%	%	%	%	%	%
		4.5	0.1	5.7	0.1	4.8	0.1	15	0.1

Table 1.11 Results of the Analysis for Grain Size of Soil
WA #2-274 Cornell Dubilier Site

Sample ID: / Location:	2274-1009 A10-1	Sample ID: / Location:	2274-1010 A10-2	Sample ID: / Location:	2274-1007 A11-1	Sample ID: / Location:	2274-1008 A11-2
Sieve #	Sample % Passing	Sieve #	Sample % Passing	Sieve #	Sample % Passing	Sieve #	Sample % Passing
1"	94	3/4"	100	3/4"	100	3/4"	100
1/2"	89 11	1/2"	100 0	1/2"	93 7	1/2"	98 2
4	79	4	97	4	92	4	92
10	73	10	93	10	84	10	88
20	66	20	83	20	72	20	83
40	53	40	72	40	54	40	76
80	24	80	53	80	12	80	31
100	17	100	48	100	4 9	100	17
200	4.9 (4.1)	200	40 60	200	1.0 92	200	11 87
Hydrometer Analysis		Hydrometer Analysis		Hydrometer Analysis		Hydrometer Analysis	
Diameter (mm)	Sample % Passing	Diameter (mm)	Sample % Passing	Diameter (mm)	Sample % Passing	Diameter (mm)	Sample % Passing
0 033	18	0 031	31	0.036	7.6	0 036	17
0 022	14	0 021	22	0.023	7.6	0.023	17
0.013	12	0.012	17	0.013	6.9	0.013	15
0.0090	10	0 0089	13	0.0094	6 1	0.0094	13
0.0064	(12) 9.1 0.7	0 0063	9.9 30.1	0.0065	5.3	0.0066	11
0 0032	6.2	0 0032	6.4	0.0033	3.2	0.0033	7.9
0.0013	(0 6) 5.5	0.0013	4 3 9.9	0.0014	2.3	0 0013	5 7

From ASTM D 422 Standard Test Method for Particle-Size Analysis of Soils

Gravel > No. 4 sieve

Sand No. 4 to No. 200

Silt 0.074 to 0.005mm

Clay < 0.005 mm

Table 1.11 (Cont) Results of the Analysis for Grain Size of Soil
WA #2-274 Cornell Dubilier Site

Sample ID: 2274-1001 Location: A12-1		Sample ID: 2274-1002 Location: A12-2		Sample ID: 2274-1003 Location: A13-1		Sample ID: 2274-1004 Location: A13-2	
Sieve #	Sample % Passing	Sieve #	Sample % Passing	Sieve #	Sample % Passing	Sieve #	Sample % Passing
3/4"	100	3/4"	100	3/4"	100	3/4"	100
1/2"	98 2	1/2"	100 0	1/2"	100 0	1/2"	100 0
4	92	4	99	4	93	4	100
10	90	10	97	10	90	10	99
20	86	20	92	20	87	20	98
40	82	40	70	40	83	40	91
80	68	80	13	80	52	80	22
100	64	100	8.0	100	44	100	13
200	55 43	200	5.1 94.9	200	35 65	200	7.6 92.4
Hydrometer Analysis		Hydrometer Analysis		Hydrometer Analysis		Hydrometer Analysis	
Diameter (mm)	Sample % Passing	Diameter (mm)	Sample % Passing	Diameter (mm)	Sample % Passing	Diameter (mm)	Sample % Passing
0.032	46	0.036	6.3	0.031	33	0.036	7.3
0.021	41	0.023	5.3	0.020	29	0.023	6.4
0.012	35	0.013	5.3	0.012	26	0.013	5.5
0.0088	30	0.0094	4.3	0.0086	23	0.0094	4.6
0.0063	26	0.0066	3.3	0.0062	20	0.0067	3.9
0.0032	15	0.0033	2.3	0.0032	13	0.0033	3.0
0.0013	10	0.0014	1.1	0.0013	8.5	0.0014	1.9

Table 1.11 (Cont) Results of the Analysis for Grain Size of Soil
WA #2-274 Cornell Dubilier Site

Sample ID: 2274-1005 Location: A14-1		Sample ID: 2274-1006 Location: A14-2	
Sieve #	Sample % Passing	Sieve #	Sample % Passing
3/4"	100	3/4"	100
1/2"	100 0	1/2"	100 0
4	100	4	96
10	100	10	92
20	100	20	81
40	99	40	53
80	90	80	4.8
100	85	100	1.8
200	75 25	200	0.28 99.72
Hydrometer Analysis		Hydrometer Analysis	
Diameter (mm)	Sample % Passing	Diameter (mm)	Sample % Passing
0.026	62	0.035	6.3
0.017	58	0.022	5.5
0.011	24 48	0.013	5.5
0 0078	41	0.0093	4.6
0.0057	38	0.0066	3.8
0 0030	29	0.0032	2.6
0 0012	30 22	0.0014	2.2

25 → 0.11

$\frac{2.5}{6.3}$ =

3.8 → 0.17

$\frac{24}{62}$ =

QA/QC for VOC

Results of the Internal Standard Areas and Surrogate Recoveries for VOC in Soil

Prior to purging, the samples were spiked with a three component surrogate mixture consisting of toluene-d_8, 4-bromofluorobenzene and 1,2-dichloroethane-d_4 and a three component internal standard mixture consisting of bromochloromethane, 1,4-difluorobenzene, and chlorobenzene-d_5.

The internal standard areas are listed in Table 2.1. All 51 internal standard areas were within QC criteria. The surrogate percent recoveries, also listed in Table 2.1, ranged from 78 to 111. All 51 recoveries were within QC limits.

Results of the MS/MSD Analysis for VOC in Soil

Samples 2274-1006 and 2274-1005 were chosen for the matrix spike/matrix spike duplicate (MS/MSD) analysis. The percent recoveries, listed in Table 2.2, ranged from 87 to 104. All 20 recoveries were within QC limits. The relative percent differences (RPDs), also listed in Table 2.2, ranged from 1 to 8. All 10 RPD values were within QC limits.

Results of the Initial Calibrations are listed in Table 2.3.

Results of the Continuing Calibrations are listed in Table 2.4.

Table 2.1 Results of the Internal Standard Areas and Surrogate Recoveries for VOC in Soil
WA # 2-274 Cornell Dubilier Site

	Sample #	Data File	Internal Standards 1 area	2 area	3 area	Surrogates DIC %	TOL %	BRO %
CAL CHECK	50 PPB VOC	>B3880	58421	391339	346596	NA	NA	NA
SAND BLANK		>B3882	54515	386016	333172	99	101	94
_____	2274-1011	>B3883	60944	421636	377286	97	98	96
_____	2274-1001	>B3884	60994	415932	368568	99	98	94
_____	2274-1002	>B3885	59471	403803	358975	98	99	94
_____	2274-1004	>B3887	60474	410402	367439	99	98	94
_____	2274-1005	>B3888	61362	423711	365925	101	100	92
_____	2274-1006	>B3889	59024	412675	372653	101	98	96
CAL CHECK	50 PPB VOC	>B3896	63255	429096	385561	NA	NA	NA
SAND BLANK		>B3898	60440	414268	373322	98	98	96
_____	2274-1003	>B3899	50228	369068	284176	102	110	82
_____	2274-1007	>B3900	56804	393393	340573	100	102	90
_____	2274-1008	>B3901	48597	347451	263396	104	111	79
_____	2274-1009	>B3902	53661	382857	314822	102	105	84
_____	2274-1010	>B3903	50636	356793	264180	103	111	78
_____	2274-1005MS	>B3904	54747	378310	322116	104	106	89
_____	2274-1005MSD	>B3905	54301	371202	311734	102	106	90
_____	2274-1006MS	>B3906	60893	412210	369584	101	101	97
_____	2274-1006MSD	>B3907	61824	421079	377792	103	100	99

SURROGATE LIMITS

S1 (DIC) = 1,2-Dichloroethane-d4	(70-121)
S2 (TOL) = Toluene-d8	(81-117)
S3 (BRO) = Bromofluorobenzene	(74-121)

Table 2.2 Results of MS/MSD Analysis for
VOC in Soil
WA # 2-274 Cornell Dubilier Site
Based on Dry Weight

Sample ID:2274-1005

Compound Name	Sample Conc. (µg/kg)	MS Spike Added (µg/kg)	MSD Spike Added (µg/kg)	MS Conc. (µg/kg)	MSD Conc. (µg/kg)	MS % Rec.	MSD % Rec.	RPD	QC Limits RPD	QC Limits % Rec
1,1-Dichloroethene	U	79.4	79.4	81.2	75.1	102	95	8	22	59 - 172
Trichloroethene	U	79.4	79.4	71.3	68.9	90	87	3	24	62 - 137
Benzene	U	79.4	79.4	81.3	77.5	102	98	5	21	66 - 142
Toluene	U	79.4	79.4	82.4	79.9	104	101	3	21	59 - 139
Chlorobenzene	U	79.4	79.4	77.2	75.7	97	95	2	21	60 - 133

Table 2.2 (Cont) Results of MS/MSD Analysis for
VOC in Soil
WA # 2-274 Cornell Dubilier Site
Based on Dry Weight

Sample ID:2274-1006

Compound Name	Sample Conc. (µg/kg)	MS Spike Added (µg/kg)	MSD Spike Added (µg/kg)	MS Conc. (µg/kg)	MSD Conc. (µg/kg)	MS % Rec.	MSD % Rec.	RPD	QC Limits RPD	QC Limits % Rec.
1,1-Dichloroethene	U	64.1	64.1	62	63.7	97	99	3	22	59 - 1
Trichloroethene	U	64.1	64.1	58.2	59.8	91	93	3	24	62 - 137
Benzene	U	64.1	64.1	64.8	65.1	101	102	1	21	66 - 142
Toluene	U	64.1	64.1	63.2	64.3	99	100	2	21	59 - 1
Chlorobenzene	U	64.1	64.1	62.3	63.8	97	100	2	21	60 - [illegible]

Table 2.3 Results of the Initial Calibrations for VOC
WA # 2-274 Cornell Dubilier Site

Calibration Date: 7/08/97, Instrument ID: GCMSD-2(3034A12982)
Minimum $\overline{RF}$ for SPCC is 0.30, Maximum % RSD for CCC is 30.0%

Laboratory ID:	>B3580	>B3582	>B3583	>B3584	>B3585	>B3586					
Compound	RF 5.00	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Dichlorodifluoromethane	4.50832	4.01277	3.88738	3.86123	3.76547	3.55395	.238	3.93152	8.174		
Chloromethane	1.57159	1.37977	1.22149	1.21718	1.13316	1.23735	.269	1.29342	12.207		**
Vinyl Chloride	1.57562	1.44972	1.39600	1.40248	1.35245	1.26506	.285	1.40689	7.354	*	
Bromomethane	1.14095	1.29188	1.22179	1.32373	1.29885	1.23218	.353	1.25157	5.368		
Chloroethane	.98618	.92023	.89648	.92013	.85456	.83145	.371	.90150	6.076		
Trichlorofluoromethane	6.90445	6.32255	6.17936	6.22134	6.00753	5.77124	.430	6.23441	6.112		
Acetone	1.10382	.82716	.74535	.66063	.67432	.58506	.529	.76606	24.108		
1,1-Dichloroethene	1.83069	1.79910	1.75945	1.80399	1.74778	1.69610	.557	1.77285	2.729	*	
Carbon Disulfide	5.71991	4.10271	4.07920	4.20538	4.06779	3.99325	.630	4.36137	15.341		
Methylene Chloride	2.01070	1.75389	1.63304	1.69053	1.61616	1.58225	.660	1.71443	9.173		
trans-1,2-Dichloroethene	2.18666	2.00090	1.88625	1.97622	1.87942	1.83455	.735	1.96067	6.491		
Methyl-tertiary-butylether	6.16971	5.59060	5.10846	5.20912	5.15252	4.99967	.733	5.37168	8.186		
1,1-Dichloroethane	4.04883	3.73371	3.50874	3.64855	3.42460	3.36558	.823	3.62167	6.908		**
2-Butanone	1.19080	1.07692	.99482	.89992	.94692	.83587	.922	.99088	12.894		
2,2-Dichloropropane	4.32973	4.19174	4.05244	4.25511	4.09464	4.04727	.947	4.16182	2.790		
cis-1,2-Dichloroethene	2.16648	2.11334	1.98564	2.08695	1.98058	1.95344	.947	2.04774	4.212		
Chloroform	5.85168	5.23276	4.88150	5.04361	4.76006	4.65464	.982	5.07071	8.561	*	
1,1-Dichloropropene	3.80385	3.40736	3.29003	3.29364	3.11449	3.02624	1.102	3.32260	8.207		
1,2-Dichloroethane	3.48360	3.23618	2.96770	3.03710	2.89862	2.82913	1.135	3.07539	7.931		
1,2-Dichloroethane-d4 (SURR)	2.41084	2.39263	2.36651	2.27170	2.24813	2.16736	1.117	2.30953	4.145		
1,1,1-Trichloroethane	.93858	.88785	.88444	.89432	.87793	.85089	.876	.88900	3.215		
Carbon Tetrachloride	.79902	.81117	.83287	.84746	.84378	.81226	.916	.82443	2.393		
Benzene	1.02883	.95319	.89757	.91197	.88191	.85255	.936	.92101	6.782		
Trichloroethene	.56073	.52911	.51304	.51455	.50523	.48108	1.046	.51729	5.121		
1,2-Dichloropropane	.37812	.35431	.33437	.33594	.32520	.31711	1.068	.34084	6.488	*	
Dibromomethane	.41563	.39661	.37936	.38237	.38916	.36985	1.097	.38883	4.099		
Bromodichloromethane	.79898	.80772	.78747	.81242	.80191	.78004	1.100	.79809	1.537		
cis-1,3-Dichloropropene	.52247	.51789	.51100	.53252	.53057	.52725	1.200	.52361	1.561		
trans-1,3-Dichloropropene	.42495	.44876	.45713	.47477	.48584	.48182	1.285	.46221	5.023		
1,1,2-Trichloroethane	.32751	.30590	.28820	.28630	.28787	.28048	1.305	.29604	5.953		
1,3-Dichloropropane	.60946	.56100	.53068	.52359	.51963	.50859	1.347	.54216	6.899		
Dibromochloromethane	.49560	.57703	.63590	.61109	.66003	.66757	1.376	.60787	10.569		
1,2-Dibromoethane	.54415	.53465	.51284	.51236	.52106	.50758	1.409	.52211	2.757		
Bromoform	.35159	.43418	.45203	.47426	.48980	.48892	1.637	.44847	11.634		**
4-Methyl-2-Pentanone	.50300	.49646	.47959	.44161	.49181	.44471	.796	.47620	5.613		
Toluene-d8 (SURR)	1.18094	1.17119	1.17385	1.16444	1.17282	1.16119	.834	1.17074	.603		
Toluene	.96882	.84891	.80991	.81176	.80650	.76799	.843	.83565	8.389	*	
2-Hexanone	.39802	.38501	.36027	.32434	.36191	.32390	.894	.35891	8.489		
Tetrachloroethene	.75719	.70930	.69583	.69356	.68507	.65213	.917	.69885	4.925		
Chlorobenzene	1.18145	1.12062	1.06787	1.08005	1.04823	1.01811	1.004	1.08606	5.323		**
1,1,1,2-Tetrachloroethane	.55903	.58286	.57679	.59707	.58765	.57409	1.012	.57958	2.239		
Ethylbenzene	2.09133	1.98260	1.82302	1.89950	1.79577	1.67945	1.020	1.87861	7.755	*	
p & m-Xylene	1.85175	1.64321	1.59253	1.53367	1.28696	.83972	1.029	1.45797	24.244		
o-Xylene	1.82517	1.67328	1.57601	1.56468	1.49260	1.45083	1.078	1.59710	8.476		
Styrene	.78664	.74923	.71293	.71196	.67882	.65824	1.080	.71630	6.500		
Isopropylbenzene	2.15876	1.98507	1.88371	1.88805	1.79067	1.67398	1.126	1.89670	8.746		
1,1,2,2-Tetrachloroethane	.58241	.53915	.51782	.49359	.50624	.52214	1.137	.52689	5.925		**
p-Bromofluorobenzene (SURR)	.58517	.59933	.61008	.61812	.60704	.61747	1.145	.60620	2.053		
1,2,3-Trichloropropane	.25872	.23993	.22487	.21485	.22238	.21261	1.152	.22889	7.648		
Bromobenzene	.64912	.61086	.58780	.59811	.57378	.57277	1.161	.59874	4.784		
n-Propylbenzene	.56094	.52470	.49802	.50453	.47611	.46991	1.175	.50570	6.635		
2-Chlorotoluene	.48258	.49538	.43379	.43049	.40426	.40270	1.185	.44153	8.867		
4-Chlorotoluene	.56390	.45991	.46725	.48054	.45441	.44796	1.193	.47899	8.995		
1,3,5-Trimethylbenzene	2.04720	1.86390	1.74840	1.71366	1.61886	1.54403	1.196	1.75601	10.251		
tert-Butylbenzene	2.05635	1.90984	1.81388	1.80726	1.68490	1.65488	1.238	1.82119	8.131		
1,2,4-Trimethylbenzene	2.02229	1.79968	1.69555	1.66157	1.56144	1.50357	1.240	1.70735	10.887		
sec-Butylbenzene	2.75452	2.53113	2.41551	2.41125	2.21263	1.93181	1.264	2.37614	11.816		
1,3-Dichlorobenzene	1.16677	1.03828	.98973	.99462	.92477	.93185	1.277	1.00767	8.805		
p-Isopropyltoluene	2.22593	2.02774	1.96136	1.95601	1.81053	1.65897	1.284	1.94009	9.939		
1,4-Dichlorobenzene	1.24151	1.12165	1.04973	1.04979	.97752	.98309	1.291	1.07055	9.248		
1,2-Dichlorobenzene	1.08936	1.02545	.97628	.94921	.89427	.90470	1.331	.97321	7.652		
n-Butylbenzene	2.25268	2.00465	1.86708	1.84397	1.71980	1.59967	1.334	1.88131	12.124		
1,2-Dibromo-3-Chloropropane	.17270	.19971	.20870	.20799	.22317	.22082	1.425	.20552	8.900		
1,2,4-Trichlorobenzene	.86221	.76259	.75993	.75559	.69585	.72616	1.537	.76039	7.377		
Naphthalene	1.42474	1.20968	1.25989	1.20900	1.17018	1.21297	1.556	1.24774	7.315		
Hexachlorobutadiene	.78971	.71017	.69767	.71872	.61596	.62592	1.562	.69303	9.299		
1,2,3-Trichlorobenzene	.83871	.71637	.70111	.68755	.62111	.66802	1.586	.70548	10.364		

$\overline{RF}$ - Response Factor (Subscript is amount in ppb), %RSD - Percent Relative Standard Deviation,
$\overline{RF}$ - Average Response Factor, $\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd),
CCC - Calibration Check Compounds (*), SPCC - System Performance Check Compounds (**)

Table 2.4 Results of the Continuing Calibrations for VOC
WA # 2-274 Cornell Dubilier Site

Initial Calibration Date: 7/08/97, Calibration Date: 8/08/97, Time: 09:46
Instrument ID: GCMSD-2(3034A12982), Laboratory ID: >B3880,
Minimum RF for SPCC is 0.30, Maximum % Diff for CCC is 25.0%

Compound	RF	RF	%Diff	CCC	SPCC	
Dichlorodifluoromethane	3.93152	3.87181	1.52			
Chloromethane	1.29342	1.42428	10.12		**	
Vinyl Chloride	1.40689	1.62885	15.78	*		
Bromomethane	1.25157	1.49763	19.66			
Chloroethane	.90150	1.10544	22.62			
Trichlorofluoromethane	6.23441	7.02133	12.62			
Acetone	.76606	1.05685	37.96			
1,1-Dichloroethene	1.77285	2.16121	21.91	*		
Carbon Disulfide	4.36137	4.72998	8.45			
Methylene Chloride	1.71443	2.06900	20.68			
trans-1,2-Dichloroethene	1.96067	2.40609	22.72			
Methyl-tertiary-butylether	5.37168	6.25843	16.51			
1,1-Dichloroethane	3.62167	4.31507	19.15		**	
2-Butanone	.99088	1.35699	36.95			
2,2-Dichloropropane	4.16182	4.81041	15.58			
cis-1,2-Dichloroethene	2.04774	2.53239	23.67			
Chloroform	5.07071	5.99688	18.27	*		
1,1-Dichloropropene	3.32260	3.98620	19.97			
1,2-Dichloroethane	3.07539	3.62796	17.97			
1,2-Dichloroethane-d4 (SURR)	2.30953	2.53092	9.59			
1,1,1-Trichloroethane	.88900	.88370	.60			
Carbon Tetrachloride	.82443	.82866	.51			
Benzene	.92101	.98212	6.64			
Trichloroethene	.51729	.57947	12.02			
1,2-Dichloropropane	.34084	.35431	3.95	*		
Dibromomethane	.38883	.42477	9.24			
Bromodichloromethane	.79809	.81045	1.55			
cis-1,3-Dichloropropene	.52361	.54214	3.54			(Conc=50.00)
trans-1,3-Dichloropropene	.46221	.47444	2.65			(Conc=50.00)
1,1,2-Trichloroethane	.29604	.30817	4.10			
1,3-Dichloropropane	.54216	.57248	5.59			
Dibromochloromethane	.60787	.66641	9.63			
1,2-Dibromoethane	.52211	.55057	5.45			
Bromoform	.44847	.48045	7.13		**	
4-Methyl-2-Pentanone	.47620	.45545	4.36			
Toluene-d8 (SURR)	1.17074	1.07763	7.95			
Toluene	.83565	.82845	.86	*		
2-Hexanone	.35891	.36816	2.58			
Tetrachloroethene	.69885	.71487	2.29			
Chlorobenzene	1.08606	1.08768	.15		**	
1,1,1,2-Tetrachloroethane	.57958	.56884	1.85			
Ethylbenzene	1.87861	1.82738	2.73	*		
p & m-Xylene	1.45797	1.58697	8.85			(Conc=100.00)
o-Xylene	1.59710	1.57547	1.35			
Styrene	.71630	.70426	1.68			
Isopropylbenzene	1.89670	1.87740	1.02			
1,1,2,2-Tetrachloroethane	.52689	.45984	12.73		**	
p-Bromofluorobenzene (SURR)	.60620	.63880	5.38			
1,2,3-Trichloropropane	.22889	.22360	2.31			
Bromobenzene	.59874	.61303	2.39			
n-Propylbenzene	.50570	.51206	1.26			
2-Chlorotoluene	.44153	.44520	.83			
4-Chlorotoluene	.47899	.48527	1.31			
1,3,5-Trimethylbenzene	1.75601	1.73297	1.31			
tert-Butylbenzene	1.82119	1.80189	1.06			
1,2,4-Trimethylbenzene	1.70735	1.69890	.49			
sec-Butylbenzene	2.37614	2.37858	.10			
1,3-Dichlorobenzene	1.00767	1.03506	2.72			
p-Isopropyltoluene	1.94009	1.95486	.76			
1,4-Dichlorobenzene	1.07055	1.09888	2.65			
1,2-Dichlorobenzene	.97321	.98485	1.20			
n-Butylbenzene	1.88131	1.87988	.08			
1,2-Dibromo-3-Chloropropane	.20552	.20039	2.49			
1,2,4-Trichlorobenzene	.76039	.82098	7.97			
Naphthalene	1.24774	1.29991	4.18			
Hexachlorobutadiene	.69303	.70638	1.93			
1,2,3-Trichlorobenzene	.70548	.73499	4.18			

RF - Response Factor from daily standard file at 50.00 ppb, %Diff - % Difference from original average or curve
$\overline{RF}$ - Average Response Factor from Initial Calibration, CCC - Calibration Check Compounds (*),
SPCC - System Performance Check Compounds (**)

Table 2.4 (Cont) Results of the Continuing Calibrations for VOC
WA # 2-274 Cornell Dubilier Site

Initial Calibration Date: 7/08/97, Calibration Date: 8/11/97, Time: 09:55
Instrument ID: GCMSD-2(3034A12982), Laboratory ID: >B3896,
Minimum RF for SPCC is 0.30, Maximum % Diff for CCC is 25.0%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Dichlorodifluoromethane	3.93152	3.66151	6.87			
Chloromethane	1.29342	1.38413	7.01		**	
Vinyl Chloride	1.40689	1.57984	12.29	*		
Bromomethane	1.25157	1.53836	22.91			
Chloroethane	.90150	1.07936	19.73			
Trichlorofluoromethane	6.23441	6.80155	9.10			
Acetone	.76606	.94125	22.87			
1,1-Dichloroethene	1.77285	2.06211	16.32	*		
Carbon Disulfide	4.36137	4.67309	7.15			
Methylene Chloride	1.71443	2.01499	17.53			
trans-1,2-Dichloroethene	1.96067	2.30176	17.40			
Methyl-tertiary-butylether	5.37168	6.14279	14.36			
1,1-Dichloroethane	3.62167	4.20077	15.99		**	
2-Butanone	.99088	1.19994	21.10			
2,2-Dichloropropane	4.16182	4.62492	11.13			
cis-1,2-Dichloroethene	2.04774	2.44131	19.22			
Chloroform	5.07071	5.84493	15.27	*		
1,1-Dichloropropene	3.32260	3.77907	13.74			
1,2-Dichloroethane	3.07539	3.56568	15.94			
1,2-Dichloroethane-d4 (SURR)	2.30953	2.55202	10.50			
1,1,1-Trichloroethane	.88900	.84473	4.98			
Carbon Tetrachloride	.82443	.79842	3.15			
Benzene	.92101	.93487	1.51			
Trichloroethene	.51729	.55247	6.80			
1,2-Dichloropropane	.34084	.34302	.64	*		
Dibromomethane	.38883	.40858	5.08			
Bromodichloromethane	.79809	.80030	.28			
cis-1,3-Dichloropropene	.52361	.52525	.31			(Conc=50.00)
trans-1,3-Dichloropropene	.46221	.46229	.02			(Conc=50.00)
1,1,2-Trichloroethane	.29604	.29569	.12			
1,3-Dichloropropane	.54216	.54168	.09			
Dibromochloromethane	.60787	.62617	3.01			
1,2-Dibromoethane	.52211	.52551	.65			
Bromoform	.44847	.46930	4.64		**	
4-Methyl-2-Pentanone	.47620	.40145	15.70			
Toluene-d8 (SURR)	1.17074	1.06598	8.95			
Toluene	.83565	.76798	8.10	*		
2-Hexanone	.35891	.32346	9.88			
Tetrachloroethene	.69885	.66054	5.48			
Chlorobenzene	1.08606	1.01294	6.73		**	
1,1,1,2-Tetrachloroethane	.57958	.54037	6.77			
Ethylbenzene	1.87861	1.73539	7.62	*		
p & m-Xylene	1.45797	1.46052	.17			(Conc=100.00)
o-Xylene	1.59710	1.47671	7.54			
Styrene	.71630	.65511	8.54			
Isopropylbenzene	1.89670	1.73683	8.43			
1,1,2,2-Tetrachloroethane	.52689	.39695	24.66		**	
p-Bromofluorobenzene (SURR)	.60620	.64091	5.72			
1,2,3-Trichloropropane	.22889	.20477	10.54			
Bromobenzene	.59874	.57953	3.21			
n-Propylbenzene	.50570	.47108	6.85			
2-Chlorotoluene	.44153	.43356	1.81			
4-Chlorotoluene	.47899	.43111	10.00			
1,3,5-Trimethylbenzene	1.75601	1.61252	8.17			
tert-Butylbenzene	1.82119	1.65316	9.23			
1,2,4-Trimethylbenzene	1.70735	1.58520	7.15			
sec-Butylbenzene	2.37614	2.19735	7.52			
1,3-Dichlorobenzene	1.00767	.96435	4.30			
p-Isopropyltoluene	1.94009	1.81466	6.47			
1,4-Dichlorobenzene	1.07055	1.04261	2.61			
1,2-Dichlorobenzene	.97321	.92316	5.14			
n-Butylbenzene	1.88131	1.73667	7.69			
1,2-Dibromo-3-Chloropropane	.20552	.17705	13.85			
1,2,4-Trichlorobenzene	.76039	.74997	1.37			
Naphthalene	1.24774	1.14867	7.94			
Hexachlorobutadiene	.69303	.64223	7.33			
1,2,3-Trichlorobenzene	.70548	.67792	3.91			

RF - Response Factor from daily standard file at 50.00 ppb, %Diff - % Difference from original average or curve
$\overline{RF}$ - Average Response Factor from Initial Calibration, CCC - Calibration Check Compounds (*),
SPCC - System Performance Check Compounds (**)

QA/QC for BNA

Results of the Internal Standard Areas and Surrogate Recoveries for BNA in Soil

Prior to extraction, each sample was spiked with a six component surrogate mixture consisting of nitrobenzene-d_5, 2-fluorobiphenyl, terphenyl-d_{14}, phenol-d_5, 2-fluorophenol, and 2,4,6-tribromophenol. After the extracts were combined and concentrated, they were spiked with an internal standards mixture consisting of 1,4-dichlorobenzene-d_4, naphthalene-d_8, acenaphthene-d_{10}, phenanthrene-d_{10}, chrysene-d_{12}, and perylene-d_{12}.

The internal standard areas are listed in Table 2.5. All 84 internal standard areas were within QC criteria. The surrogate percent recoveries, also listed in Table 2.5, ranged from 70 to 108. All 84 percent recoveries were within QC limits.

Results of the MS/MSD Analysis for BNA in Soil

Sample 2274-1005 was chosen for the matrix spike/matrix spike duplicate (MS/MSD) analysis. The percent recoveries, listed in Table 2.6, ranged from 66 to 96. All 22 recoveries were within QC limits. The relative percent differences (RPDs), also listed in Table 2.6, ranged from 1 to 10. All 11 RPD values were within QC limits.

Table 2.5 Results of the Internal Standard Areas and Surrogate Recoveries for BNA in Soil
WA# 2-274 Cornell Dubilier Site

Analysis Date 08/25/97

Sample No.	File ID	IS 1	IS 2	IS 3	IS 4	IS 5	IS 6
SBLK08079701	CD001	91662	343032	176087	311111	266786	222510
2274-1005	CD002	75071	273163	141326	252627	239245	200472
2274-1005 MS	CD003	83581	302535	155335	269770	251008	213583
2274-1005 MSD	CD004	97896	358308	180084	302036	253024	217802
2274-1012	CD005	88832	323740	163417	278103	242283	204580
2274-1001	CD006	90386	330622	167743	281296	239140	202741
2274-1002	CD007	89820	318715	159320	274873	243235	213076
2274-1003	CD008	89675	329795	169620	288451	255273	223322
2274-1004	CD009	100998	361312	181197	308375	272024	236892
2274-1006	CD010	97293	353359	177235	294476	250916	216915
2274-1007	CD011	105213	387770	193940	328046	284876	248858
2274-1008	CD012	92740	337062	170007	280875	242480	212921
2274-1009	CD013	98451	366916	182680	293822	237606	208991
	Cal Check Area	103720	349389	188645	294695	224182	219132

IS 1 = d4-Dichlorobenzene
IS 2 = d8-Naphthalene
IS 3 = d10-Acenaphthene
IS 4 = d10-Phenanthrene
IS 5 = d12-Chrysene
IS 6 = d12-Perylene

Sample No.	File ID	Surr. 1	Surr. 2	Surr. 3	Surr. 4	Surr. 5	Surr. 6
SBLK08079701	CD001	86	96	82	93	79	84
2274-1005	CD002	80	91	77	84	85	75
2274-1005 MS	CD003	82	92	78	85	90	75
2274-1005 MSD	CD004	78	88	77	88	87	81
2274-1012	CD005	73	82	71	82	81	80
2274-1001	CD006	70	84	73	86	79	85
2274-1002	CD007	96	107	91	107	97	96
2274-1003	CD008	93	103	86	96	92	84
2274-1004	CD009	95	106	89	103	97	91
2274-1006	CD010	70	81	68	85	83	81
2274-1007	CD011	98	106	88	101	97	89
2274-1008	CD012	97	105	93	103	100	91
2274-1009	CD013	99	108	90	104	101	93

CLP Surrogate Limits	Soil	
2-Fluorophenol	(25-121)	Surr 1
Phenol-d5	(24-113)	Surr 2
Nitrobenzene-d5	(23-120)	Surr 3
2-Fluorobiphenyl	(30-115)	Surr 4
2,4,6-Tribromophenol	(19-122)	Surr 5
Terphenyl-d14	(18-137)	Surr 6

Table 2.5 (Cont) Results of the Internal Standard Areas and Surrogate Recoveries for BNA in Soil
WA# 2-274 Cornell Dubilier Site

Analysis Date 08/26/97

Sample No.	File ID	IS 1	IS 2	IS 3	IS 4	IS 5	IS 6
2274-1010	CD015	108981	394648	200243	343749	317361	271047
	Cal Check Area	86962	299851	161747	254955	214708	227937

IS 1 = d4-Dichlorobenzene
IS 2 = d8-Naphthalene
IS 3 = d10-Acenaphthene
IS 4 = d10-Phenanthrene
IS 5 = d12-Chrysene
IS 6 = d12-Perylene

Sample No.	File ID	Surr. 1	Surr. 2	Surr. 3	Surr. 4	Surr. 5	Surr. 6
2274-1010	CD015	84	92	81	86	83	81

CLP Surrogate Limits	Soil	
2-Fluorophenol	(25-121)	Surr. 1
Phenol-d5	(24-113)	Surr. 2
Nitrobenzene-d5	(23-120)	Surr. 3
2-Fluorobiphenyl	(30-115)	Surr. 4
2,4,6-Tribromophenol	(19-122)	Surr. 5
Terphenyl-d14	(18-137)	Surr. 6

Table 2.6 Results of MS/MSD Analysis for BNA in Soil
WA# 2-274 Cornell Dubilier Site
(Based on Dry Weight)

Sample ID: 2274-1005

Compound Name	Sample Conc µg/kg	MS Spike Added µg/kg	MSD Spike Added µg/kg	MS Conc µg/kg	MSD Conc µg/kg	MS % Rec	MSD % Rec	RPD	QC Limits RPD	QC Limits % Rec
Phenol	U	5040	5040	4320	4120	86	82	5	35	26 -
2-Chlorophenol	U	5040	5040	4150	4050	82	80	2	50	25 -
1,4-Dichlorobenzene	U	2520	2520	1700	1760	68	70	4	27	28 -
N-Nitroso-Di-N-Propylamine	U	2520	2520	2030	2120	81	84	4	38	41 -
1,2,4-Trichlorobenzene	U	2520	2520	1670	1780	66	71	6	23	38 -
4-Chloro-3-Methylphenol	U	5040	5040	4450	4190	88	83	6	33	26 -
Acenaphthene	U	2520	2520	1960	2100	78	83	7	19	31 -
4-Nitrophenol	U	5040	5040	4860	4420	96	88	10	50	11 -
2,4-Dinitrotoluene	U	2520	2520	2110	2090	84	83	1	47	28 -
Pentachlorophenol	U	5040	5040	4330	4310	86	86	1	47	17 -
Pyrene	U	2520	2520	1900	1980	75	79	4	36	35 -

QA/QC for Pesticide/PCB

Results of the Surrogate Recoveries for Pesticide/PCB in Soil

The surrogate percent recoveries, listed in Table 2.7, ranged from 37 to 144. Twenty-three out of 28 recoveries are within QC limits.

Results of the Surrogate Recoveries for Pesticide/PCB in Tissue

The surrogate percent recoveries, listed in Table 2.8, ranged from 19 to 108. Ninety-one out of 138 recoveries are within QC limits.

Results of the MS/MSD Analysis for Pesticide/PCB in Soil

Soil sample 2274-1006 was chosen for the matrix spike/matrix spike duplicate (MS/MSD) analysis. The percent recoveries, listed in Table 2.9, ranged from 94 to 133. All 12 recoveries are within QC limits. The relative percent differences (RPDs), also listed in Table 2.9, ranged from zero (0) to 4. All 6 RPD values are within QC limits.

Results of the MS/MSD Analysis for Pesticide/PCB in Tissue

Tissue samples CC-A10-2, BS-A11-1, BH-A11-2, WS-A14-1, WS-A11-1, and CC-A12-3 were chosen for the matrix spike/matrix spike duplicate (MS/MSD) analyses. The reported percent recoveries, listed in Table 2.10, ranged from 4(to 249. Sixty out of 68 reported recoveries are within QC limits. Positive matrix interference was observed by the analyst for the p,p'-DDT results due to the weathered arochlor 1248 and 1254 observed in these samples. The repo: d relative percent differences (RPDs), also listed in Table 2.10, ranged from one to 41. All 34 reported RPD values are within QC limits Four percent recoveries were not reported, and two RPDs were not calculated due to matrix interference.

Table 2.7 Results of the Surrogate Recoveries
for Pesticide/PCB in Soil
WA #: 2-274 Cornell Dubilier Site

Sample ID	Percent Recovery TCMX	DCBP
SBLK08149701	101	106
2274-1001	109	67
2274-1002	144	70
2274-1003	88	61
2274-1004	83	38 *
2274-1005	123	83
2274-1006	114	85
2274-1006MS	110	86
2274-1006MSD	109	77
2274-1007	74	37 *
2274-1008	79	49 *
2274-1009	89	40 *
2274-1010	80	38 *
2274-1012	95	94

	ADVISORY QC Limits
Tetrachloro-m-xylene (TCMX)	60-150
Decachlorobiphenyl (DCBP)	60-150

Table 2.8 Results of the Surrogate Recoveries
for Pesticide/PCB in Tissue
WA #: 2-274 Cornell Dubilier Site

Sample ID	Percent Recovery TCMX	DCBP
MBLK 080897	66	82
CC-A12-1	61	25 *
CC-A12-2	48 *	25 *
CC-A12-3	60	25 *
BS-A12-2	66	82
BH-A12-1	67	90
CC-A11-1	63	19 *
CC-A11-2	60	30 *
CC-A11-3	57 *	22 *
WS-A11-3	59 *	30 *
PS-A11-1	64	28 *
PS-A11-2	59 *	30 *
BS-A11-1	54 *	32 *
BS-A11-2	64	35 *
BS-A11-3	60	38 *
BH-A11-1	58 *	38 *
BS-A10-3	66	75
PS-A10-1	71	72
PS-A10-2	79	64
PS-A13-1	56 *	56 *
PS-A13-2	70	62
BS-A13-1	73	75
BH-A5-1	79	87
BS-A14-1	71	79
MBLK 080997	57 *	108
WS-A12-1	59 *	76
WS-A12-2	73	79
WS-A12-3	77	83
PS-A12-1	64	71
PS-A12-2	65	72
PS-A12-3	74	77
BS-A12-1	71	77
WS-A11-1	75	81
WS-A11-2	74	82
PS-A11-3	69	76
QC Advisory Limits:	60-150%	60-150%

Table 2.8 (Cont) Results of the Surrogate Recoveries
for Pesticide/PCB in Tissue
WA #: 2-274 Cornell Dubilier Site

Sample ID	Percent Recovery TCMX	DCBP
BH-A11-2	73	89
BH-A11-3	68	83
CC-A10-1	92	41 *
CC-A10-2	70	59 *
CC-A10-3	62	71
WS-A10-1	68	79
WS-A10-2	81	84
WS-A10-3	67	57 *
BS-A10-1	55 *	56 *
BS-A10-2	54 *	54 *
CC-A13-1	67	26 *
WS-A13-1	67	87
WS-A13-2	52 *	24 *
MBLK 081197	64	87
WS-A13-3	52 *	38 *
BS-A13-2	55 *	44 *
WS-A14-1	61	54 *
WS-A14-2	60	60
WS-A14-3	57 *	57 *
BH-A14-1	64	66
PS-A14-1	57 *	49 *
PS-A14-2	58 *	53 *
CC-A10-2 MS	59 *	57 *
CC-A10-2 MSD	52 *	49 *
BS-A11-1 MS	50 *	54 *
BS-A11-1 MSD	46 *	43 *
BH-A11-2 MS	52 *	58 *
BH-A11-2 MSD	56 *	58 *
WS-A14-1 MS	58 *	50 *
WS-A14-1 MSD	65	53 *
WS-A11-1 MS	57 *	51 *
WS-A11-1 MSD	52 *	51 *
CC-A12-3 MS	47 *	49 *
CC-A12-3 MSD	53 *	50 *

QC Advisory Limits: 60-150% 60-150%

Table 2.9 Results of the MS/MSD Analysis for Pesticide/PCB in Soil
WA #: 2-274 Cornell Dubilier Site
Based on Dry Weight

Sample ID: 2274-1006

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	M S Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	RPD
g-BHC	U	25 816	26.229	102	25.816	27.261	106	4	46-127	50
Heptachlor	U	25.816	32.218	125	25.816	32.218	125	0	35-130	31
Aldrin	U	25 816	28.914	112	25.816	29.120	113	1	34-132	43
Dieldrin	U	51.632	57.414	111	51.632	58.240	113	1	31-134	38
Endrin	U	51.632	68.567	133	51.632	68.773	133	0	42-139	45
p,p'-DDT	U	51.632	48.534	94	51.632	48.327	94	0	23-134	50

Table 2.10 Results of the MS/MSD Analysis for Pesticide/PCB in Tissue
WA#2-274 Cornell Dubilier Site
Based on Dry Weight

Sample ID: CC-A10-2

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	M S Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	RPD
g-BHC	U	104.515	62.477	60	104.515	52.641	50	17	46-127	50
Heptachlor	U	104.515	100.225	96	104.515	77.387	74	26	35-130	31
Aldrin	U	104.515	103.373	99	104.515	89.794	86	14	34-132	43
Dieldrin	80.430	209.030	217.673	66	209.030	183.299	49	29	31-134	38
Endrin	U	209.030	281.020	134	209.030	231.253	111	19	42-139	45
p,p'-DDT	U	209.030	363.532	174 *MI	209.030	302.960	145 *MI	18	23-134	50

Sample ID: BS-A11-1

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	M S Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	RPD
g-BHC	U	124.131	63.842	51	125.313	54.168	43	17	46-127	50
Heptachlor	U	124.131	89.923	72	125.313	78.243	62	15	35-130	31
Aldrin	U	124.131	94.494	76	125.313	80.796	64	17	34-132	43
Dieldrin	U	248.262	154.267	62	250.627	119.881	48	26	31-134	38
Endrin	U	248.262	232.934	94	250.627	180.069	72	27	42-139	45
p,p'-DDT	108.767	248.262	286.792	72	250.627	227.902	48	41	23-134	50

Table 2.10 (Cont) Results of the MS/MSD Analysis for Pesticide/PCB in Tissue
WA#2-274 Cornell Dubilier Site
Based on Dry Weight

Sample ID: BH-A11-2

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	Advisory QC Limits RPD
g-BHC	U	134.844	67.844	50	134.844	72.212	54	6	46-127	50
Heptachlor	U	134.844	106.549	79	134.844	117.448	87	10	35-130	31
Aldrin	U	134.844	119.270	88	134.844	130.039	96	9	34-132	43
Dieldrin	U	269.687	180.186	67	269.687	187.002	69	4	31-134	38
Endrin	U	269.687	246.443	91	269.687	258.952	96	5	42-139	45
p,p'-DDT	U	269.687	471.420	175 *MI	269.687	513.132	190 *MI	8	23-134	50

Sample ID: WS-A14-1

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	MS Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	Advisory QC Limits RPD
g-BHC	U	100.644	58.386	58	99.721	61.397	62	6	46-127	50
Heptachlor	U	100.644	92.750	92	99.721	101.724	102	10	35-130	31
Aldrin	U	100.644	65.395	65	99.721	70.868	71	9	34-132	43
Dieldrin	U	201.288	177.408	88	199.442	196.312	98	11	31-134	38
Endrin	U	201.288	186.486	93	199.442	203.377	102	10	42-139	45
p,p-DDT	U	201.288	287.621	143 *MI	199.442	319.752	160 *MI	11	23-134	50

Table 2.10 (Cont) Results of the MS/MSD Analysis for Pesticide/PCB in Tissue
WA#2-274 Cornell Dubilier Site
Based on Dry Weight

Sample ID: WS-A11-1

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	M S Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	RPD
g-BHC	U	126.518	73.805	58	124.131	65.008	52	11	46-127	50
Heptachlor	U	126.518	122.946	97	124.131	109.973	89	9	35-130	31
Aldrin	U	126.518	112.157	89	124.131	104.056	84	6	34-132	43
Dieldrin	U	253.036	161.435	64	248.262	153.103	62	3	31-134	38
Endrin	U	253.036	227.376	90	248.262	213.853	86	4	42-139	45
p,p'-DDT	U	253.036	610.316	241 *MI	248.262	619.191	249 *MI	3	23-134	50

Sample ID: CC-A12-3

Compound	Sample Conc (µg/kg)	MS Spike Added (µg/kg)	M S Conc (µg/kg)	MS % Rec	MSD Spike Added (µg/kg)	MSD Conc (µg/kg)	MSD % Rec	RPD	Advisory QC Limits % Rec	RPD
g-BHC	U	103.520	41.653	40	103.520	41.984	41	1	46-127	50
Heptachlor	U	103.520	54.064	52	103.520	53.424	52	1	35-130	31
Aldrin	U	103.520	513.6	MI	103.520	581.16	MI	NC	34-132	43
Dieldrin	U	207.039	120.01	58	207.039	121.38	59	1	31-134	38
Endrin	162.14	207.039	250.26	43	207.039	270.97	53	21	42-139	45
p,p-DDT	U	207.039	1862	MI	207.039	2090	MI	NC	23-134	50

QA/QC for TAL Metals

Results of the QC Standard Analysis for TAL Metals (Soil)

The QC standards ERA-431, QC-7x100, QC-21x100, TMWS, TMMA#1 and TMMA#2 were used to check the accuracy of the calibration curves. The percent recoveries for the metals found in the QC standards listed in Table 2. ranged from 89 to 113. There are 95% confidence interval limits available for 18 of the 37 concentration recoveries. All 18 concentration recoveries are within the limits. There are no 95% confidence interval limits available for the remaining 19 recoveries.

Results of the QC Standard Analysis for TAL Metals (Tissue)

The QC standards ERA-431, QC-7x100, QC-21x100, TMWS, TMMA#1 and TMMA#2 were used to check the accuracy of the calibration curves. The percent recoveries for the metals found in the QC standards listed in Table 2. ranged from 93 to 111. There are 95% confidence interval limits available for 38 of the 72 concentration recoveries. All 38 concentration recoveries are within the limits. There are no 95% confidence interval limits available for the remaining 34 recoveries.

Results of the MS/MSD Analysis for TAL Metals in Soil

Samples C2274-1005 and C2274-1006 were chosen for matrix spike/matrix spike duplicate (MS/MSD) analysis. The reported percent recoveries, listed in Table 2.13, ranged from 12 to 163. The reported relative percent differences (RPDs), also listed in Table 2.13, ranged from zero (0) to 59. Two percent recoveries and one RPD were not calculated because the sample concentration of the analyte was more than 4 times greater than the spike concentratio No QC limits are available for this analysis.

Results of the MS/MSD Analysis for TAL Metals in Tissue

Samples WS-A10-3, WS-A13-1, WS-A14-2, CC-A12-2, WS-A12-1 and BS-A11-1 were chosen for matrix spike/matrix spike duplicate (MS/MSD) analysis. The percent recoveries, listed in Table 2.14, ranged from 45 to 97. The relativ percent differences (RPDs), also listed in Table 2.14, ranged from zero (0) to 20. No QC limits are available for this analysis

Results of the Blank Spike Analysis for TAL Metals in Soil

The percent recoveries for the blank spike compounds, listed in Table 2.15, ranged from 87 to 110. No QC limits a available for this analysis.

Results of the Blank Spike Analysis for TAL Metals in Tissue

The percent recoveries for the blank spike compounds, listed in Table 2.16, ranged from 82 to 112. All 46 recoveries were within the QC limits.

Table 2.11 Results of the QC Standard Analysis for TAL Metals (Soil)
WA# 2-274 Cornell Dubilier Site

Metal	Date Analyzed	Quality Control Standard	Conc. Recovered µg/L	Certified Value µg/L	95 % Confidence Interval	% Recovery
Aluminum	08/19/97	QC-7 x100	1047	1000	NA	105
	08/19/97	ERA-431	475	441	362 - 520	108
Antimony	08/19/97	QC-21 x100	1032	1000	NA	103
Arsenic	08/18/97	TMAA #1	44 4	50	41 9-55 9	89
Barium	08/19/97	QC-7 x100	1026	1000	NA	103
	08/19/97	ERA-431	414	406	333 - 479	102
Beryllium	08/19/97	QC-21 x100	1064	1000	NA	106
	08/19/97	ERA-431	108	103	85 - 122	105
Cadmium	08/19/97	QC-21 x100	1081	1000	NA	108
	08/19/97	ERA-431	85	82	67 - 97	104
Calcium	08/19/97	QC-21 x100	1122	1000	NA	112
Chromium	08/19/97	QC-21 x100	1114	1000	NA	111
	08/19/97	ERA-431	574	529	434 - 624	109
Cobalt	08/19/97	QC-21 x100	1091	1000	NA	109
	08/19/97	ERA-431	493	447	367 - 527	110
Copper	08/19/97	QC-21 x100	1061	1000	NA	106
	08/19/97	ERA-431	220	208	171 - 245	106
Iron	08/19/97	QC-21 x100	1115	1000	NA	112
	08/19/97	ERA-431	741	676	554 - 798	110
Lead	08/19/97	QC-21 x100	1124	1000	NA	112
	08/19/97	ERA-431	367	353	289 - 417	104
Magnesium	08/19/97	QC-21 x100	1069	1000	NA	107
Manganese	08/19/97	QC-21 x100	1102	1000	NA	110
	08/19/97	ERA-431	555	518	425 - 611	107
Mercury	08/13/97	TMWS	3 00	3	2.21 - 3.65	100
Nickel	08/19/97	QC-21 x100	1133	1000	NA	113
	08/19/97	ERA-431	106	94	77 - 111	113
Potassium	08/19/97	QC-7 x100	10010	10000	NA	100
Selenium	08/18/97	TMAA #1	50.5	50	39.4-57.4	101
Silver	08/19/97	QC-7 x100	1041	1000	NA	104
	08/19/97	ERA-431	69	65	53 - 76	106
Sodium	08/19/97	QC-7 x100	1040	1000	NA	104
Thallium	08/18/97	TMAA #2	51 1	50	39 9-57 97	102
Vanadium	08/19/97	QC-21 x100	1055	1000	NA	106
	08/19/97	ERA-431	351	338	277 - 399	104
Zinc	08/19/97	QC-21 x100	1088	1000	NA	109
	08/19/97	ERA-431	455	424	348 - 500	107

Table 2.12 Results of the QC Standard Analysis for TAL Metals (Tissue)
WA# 2-274 Cornell Dubilier Site

Metal	Date Analyzed	Quality Control Standard	Conc. Recovered µg/L	Certified Value µg/L	95 % Confidence Interval	% Recovery
Aluminum	08/20/97	QC-7 x100	1067	1000	NA	107
	08/20/97	ERA-431	459	441	362 - 520	104
Antimony	08/25/97	TMMA#2	99.9	100	81.65 - 125.67	100
Arsenic	08/27/97	TMMA #1	52.13	50	41.9-55.9	104
Barium	08/20/97	QC-7 x100	1028	1000	NA	103
	08/20/97	ERA-431	414	406	333 - 479	102
Beryllium	08/20/97	QC-21 x100	1046	1000	NA	105
	08/20/97	ERA-431	108	103	85 - 122	105
Cadmium	08/20/97	QC-21 x100	1049	1000	NA	105
	08/20/97	ERA-431	82	82	67 - 97	100
Calcium	08/20/97	QC-21 x100	1091	1000	NA	109
Chromium	08/20/97	QC-21 x100	1079	1000	NA	108
	08/20/97	ERA-431	556	529	434 - 624	105
Cobalt	08/20/97	QC-21 x100	1057	1000	NA	106
	08/20/97	ERA-431	464	447	367 - 527	104
Copper	08/20/97	QC-21 x100	1050	1000	NA	105
	08/20/97	ERA-431	218	208	171 - 245	105
Iron	08/20/97	QC-21 x100	1081	1000	NA	108
	08/20/97	ERA-431	716	676	554 - 798	106
Lead	08/27/97	TMMA#1	50.6	50	43.4 - 56.3	101
Magnesium	08/20/97	QC-21 x100	1100	1000	NA	110
Manganese	08/20/97	QC-21 x100	1067	1000	NA	107
	08/20/97	ERA-431	536	518	425 - 611	103
Mercury	08/19/97	TMWS	3.0	3.00	2.21 - 3.65	100
Nickel	08/20/97	QC-21 x100	1089	1000	NA	109
	08/20/97	ERA-431	104	94	77 - 111	111
Potassium	08/20/97	QC-7 x100	10450	10000	NA	105
Selenium	08/22/97	TMMA #1	48.55	50	39.4-57.4	97
Silver	08/20/97	QC-7 x100	1028	1000	NA	103
	08/20/97	ERA-431	64	65	53 - 76	98
Sodium	08/20/97	QC-7 x100	1052	1000	NA	105
Thallium	08/27/97	TMMA #2	49	50	39.9-57.97	98
Vanadium	08/20/97	QC-21 x100	1021	1000	NA	102
	08/20/97	ERA-431	340	338	277 - 399	101
Zinc	08/20/97	QC-21 x100	1056	1000	NA	106
	08/20/97	ERA-431	444	424	348 - 500	105

Table 2.12 (Cont) Results of the QC Standard Analysis for TAL Metals (Tissue)
WA# 2-274 Cornell Dubilier Site

Metal	Date Analyzed	Quality Control Standard	Conc. Recovered µg/L	Certified Value µg/L	95 % Confidence Interval	% Recovery
Aluminum	08/19/97	QC-7 x100	1022	1000	NA	102
	08/19/97	ERA-431	463	441	362 - 520	105
Antimony	08/25/97	TMMA#2	105	100	81.65 - 125.67	105
Arsenic	08/28/97	TMMA #1	46.6	50	41.9-55.9	93
Barium	08/19/97	QC-7 x100	1014	1000	NA	101
	08/19/97	ERA-431	410	406	333 - 479	101
Beryllium	08/19/97	QC-21 x100	1039	1000	NA	104
	08/19/97	ERA-431	107	103	85 - 122	104
Cadmium	08/19/97	QC-21 x100	1048	1000	NA	105
	08/19/97	ERA-431	84	82	67 - 97	102
Calcium	08/19/97	QC-21 x100	1084	1000	NA	108
Chromium	08/19/97	QC-21 x100	1070	1000	NA	107
	08/19/97	ERA-431	548	529	434 - 624	104
Cobalt	08/19/97	QC-21 x100	1044	1000	NA	104
	08/19/97	ERA-431	466	447	367 - 527	104
Copper	08/19/97	QC-21 x100	1045	1000	NA	105
	08/19/97	ERA-431	214	208	171 - 245	103
Iron	08/19/97	QC-21 x100	1076	1000	NA	108
	08/19/97	ERA-431	710	676	554 - 798	105
Lead	08/21/97	TMMA#1	49.2	50	43.4 - 56.3	98
Magnesium	08/19/97	QC-21 x100	1093	1000	NA	109
Manganese	08/19/97	QC-21 x100	1061	1000	NA	106
	08/19/97	ERA-431	533	518	425 - 611	103
Mercury	08/15/97	TMWS	2.9	3.00	2.21 - 3.65	97
Nickel	08/19/97	QC-21 x100	1085	1000	NA	109
	08/19/97	ERA-431	99	94	77 - 111	105
Potassium	08/19/97	QC-7 x100	9839	10000	NA	98
Selenium	08/20/97	TMMA #1	49.1	50	39.4-57.4	98
Silver	08/19/97	QC-7 x100	1020	1000	NA	102
	08/19/97	ERA-431	64	65	53 - 76	98
Sodium	08/19/97	QC-7 x100	1019	1000	NA	102
Thallium	08/21/97	TMMA #2	49.8	50	39.9-57.97	100
Vanadium	08/19/97	QC-21 x100	1018	1000	NA	102
	08/19/97	ERA-431	334	338	277 - 399	99
Zinc	08/19/97	QC-21 x100	1047	1000	NA	105
	08/19/97	ERA-431	441	424	348 - 500	104

Table 2.13 Results of the MS/MSD Analysis for TAL Metals in Soil
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Metal	Client #	Sample Conc. mg/kg	Original Conc. Spike mg/kg	Original Conc. Dup. mg/kg	Recovered Conc. Spike mg/kg	Recovered Conc. Dup. mg/kg	% Recovery Spike	% Recovery Dup	RPD
Antimony	C2274-1005	U	40.8	44.3	4.83	9.63	12	22	59
Antimony	C2274-1006	U	36.3	34.9	14.5	15.3	40	44	9
Arsenic	C2274-1005	2.41	5.00	4.48	5.06	4.81	53	54	0
Arsenic	C2274-1006	0.957	4.17	3.51	4.36	3.77	82	80	2
Barium	C2274-1005	232	81.7	88.6	294	316	76	95	22
Barium	C2274-1006	26.1	72.5	69.7	101	106	103	115	10
Beryllium	C2274-1005	0.916	40.8	44.3	43.1	48.8	103	108	5
Beryllium	C2274-1006	0.222	36.3	34.9	39	39.1	107	112	4
Cadmium	C2274-1005	U	40.8	44.3	39	45.5	95	103	7
Cadmium	C2274-1006	0.043	36.3	34.9	37.3	36.7	103	105	2
Chromium	C2274-1005	35.3	40.8	44.3	74	83.7	95	109	14
Chromium	C2274-1006	8.94	36.3	34.9	52.4	46.7	120	108	10
Cobalt	C2274-1005	11	40.8	44.3	50.2	57.5	96	105	9
Cobalt	C2274-1006	4.02	36.3	34.9	42.7	42.6	107	111	4
Copper	C2274-1005	11.5	40.8	44.3	51.9	58	99	105	6
Copper	C2274-1006	7.86	36.3	34.9	47.1	46	108	109	1
Lead	C2274-1005	9.2	40.8	44.3	48.3	58.2	96	111	14
Lead	C2274-1006	16.7	36.3	34.9	54.4	53	104	104	0
Manganese	C2274-1005	265	40.8	44.3	230	258	NC	NC	NC
Manganese	C2274-1006	106	36.3	34.9	150	163	121	163	30
Mercury	C2274-1005	0.035	0.354	0.354	0.39	0.372	100	95	5
Mercury	C2274-1006	U	0.308	0.331	0.308	0.331	100	100	0
Nickel	C2274-1005	17.6	40.8	44.3	56.5	65.6	95	108	13
Nickel	C2274-1006	8.45	36.3	34.9	49.4	47.1	113	111	2
Selenium	C2274-1005	0.353	5.00	4.48	3.2	2.82	57	55	3
Selenium	C2274-1006	0.024	4.17	3.51	2.8	2.12	67	60	11
Silver	C2274-1005	U	40.8	44.3	38.2	43.9	94	99	6
Silver	C2274-1006	U	36.3	34.9	35.7	35.9	98	103	4
Thallium	C2274-1005	0.196	5.00	4.48	4.27	3.61	81	76	7
Thallium	C2274-1006	0.072	4.17	3.51	3.75	2.97	88	83	6
Vanadium	C2274-1005	46.7	81.7	88.6	124	140	95	105	11
Vanadium	C2274-1006	11.6	72.5	69.7	86.9	85.3	104	106	2
Zinc	C2274-1005	57.9	40.8	44.3	91.3	106	82	109	28
Zinc	C2274-1006	51	36.3	34.9	90.3	89.3	108	110	1

Table 2.14 Results of the MS/MSD Analysis for TAL Metals in Tissue
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Metal	Client #	Sample Conc. mg/kg	Original Conc. Spike mg/kg	Original Conc. Dup. mg/kg	Recovered Conc. Spike mg/kg	Recovered Conc. Dup. mg/kg	% Recovery Spike	% Recovery Dup	RPD
Antimony	WS-A10-3	0.204	8.50	8.39	5.78	5.64	66	65	1
Antimony	WS-A13-1	U	8.56	8.45	5.51	5.41	64	64	0
Antimony	WS-A14-2	U	6.54	6.47	4.19	4.45	64	69	7
Arsenic	WS-A10-3	0.755	8.50	8.39	8.36	8.16	89	88	1
Arsenic	WS-A13-1	0.385	8.56	8.45	7.75	7.41	86	83	3
Arsenic	WS-A14-2	0.126	6.54	6.47	5.14	5.54	77	84	9
Barium	WS-A10-3	0.92	34.0	33.5	31.8	31.5	91	91	0
Barium	WS-A13-1	1.42	34.2	33.8	32.5	32.1	91	91	0
Barium	WS-A14-2	0.768	26.2	25.9	24.1	23.6	89	88	1
Beryllium	WS-A10-3	0.074	34.0	33.5	30.9	31	91	92	2
Beryllium	WS-A13-1	0.059	34.2	33.8	31.5	30.8	92	91	1
Beryllium	WS-A14-2	0.033	26.2	25.9	23.9	23.4	91	90	1
Cadmium	WS-A10-3	0.205	34.0	33.5	28.3	28	83	83	0
Cadmium	WS-A13-1	0.004	34.2	33.8	28.8	27.8	84	82	2
Cadmium	WS-A14-2	0.142	26.2	25.9	21.8	21.7	83	83	1
Chromium	WS-A10-3	2.82	34.0	33.5	31.9	31.9	86	87	1
Chromium	WS-A13-1	2.44	34.2	33.8	33.1	31.7	90	87	3
Chromium	WS-A14-2	1.99	26.2	25.9	25.2	23.8	89	84	5
Cobalt	WS-A10-3	1.75	34.0	33.5	30.9	30.8	86	87	1
Cobalt	WS-A13-1	1.71	34.2	33.8	31.6	30	87	84	4
Cobalt	WS-A14-2	0.51	26.2	25.9	24.2	23.2	90	88	3
Copper	WS-A10-3	2.8	34.0	33.5	33.8	33.9	91	93	2
Copper	WS-A13-1	1.92	34.2	33.8	33.4	33.1	92	92	0
Copper	WS-A14-2	15.9	26.2	25.9	35.3	33	74	66	11
Lead	WS-A10-3	0.34	8.50	8.39	6.73	6.84	75	78	3
Lead	WS-A13-1	0.236	8.56	8.45	6.64	6.72	75	77	3
Lead	WS-A14-2	0.1	6.54	6.47	4.84	5.1	72	77	6

Table 2.14 (Cont) Results of the MS/MSD Analysis for TAL Metals in Tissue
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Metal	Client #	Sample Conc. mg/kg	Original Conc. Spike mg/kg	Original Conc. Dup. mg/kg	Recovered Conc. Spike mg/kg	Recovered Conc. Dup. mg/kg	% Recovery Spike	% Recovery Dup	RPD
Manganese	WS-A10-3	0.727	34.0	33.5	31.2	30.7	90	89	0
Manganese	WS-A13-1	2.64	34.2	33.8	32.7	31.2	88	85	4
Manganese	WS-A14-2	0.947	26.2	25.9	23.7	24.6	87	91	5
Mercury	WS-A10-3	0.765	1.51	1.53	2.19	2.07	95	85	10
Mercury	WS-A13-1	0.479	1.37	1.32	1.78	1.71	95	94	2
Mercury	WS-A14-2	0.282	1.53	1.50	1.76	1.73	97	96	0
Nickel	WS-A10-3	1.37	34.0	33.5	32.2	30.9	91	88	3
Nickel	WS-A13-1	0.802	34.2	33.8	31.8	29.7	91	86	6
Nickel	WS-A14-2	0.32	26.2	25.9	23.6	22.6	89	86	3
Selenium	WS-A10-3	1.6	8.50	8.39	8.58	8.2	82	79	4
Selenium	WS-A13-1	1.61	8.56	8.45	8.15	8.48	76	81	6
Selenium	WS-A14-2	1.29	6.54	6.47	4.25	4.68	45	52	15
Silver	WS-A10-3	1.47	34.0	33.5	30	29.4	84	83	1
Silver	WS-A13-1	0.554	34.2	33.8	30.1	29	86	84	2
Silver	WS-A14-2	U	26.2	25.9	22.6	21.5	86	83	4
Thallium	WS-A10-3	0.306	8.50	8.39	7.79	7.78	88	89	1
Thallium	WS-A13-1	0.372	8.56	8.45	8.08	8.07	90	91	1
Thallium	WS-A14-2	0.2	6.54	6.47	6.13	6.52	91	98	7
Vanadium	WS-A10-3	2.21	34.0	33.5	30.8	31.1	84	86	2
Vanadium	WS-A13-1	1.21	34.2	33.8	32.2	31.3	90	89	2
Vanadium	WS-A14-2	0.535	26.2	25.9	24.1	23.1	90	87	3
Zinc	WS-A10-3	51.3	34.0	33.5	80.8	77.1	87	77	12
Zinc	WS-A13-1	64.1	34.2	33.8	91.3	89.4	79	75	6
Zinc	WS-A14-2	69	26.2	25.9	89.4	89.3	78	78	1

Table 2.14 (Cont) Results of the MS/MSD Analysis for TAL Metals in Tissue
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Metal	Client #	Sample Conc. mg/kg	Original Conc. Spike mg/kg	Original Conc. Dup. mg/kg	Recovered Conc. Spike mg/kg	Recovered Conc. Dup. mg/kg	% Recovery Spike	% Recovery Dup	RPD
Antimony	CC-A12-2	U	7.19	7.08	4.83	4.96	67	70	4
Antimony	WS-A12-1	U	6.79	6.50	4.91	4.32	72	66	9
Antimony	BS-A11-1	U	8.10	7.14	5.67	4.66	70	65	7
Arsenic	CC-A12-2	0.531	7.19	7.08	6.99	6.96	90	91	1
Arsenic	WS-A12-1	0.215	6.79	6.50	6.21	5.68	88	84	5
Arsenic	BS-A11-1	0.568	8.10	7.14	7.34	5.86	84	74	12
Barium	CC-A12-2	0.508	28.8	28.3	27.7	26.6	95	92	3
Barium	WS-A12-1	0.923	27.1	26.0	26.2	25.3	93	94	1
Barium	BS-A11-1	0.685	32.4	28.6	30.5	26.7	92	91	1
Beryllium	CC-A12-2	0.012	28.8	28.3	27.1	26.5	94	93	1
Beryllium	WS-A12-1	U	27.1	26.0	25.3	24.1	93	93	1
Beryllium	BS-A11-1	U	32.4	28.6	30.4	26.6	94	93	1
Cadmium	CC-A12-2	0.39	28.8	28.3	24.4	24	83	83	0
Cadmium	WS-A12-1	0.443	27.1	26.0	23.3	22.1	84	83	1
Cadmium	BS-A11-1	0.307	32.4	28.6	29.2	24.8	89	86	4
Chromium	CC-A12-2	1.8	28.8	28.3	26.6	27	86	89	3
Chromium	WS-A12-1	2.1	27.1	26.0	25.6	24.3	87	85	1
Chromium	BS-A11-1	2.43	32.4	28.6	32.2	28	92	90	3
Cobalt	CC-A12-2	0.246	28.8	28.3	24.1	26.2	83	92	10
Cobalt	WS-A12-1	0.638	27.1	26.0	23.6	22.7	85	85	0
Cobalt	BS-A11-1	0.355	32.4	28.6	30.5	25.9	93	89	4
Copper	CC-A12-2	2.39	28.8	28.3	29.4	28.5	94	92	2
Copper	WS-A12-1	3.12	27.1	26.0	28.6	27.3	94	93	1
Copper	BS-A11-1	2.37	32.4	28.6	32.5	28.8	93	93	1
Lead	CC-A12-2	0.114	7.19	7.08	6.95	6.57	95	91	4
Lead	WS-A12-1	0.107	6.79	6.50	6.25	5.93	91	90	1
Lead	BS-A11-1	0.017	8.10	7.14	6.91	5.87	85	82	4

Table 2.14 (Cont) Results of the MS/MSD Analysis for Metals in Tissue
WA# 2-274 Cornell Dubilier Site
Based on Dry Weight

Metal	Client #	Sample Conc. mg/kg	Original Conc. Spike mg/kg	Original Conc. Dup. mg/kg	Recovered Conc. Spike mg/kg	Recovered Conc. Dup. mg/kg	% Recovery Spike	% Recovery Dup	RPD
Manganese	CC-A12-2	0.928	28.8	28.3	26.5	26.7	89	91	2
Manganese	WS-A12-1	2.55	27.1	26.0	26.6	25.1	89	87	2
Manganese	BS-A11-1	2.99	32.4	28.6	30.7	28.4	86	89	4
Mercury	CC-A12-2	0.307	1.53	1.12	1.76	1.34	95	92	2
Mercury	WS-A12-1	0.283	1.75	1.39	1.84	1.46	89	85	5
Mercury	BS-A11-1	0.886	1.83	1.59	2.57	2.3	92	89	3
Nickel	CC-A12-2	0.794	28.8	28.3	25.7	25.9	87	89	2
Nickel	WS-A12-1	1.96	27.1	26.0	25.7	24	87	85	3
Nickel	BS-A11-1	1.58	32.4	28.6	30.8	26.5	90	87	3
Selenium	CC-A12-2	2.16	7.19	7.08	7.5	6.63	74	63	16
Selenium	WS-A12-1	1.84	6.79	6.50	6.12	5.37	63	54	15
Selenium	BS-A11-1	0.872	8.10	7.14	7.14	5.47	77	64	18
Silver	CC-A12-2	0.844	28.8	28.3	25.1	25.3	84	86	2
Silver	WS-A12-1	0.821	27.1	26.0	23.9	22.2	85	82	3
Silver	BS-A11-1	0.363	32.4	28.6	29.8	25.5	91	88	3
Thallium	CC-A12-2	0.13	7.19	7.08	6.76	6.8	92	94	2
Thallium	WS-A12-1	0.078	6.79	6.50	5.95	6.11	87	93	7
Thallium	BS-A11-1	0.133	8.10	7.14	7.45	7.06	90	97	7
Vanadium	CC-A12-2	0.722	28.8	28.3	25.5	25.8	86	88	3
Vanadium	WS-A12-1	0.544	27.1	26.0	24.8	23.7	89	89	0
Vanadium	BS-A11-1	U	32.4	28.6	30.6	26.4	94	92	2
Zinc	CC-A12-2	43.9	28.8	28.3	66.4	70.9	78	95	20
Zinc	WS-A12-1	55.9	27.1	26.0	79.5	77.4	87	83	5
Zinc	BS-A11-1	64.7	32.4	28.6	94.5	88.5	92	83	10

Table 2.15 Results of the Blank Spike Analysis for TAL Metals in Soil
WA# 2-274 Cornell Dubilier Site

Metal	Spiked Conc mg/kg	Sand Blk Conc mg/kg	Recovered Conc. mg/kg	% Recovery
Aluminum	727	U	767	105
Antimony	45.5	U	47	103
Arsenic	4.95	U	4.3	87
Barium	90.9	U	92.1	101
Beryllium	45.5	U	49.1	108
Cadmium	45.5	U	48.2	106
Calcium	727	U	788	108
Chromium	45.5	U	49.4	109
Cobalt	45.5	U	49.9	110
Copper	45.5	U	47.5	105
Iron	727	U	800	110
Lead	45.5	U	48.8	107
Magnesium	727	U	772	106
Manganese	45.5	U	48.8	107
Mercury	0.400	NA	0.4	100
Nickel	45.5	U	50.2	110
Potassium	727	U	727	100
Selenium	4.95	U	5.01	101
Silver	45.5	U	46.3	102
Sodium	727	U	739	102
Thallium	4.95	U	5.14	104
Vanadium	90.9	U	94.5	104
Zinc	45.5	3.03	51	106

Table 2.16 Results of the Blank Spike Analysis for TAL Metals in Tissue
WA# 2-274 Cornell Dubilier Site

Metal	Spiked Conc mg/kg	Recovered Conc mg/kg	% Recovery
Aluminum	400	357	89
Antimony	2.50	2.3	92
Arsenic	2.50	2.69	108
Barium	10.0	9.25	93
Beryllium	10.0	9.09	91
Cadmium	10.0	8.22	82
Calcium	400	340	85
Chromium	10.0	8.76	88
Cobalt	10.0	8.88	89
Copper	10.0	9.48	95
Iron	400	362	91
Lead	2.50	2.42	97
Magnesium	400	352	88
Manganese	10.0	8.83	88
Mercury	0.400	0.400	100
Nickel	10.0	8.93	89
Potassium	400	334	84
Selenium	2.50	2.65	106
Silver	10.0	8.55	86
Sodium	400	361	90
Thallium	2.50	2.22	89
Vanadium	10.0	8.94	89
Zinc	10.0	9.03	90

Table 2 16 (Cont) Results of the Blank Spike Analysis for TAL Metals in Tissue
WA# 2-274 Cornell Dubilier Site

METAL	Spiked Conc mg/kg	Recovered Conc mg/kg	% Recovery
Aluminum	400	371	93
Antimony	2.50	2.3	92
Arsenic	2.50	2.67	107
Barium	10.0	9.41	94
Beryllium	10.0	9.34	93
Cadmium	10.0	8.8	88
Calcium	400	359	90
Chromium	10.0	9.76	98
Cobalt	10.0	9.59	96
Copper	10.0	9.87	99
Iron	400	371	93
Lead	2.50	2.49	100
Magnesium	400	370	93
Manganese	10.0	9.11	91
Mercury	0.400	0.400	100
Nickel	10.0	9.53	95
Potassium	400	430	108
Selenium	2.50	2.79	112
Silver	10.0	9.47	95
Sodium	400	364	91
Thallium	2.50	2.69	108
Vanadium	10.0	9.49	95
Zinc	10.0	9.48	95

QA/QC for TOC

Results of the Duplicate Analysis for TOC in Soil

Sample E2274-1001 was chosen for duplicate analysis. The relative percent difference (RPD), listed in Table 2.17, was three. No QC limits are available for the RPD.

Table 2.17 Results of the Duplicate Analysis for TOC in Soil
WA # 2-274 Cornell Dubilier Site
Based on Dry Weight

Sample: E2274-1001

Sample Conc. %	Duplicate Conc. %	RPD
1.2	1.17	3

Roy F. Weston, Inc.
GSA Raritan Depot
Bldg. 209 Annex (Bay F)
2890 Woodbridge Avenue
Edison, New Jersey 08837-3679
732-321-4200 • Fax 732-494-4021

APPL Inc.
4203 West Swift Avenue
Fresno, CA 93722

Attn: Diane Anderson

14 August 1997

Project# 3347-142-001-2274 Cornell Dubilier

As per Weston REAC Purchase Order number 83846, please analyze samples according to the following parameters:

Analysis/Method	Matrix	# of samples
TOC (Loss on Ignition) / AASHTO T267-86	Soil	10
Grain Size/ASTM D422	Soil	10
Data package attached Deliverables Requirements		

Samples are expected to arrive at your laboratory on August 15, 1997. **All applicable QA/QC analysis as per method, will be performed on our sample matrix. Preliminary sample result tables plus a signed copy of our Chain of Custody must be faxed to REAC 10 business days after receipt of samples, with the complete data package due 21 business days after receipt of samples.** The complete data package must include all items on the deliverables checklist.

Please submit all reports and technical questions concerning this project to **John Johnson at (908) 321-4248 or fax to (908) 494-4020** Any contractual question, please call Cynthia Davison at (908) 321-4296.

Thank you

Sincerely,

Misty Barkley
Data Validation and Report Writing Group Leader
Roy F. Weston, Inc. / REAC Project

MB:jj Attachments

cc R. Singhvi
M. Sprenger
2274\non\mem\9708\sub\2274Con
V. Kansal
Subcontracting File
C. Gasser
C. Davison
S. Grossman
M. Barkley

REAC, [illegible]
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2274-01
RFW Contact: Scott Grossman Phone: 321-4200

No: 05350

SHEET NO. 1 OF 3

081297

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TAL	Pest/PCB	% Moist	% Lipids
053	CC-A12-1	A-12	Tissue	8/6/97	—	4°C	x	x	x	x
054	CC-A12-2	A-12	T*	8/6/97	—	4°C				
055	CC-A12-3	A-12	T	8/6/97	—	4°C				
056	WS-A12-1	A-12	T	8/6/97	—	4°C				
057	WS-A12-2	A-12	T	8/6/97	—	4°C				
058	WS-A12-3	A-12	T	8/6/97	—	4°C				
059	PS-A12-1	A-12	T	8/6/97	—	4°C				
060	PS-A12-2	A-12	T	8/6/97	—	4°C				
061	PS-A12-3	A-12	T	8/6/97	—	4°C				
062	BS-A12-1	A-12	T	8/6/97	—	4°C				
063	BS-A12-2	A-12	T	8/6/97	—	4°C				
064	BH-A12-1	A-12	T	8/6/97	—	4°C				
065	CC-A11-1	A-11	T	8/6/97	—	4°C				
066	CC-A11-2	A-11	T	8/6/97	—	4°C				
067	CC-A11-3	A-11	T	8/6/97	—	4°C				
068	WS-A11-1	A-11	T	8/6/97	—	4°C				
069	WS-A11-2	A-11	T	8/6/97	—	4°C				
070	WS-A11-3	A-11	T	8/6/97	—	4°C				
071	PS-A11-1	A-11	T	8/6/97	—	4°C				
072	PS-A11-2	A-11	T	8/6/97	—	4°C				

0115

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:
* T = Tissue

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ALL/Analysis	Nancy Beckham	8/7/97	[illegible]	8/7/97	4:30	All/Analysis	[illegible]	8/12/97	[illegible]	[illegible]	14:15
All/Analysis	[illegible]	[illegible]	[illegible]	8/12/97	3:00						

FORM #4 8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2274-01
RFW Contact: Scott Grossman Phone: 321-4200

No: 05351

SHEET NO. 3 OF 3

081297

Sample Identification

Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TAL	Pest/PCB	% Moist	% Lipid
093	BS-A13-2	A-13	T*	8/6/97		4°C	X	X	X	X
094	WS-A13-1	A-13	T	8/6/97		4°C				
095	WS-A13-2	A-13	T	8/6/97		4°C				
096	WS-A13-3	A-13 •	T	8/6/97		4°C				
097	BS-A13-1	A-13	T	8/6/97		4°C				
098	BS-A13-2	A-13 •	T	8/6/97		4°C				
099	BH-A5-1	A-5	T	NA 6/17/97		4°C				
100	WS-A14-1	A-14	T	8/6/97		4°C				
101	WS-A14-2	A-14 •	T	8/6/97		4°C				
102	WS-A14-3	A-14	T	8/6/97		4°C				
103	BS-A14-1	A-14	T	8/6/97		4°C				
104	BH-A14-1	A-14	T	8/6/97		4°C				
105	PS-A14-1	A-14	T	8/6/97		4°C				
106	PS-A14-2	A-14	T	8/6/97		4°C				

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

* T = Tissue

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ALL/Analysis	Nancy Beckham	8/7/97	[illegible]	8/7/97	4:30	ALL/Analysis	[illegible]	8/12/97	[illegible]	[illegible]	17:15
All/Analysis	[illegible]	[illegible]	[illegible]	8/11/97	3:00						

FORM #4

8/94

REAC, [illegible] J
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2274-01
RFW Contact: Scott Grossman Phone: 321-4200

No: 05369

SHEET NO. 2 OF 3

081297

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	TAL	Pest/PCB	% moisture	% Lipids
073	PS-A11-3	A-11	T *	8/6/97	—	4°C	X	X	X	X
074	BS-A11-1	A-11	T	8/6/97	—	4°C				
075	BS-A11-2	A-11 •	T	8/6/97	—	4°C				
076	BS-A11-3	A-11	T	8/6/97	—	4°C				
077	BH-A11-1	A-11 •	T	8/6/97	—	4°C				
078	BH-A11-2	A-11	T	8/6/97	—	4°C				
079	BH-A11-3	A-11	T	8/6/97	—	4°C				
080	CC-A10-1	A-10	T	8/6/97	—	4°C				
081	CC-A10-2	A-10	T	8/6/97	—	4°C				
082	CC-A10-3	A-10 •	T	8/6/97	—	4°C				
083	WS-A10-1	A-10	T	8/6/97	—	4°C				
084	WS-A10-2	A-10	T	8/6/97	—	4°C				
085	WS-A10-3	A-10 •	T	8/6/97	—	4°C				
086	BS-A10-1	A-10 •	T	8/6/97	—	4°C				
087	BS-A10-2	A-10	T	8/6/97	—	4°C				
088	BS-A10-3	A-10	T	8/6/97	—	4°C				
089	PS-A10-1	A-10	T	8/6/97	—	4°C				
090	PS-A10-2	A-10	T	8/6/97	—	4°C				
091	CC-A13-1	A-13 •	T	8/6/97	—	4°C				
092	PS-A13-1	A-13	T	8/6/97	—	4°C				

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

* T = Tissue

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All/Analysis	Nancy Beckham	8/7/97	[illegible]	8/7/97	4:30PM	All/Analysis	[illegible]	8/12/97	[illegible]	8/12/97	14:15
All/Analysis	[illegible]	[illegible]	Sobolewski	8/12/97	3:00						

FORM #4 8/94

* US GPO 1994 383 015

USEPA ERT

CHAIN OF CUSTODY RECORD

COC # 274-9001

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274-01
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier Site
Location: South Plainfield, NJ
Site Phone: (908) 321-4230

Page No.: 1 of 1
Cooler #:
Lab:
Contact: Scott Grossman
(908) 321-4230

080797

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
939	D	2274-1001	A12-1	Sediment	8/7/97	8 oz glass/None	Base neutral/acid extractables		
940	D	2274-1002	A12-2	Sediment	8/7/97	8 oz glass/None	Base neutral/acid extractables		
941	D	2274-1003	A13-1	Sediment	8/7/97	8 oz glass/None	Base neutral/acid extractables		
942	D	2274-1004	A13-2	Sediment	8/7/97	8 oz glass/None	Base neutral/acid extractables		
943	D	2274-1005	A14-1	Sediment	8/7/97	8 oz glass/None	Base neutral/acid extractables	Y	
944	D	2274-1006	A14-2	Sediment	8/7/97	8 oz glass/None	Base neutral/acid extractables		
945	D	2274-1007	A11-1	Sediment	8/7/97	8 oz glass/None	Base neutral/acid extractables		
946	D	2274-1008	A11-2	Sediment	8/7/97	8 oz glass/None	Base neutral/acid extractables		
947	D	2274-1009	A10-1	Sediment	8/8/97	8 oz glass/None	Base neutral/acid extractables		
948	D	2274-1010	A10-2	Sediment	8/8/97	8 oz glass/None	Base neutral/acid extractables		
949	D	2274-1012	Field Blank	Soil	8/8/97	8 oz glass/None	Base neutral/acid extractables		

0118

Special Instructions:

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
1-11 /Analysis	[illegible]	8/8/97	[illegible]	[illegible]	[illegible]	All/ANALYSIS	[illegible]	9/8/97	[illegible]	8/8/97	9:30 Am

EP[illegible] CHAIN OF C[illegible]ODY RECORD [illegible] 274-5002

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274-01
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier Site
Location: South Plainfield, NJ
Site Phone: (908) 321-4230

Page No.: 1 of 1
Cooler #:
Lab:
Contact: Scott Grossman
(908) 321-4230

080797

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
907	C	2274-1001	A12-1	Sediment	8/7/97	8 oz glass/None	metals, TAL		
908	C	2274-1002	A12-2	Sediment	8/7/97	8 oz glass/None	metals, TAL		
909	C	2274-1003	A13-1	Sediment	8/7/97	8 oz glass/None	metals, TAL		
910	C	2274-1004	A13-2	Sediment	8/7/97	8 oz glass/None	metals, TAL		
911	C	2274-1005	A14-1	Sediment	8/7/97	8 oz glass/None	metals, TAL	Y	
912	C	2274-1006	A14-2	Sediment	8/7/97	8 oz glass/None	metals, TAL	Y	
913	C	2274-1007	A11-1	Sediment	8/7/97	8 oz glass/None	metals, TAL		
914	C	2274-1008	A11-2	Sediment	8/7/97	8 oz glass/None	metals, TAL		
915	C	2274-1009	A10-1	Sediment	8/8/97	8 oz glass/None	metals, TAL		
916	C	2274-1010	A10-2	Sediment	8/8/97	8 oz glass/None	metals, TAL		
917	C	2274-1012	Field Blank	Soil	8/8/97	8 oz glass/None	metals, TAL		

0119

Special Instructions:

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
1-11/Analysis	[illegible]	8/8/97	C Gusser	8/8/97	[illegible]	A11/ANALYSIS	C Gusser	8/8/97	C Sobolewski	8/8/97	10:00

USEPA ERT | **CHAIN OF CUSTODY RECORD** | **COC # 274-9003**

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274-01
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier Site
Location: South Plainfield, NJ
Site Phone: (908) 321-4230

Page No.: 1 of 1
Cooler #:
Lab:
Contact: Scott Grossman
(908) 321-4230

080797

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
~~896~~ n.b	A	2274-1000	A10		8/7/97	Foil	~~Pesticides/PCB~~ (PP)		
~~897~~ 894 n.b	B	2274-1001	A12-1	Sediment	8/7/97	8 oz glass/None	Pesticides/PCB		
897	B	2274-1002	A12-2	Sediment	8/7/97	8 oz glass/None	Pesticides/PCB		
898	B	2274-1003	A13-1	Sediment	8/7/97	8 oz glass/None	Pesticides/PCB		
899	B	2274-1004	A13-2	Sediment	8/7/97	8 oz glass/None	Pesticides/PCB		
900	B	2274-1005	A14-1	Sediment	8/7/97	8 oz glass/None	Pesticides/PCB	Y	
901	B	2274-1006	A14-2	Sediment	8/7/97	8 oz glass/None	Pesticides/PCB	Y	
902	B	2274-1007	A11-1	Sediment	8/7/97	8 oz glass/None	Pesticides/PCB		
903	B	2274-1008	A11-2	Sediment	8/7/97	8 oz glass/None	Pesticides/PCB		
904	B	2274-1009	A10-1	Sediment	8/8/97	8 oz glass/None	Pesticides/PCB		
905	B	2274-1010	A10-2	Sediment	8/8/97	8 oz glass/None	Pesticides/PCB		
906	B	2274-1012	Field Blank	Soil	8/8/97	8 oz glass/None	Pesticides/PCB		0120

Special Instructions:

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
I-11/Analysis		8/8/97		8/8	15:15	A11/Analysis	C. Garson	8/8/97		8/8/97	9:20 am

USEPA CHAIN OF CUSTODY RECORD 2274-9004

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274-01
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier Site
Location: South Plainfield, NJ
Site Phone: (908) 321-4230

Page No.: 1 of 1
Cooler #:
Lab:
Contact: Scott Grossman
(908) 321-4230

08/07/97

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
918	A	2274-1001	A12-1	Sediment	8/7/97	4 oz. sept/None	Volatiles		
919	A	2274-1002	A12-2	Sediment	8/7/97	4 oz. sept/None	Volatiles		
920	A	2274-1003	A13-1	Sediment	8/7/97	4 oz. sept/None	Volatiles		
921	A	2274-1004	A13-2	Sediment	8/7/97	4 oz. sept/None	Volatiles		
922	A	2274-1005	A14-1	Sediment	8/7/97	4 oz. sept/None	Volatiles	Y	
923	A	2274-1006	A14-2	Sediment	8/7/97	4 oz. sept/None	Volatiles	Y	
924	A	2274-1007	A11-1	Sediment	8/7/97	4 oz. sept/None	Volatiles		
925	A	2274-1008	A11-2	Sediment	8/7/97	4 oz. sept/None	Volatiles		
926	A	2274-1009	A10-1	Sediment	8/8/97	4 oz. sept/None	Volatiles		
927	A	2274-1010	A10-2	Sediment	8/8/97	4 oz. sept/None	Volatiles		
928	A	2274-1011	Trip Blank	Soil	8/8/97	4 oz. sept/None	Volatiles		0121

Special Instructions:

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
I-11/Analysis	[signature]	8/8/97	[signature]	8/8/97	[illegible]	All/ANALYSIS	C. Bussen	8/8/97	[signature]	8/8/97	940

CHAIN OF C[illegible]TODY RECORD

C[illegible] # 274-9005

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274-01
EPA Contract 68-C4-0022

Project Name: Corpell Dubilier Site
Location: South Plainfield, NJ
Site Phone: (908) 321-4230

Page No.: 1 of 1
Cooler #:
Lab:
Contact: Scott Grossman
(908) 321-4230

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
929	F	2274-1001	A12-1	Sediment	8/7/97	32 oz glass/None	Grain Size		
930	F	2274-1002	A12-2	Sediment	8/7/97	32 oz glass/None	Grain Size		
931	F	2274-1003	A13-1	Sediment	8/7/97	32 oz glass/None	Grain Size		
932	F	2274-1004	A13-2	Sediment	8/7/97	32 oz glass/None	Grain Size		
933	F	2274-1005	A14-1	Sediment	8/7/97	32 oz glass/None	Grain Size		
934	F	2274-1006	A14-2	Sediment	8/7/97	32 oz glass/None	Grain Size		
935	F	2274-1007	A11-1	Sediment	8/7/97	32 oz glass/None	Grain Size		
936	F	2274-1008	A11-2	Sediment	8/7/97	32 oz glass/None	Grain Size		
937	F	2274-1009	A10-1	Sediment	8/8/97	32 oz glass/None	Grain Size		
938	F	2274-1010	A10-2	Sediment	8/8/97	32 oz glass/None	Grain Size		

600

0122

Special Instructions:

Ambient & Intact

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
1-10/Analysis	Philip Vi[illegible]	8/8/97	C Gasser	8/8/97	15:15	Fed Exp					
						1-10 Analysis	Fed Exp	8/14/97	[illegible]	8/14/97	1055

PA AIN C DY OR 4-9

REAC, Edison, NJ
Contact: Scott Grossman
(908) 321-4230
WO#: 03347-142-001-2274-01
EPA Contract 68-C4-0022

Project Name: Cornell Dubilier Site
Location: South Plainfield, NJ
Site Phone: (908) 321-4230

Page No.: 1 of 1
Cooler #:
Lab:
Contact: Scott Grossman
(908) 321-4230

080797

LAB #	Tag	Sample #	Location	Matrix	Collected	Container/Preservative	Analysis Requested	MS MSD	Comments
950	E	2274-1001	A12-1	Sediment	8/7/97	8 oz glass/None	TOC		
951	E	2274-1002	A12-2	Sediment	8/7/97	8 oz glass/None	TOC		
952	E	2274-1003	A13-1	Sediment	8/7/97	8 oz glass/None	TOC		
953	E	2274-1004	A13-2	Sediment	8/7/97	8 oz glass/None	TOC		
954	E	2274-1005	A14-1	Sediment	8/7/97	8 oz glass/None	TOC		
955	E	2274-1006	A14-2	Sediment	8/7/97	8 oz glass/None	TOC		
956	E	2274-1007	A11-1	Sediment	8/7/97	8 oz glass/None	TOC		
957	E	2274-1008	A11-2	Sediment	8/7/97	8 oz glass/None	TOC		
958	E	2274-1009	A10-1	Sediment	8/8/97	8 oz glass/None	TOC		
959	E	2274-1010	A10-2	Sediment	8/8/97	8 oz glass/None	TOC		

0723

Special Instructions:

Ambient + Intact

REFERENCE COC:

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
1-10 / Analysis	[signature]	8/8/97	[signature]	8/8/97	15 15	Fed Exp.					
1-10 / Analysis	Fed Exp.								[signature]	8/14/97	1035

800

PARTICLE SIZE ANALYSIS

Technician's name: Chris French
Date: 08/14/97

Site name: Cornell Dubiler
Sample No.: A10262

Sample Data

Mass of sample split on No. 10 sieve (g):	101.91
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	101.91
Percent passing No. 10 sieve (g):	100.00
Mass used in Hydrometer test (g):	101.91
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	101.91

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	100.55

Hydrometer Test

Hydrometer type: 151H

Hydrometer correction:	0.001
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.001

Values

K:	0.01365
W:	100.55
F:	0.00

Results A10262

Sieve Analysis

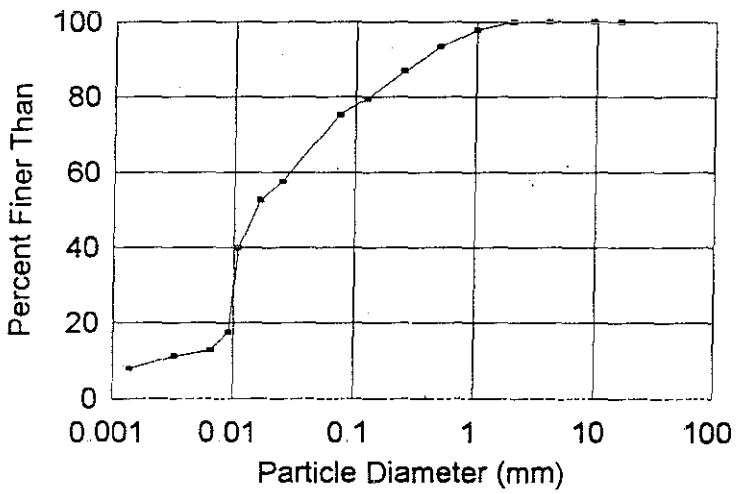
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	100.55	100.00
9.5	0.00	0.00	0.00	100.55	100.00
4	0.00	0.00	0.00	100.55	100.00
2	0.00	0.00	0.00	100.55	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.037	1.036	6.77	0.0251	57.50
5	1.034	1.033	7.57	0.0168	52.71
15	1.026	1.025	9.68	0.0110	39.93
30	1.012	1.011	13.39	0.0091	17.57
60	1.009	1.008	14.18	0.0066	12.78
250	1.008	1.007	14.44	0.0033	11.18
1440	1.006	1.005	14.97	0.0014	7.99

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	2.19	98.36	97.82
0.5	4.50	93.86	93.35
0.25	6.54	87.32	86.84
0.125	7.38	79.94	79.50
0.075	4.19	75.75	75.34
TOTAL	24.80		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	97.82
	0.5	93.35
Fine Sand	0.25	86.84
	0.125	79.50
	0.075	75.34
Silt	0.0251	57.50
	0.0168	52.71
	0.0110	39.93
	0.0091	17.57
	0.0066	12.78
	0.0033	11.18
Clay	0.0014	7.99

PARTICLE SIZE ANALYSIS

Technician's name: Chris French
Date: 08/14/97

Site name: Cornell Dubiler
Sample No.: A10263

Sample Data

Mass of sample split on No. 10 sieve (g):	169.06
Mass retained on No. 10 sieve (g):	66.02
Mass passing No. 10 sieve (g):	103.04
Percent passing No. 10 sieve (g):	60.95
Mass used in Hydrometer test (g):	103.04
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	103.04

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	101.67

Hydrometer Test

Hydrometer type: 151H

Hydrometer correction:	0.001
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.001

Values

K:	0.01365
W:	156.81
F:	65.14

Results A10263

Sieve Analysis

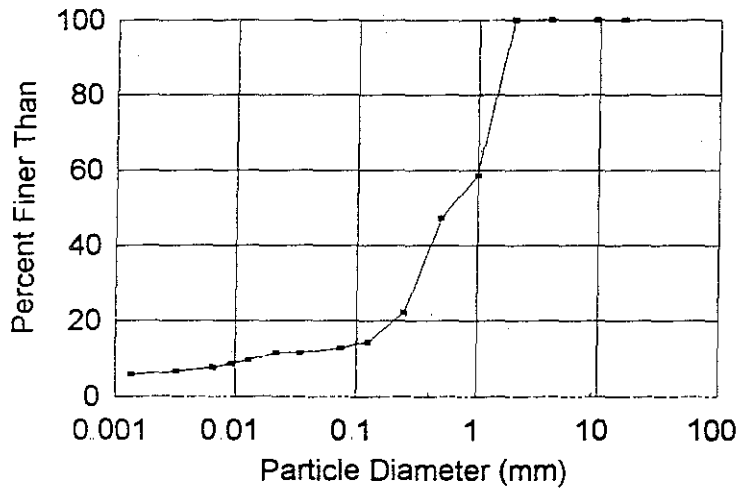
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	166.81	100.00
9.5	12.61	12.44	0.00	166.81	100.00
4	39.91	39.38	0.00	166.81	100.00
2	13.50	13.32	0.00	166.81	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.013	1.012	13.12	0.0350	11.55
4	1.013	1.012	13.12	0.0221	11.55
15	1.011	1.01	13.65	0.0130	9.63
30	1.010	1.009	13.91	0.0093	8.67
60	1.009	1.008	14.18	0.0066	7.70
250	1.008	1.007	14.44	0.0033	6.74
1440	1.007	1.006	14.71	0.0014	5.78

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	3.98	97.69	58.56
0.5	18.96	78.73	47.20
0.25	41.59	37.14	22.26
0.125	13.14	24.00	14.39
0.075	2.76	21.24	12.73
TOTAL	80.43		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	58.56
	0.5	47.20
Fine Sand	0.25	22.26
	0.125	14.39
	0.075	12.73
Silt	0.0350	11.55
	0.0221	11.55
	0.0130	9.63
	0.0093	8.67
	0.0066	7.70
Clay	0.0033	6.74
	0.0014	5.78

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/08/97
Site name:	Comell Dubilier
Sample No.:	A10264

Sample Data

Mass of sample split on No. 10 sieve (g):	101.7
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	101.7
Percent passing No. 10 sieve (g):	100.00
Mass used in Hydrometer test (g):	101.7
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	101.7

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	100.34

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	100.34
F:	0.00

Results	A10264

Sieve Analysis

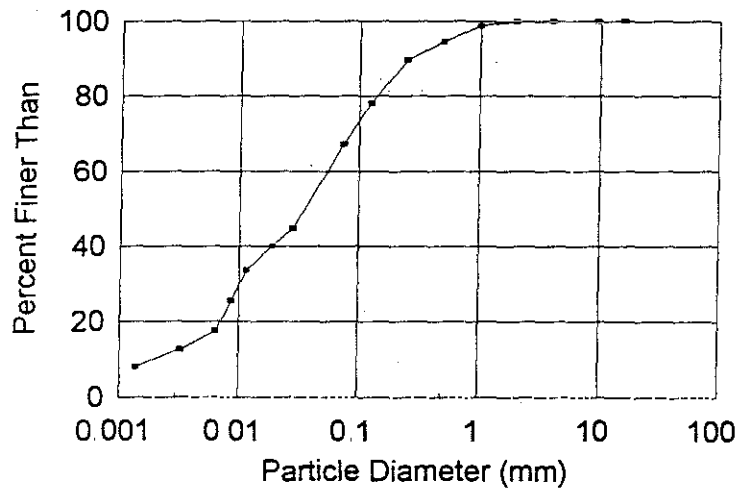
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	100.34	100.00
9.5	0.00	0.00	0.00	100.34	100.00
4	0.00	0.00	0.00	100.34	100.00
2	0.00	0.00	0.00	100.34	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.030	1.028	8.89	0.0288	44.82
5	1.027	1.025	9.53	0.0190	40.01
15	1.023	1.021	10.74	0.0116	33.61
30	1.018	1.016	12.06	0.0087	25.61
60	1.013	1.011	13.39	0.0064	17.61
250	1.010	1.008	14.18	0.0033	12.80
1440	1.007	1.005	14.97	0.0014	8.00

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	1.26	99.08	98.74
0.5	4.23	94.85	94.53
0.25	5.01	89.84	89.54
0.125	11.57	78.27	78.01
0.075	10.91	67.36	67.13
TOTAL	32.98		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	98.74
	0.5	94.53
Fine Sand	0.25	89.54
	0.125	78.01
	0.075	67.13
Silt	0.0288	44.82
	0.0190	40.01
	0.0116	33.61
	0.0087	25.61
	0.0064	17.61
Clay	0.0033	12.80
	0.0014	8.00

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/08/97
Site name:	Cornell Dubilier
Sample No.:	A10265

Sample Data

Mass of sample split on No. 10 sieve (g):	104.5
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	104.5
Percent passing No. 10 sieve (g):	100.00
Mass used in Hydrometer test (g):	104.5
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	104.5

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	103.11

Hydrometer Test

Hydrometer type:	152H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	103.11
F:	0.00

Results A10265

Sieve Analysis

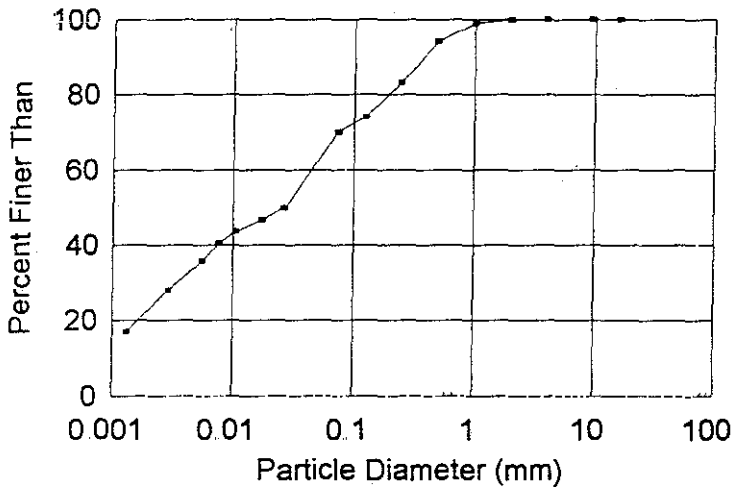
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	103.11	100.00
9.5	0.00	0.00	0.00	103.11	100.00
4	0.00	0.00	0.00	103.11	100.00
2	0.00	0.00	0.00	103.11	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.034	1.032	7.53	0.0270	49.85
5	1.032	1.030	8.35	0.0176	46.73
15	1.030	1.028	8.89	0.0105	43.61
30	1.028	1.026	9.42	0.0076	40.50
60	1.025	1.023	10.21	0.0056	35.83
250	1.020	1.018	11.53	0.0029	28.04
1440	1.013	1.011	13.30	0.0013	17.13

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	1.09	102.02	98.94
0.5	4.87	97.15	94.22
0.25	11.31	85.84	83.25
0.125	9.48	76.36	74.06
0.075	4.08	72.28	70.10
TOTAL	30.83		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	98.94
	0.5	94.22
Fine Sand	0.25	83.25
	0.125	74.06
	0.075	70.10
Silt	0.0270	49.85
	0.0176	46.73
	0.0105	43.61
	0.0076	40.50
	0.0056	35.83
	0.0029	28.04
Clay	0.0013	17.13

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/14/97
Site name:	Cornell Dubiler
Sample No.:	A10266

Sample Data

Mass of sample split on No. 10 sieve (g):	123.24
Mass retained on No. 10 sieve (g):	20.27
Mass passing No. 10 sieve (g):	102.97
Percent passing No. 10 sieve (g):	83.55
Mass used in Hydrometer test (g):	102.97
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	102.97

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	101.60

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.001
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.001

Values

K:	0.01365
W:	121.60
F:	20.00

Results	A10266

Sieve Analysis

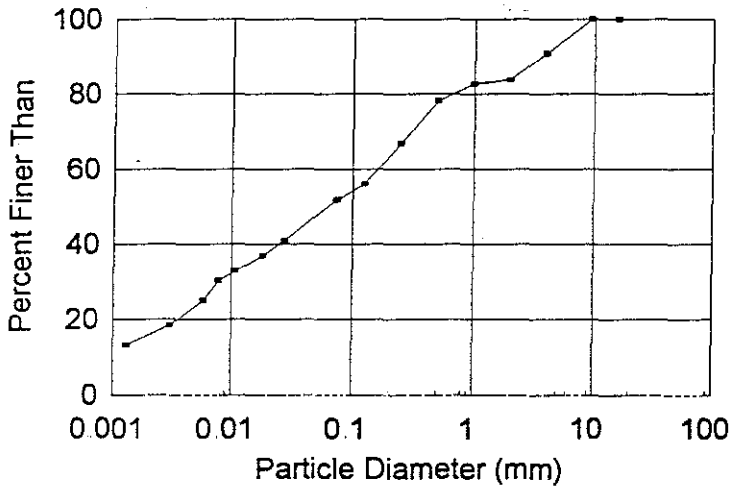
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	121.60	100.00
9.5	0.00	0.00	0.00	121.60	100.00
4	11.45	11.30	11.15	110.45	90.83
2	8.82	8.70	8.59	101.86	83.77

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.032	1.031	8.09	0.0275	40.95
5	1.029	1.028	8.39	0.0182	36.98
15	1.026	1.025	8.68	0.0110	33.02
30	1.024	1.023	10.21	0.0080	30.38
60	1.020	1.019	11.27	0.0059	25.10
250	1.015	1.014	12.59	0.0031	18.49
1440	1.011	1.01	13.65	0.0013	13.21

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	1.03	100.57	82.71
0.5	5.51	95.06	78.17
0.25	13.79	81.27	66.83
0.125	13.22	68.05	55.96
0.075	5.08	62.97	51.78
TOTAL	38.53		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	90.83
	2	83.77
Medium Sand	1	82.71
	0.5	78.17
Fine Sand	0.25	66.83
	0.125	55.96
	0.075	51.78
Silt	0.0275	40.95
	0.0182	36.98
	0.0110	33.02
	0.0080	30.38
	0.0059	25.10
Clay	0.0031	18.49
	0.0013	13.21

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/08/97
Site name:	Cornell Dubilier
Sample No.:	A10267

Sample Data

Mass of sample split on No. 10 sieve (g):	101.2
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	101.2
Percent passing No. 10 sieve (g):	100.00
Mass used in Hydrometer test (g):	101.2
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	101.2

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	99.85

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	99.85
F:	0.00

Results	A10267

Sieve Analysis

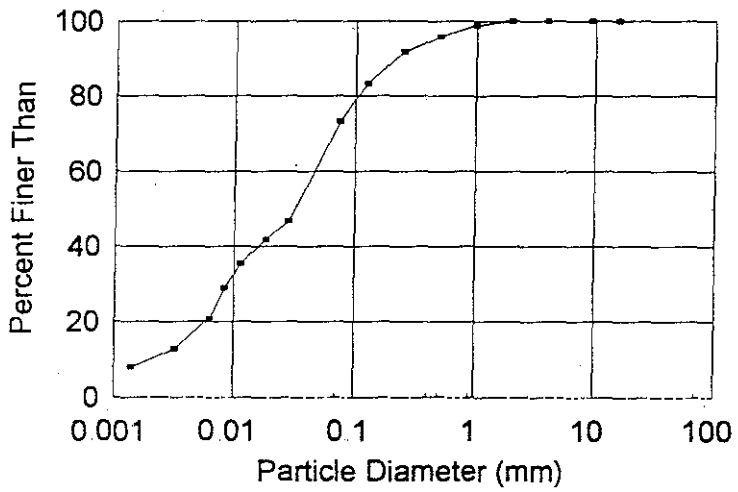
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	99.85	100.00
9.5	0.00	0.00	0.00	99.85	100.00
4	0.00	0.00	0.00	99.85	100.00
2	0.00	0.00	0.00	99.85	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.031	1.029	8.62	0.0283	46.65
5	1.028	1.025	9.42	0.0187	41.82
15	1.024	1.022	10.48	0.0114	35.39
30	1.020	1.018	11.53	0.0085	28.95
60	1.015	1.013	12.85	0.0063	20.91
250	1.010	1.008	14.18	0.0033	12.87
1440	1.007	1.005	14.97	0.0014	8.04

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	1.21	98.64	98.79
0.5	2.91	95.73	95.87
0.25	4.03	91.70	91.84
0.125	8.51	83.19	83.32
0.075	10.01	73.18	73.29
TOTAL	26.57		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	98.79
	0.5	95.87
Fine Sand	0.25	91.84
	0.125	83.32
	0.075	73.29
Silt	0.0283	46.65
	0.0187	41.82
	0.0114	35.39
	0.0085	28.95
	0.0063	20.91
Clay	0.0033	12.87
	0.0014	8.04

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/14/97
Site name:	Cornell Dubilier
Sample No.:	A10371

Sample Data

Mass of sample split on No. 10 sieve (g):	102.59
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	102.59
Percent passing No. 10 sieve (g):	100.00
Mass used in Hydrometer test (g):	102.59
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	102.59

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	101.22

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.001
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.001

Values

K:	0.01365
W:	101.22
F:	0.00

Results	A10371

Sieve Analysis

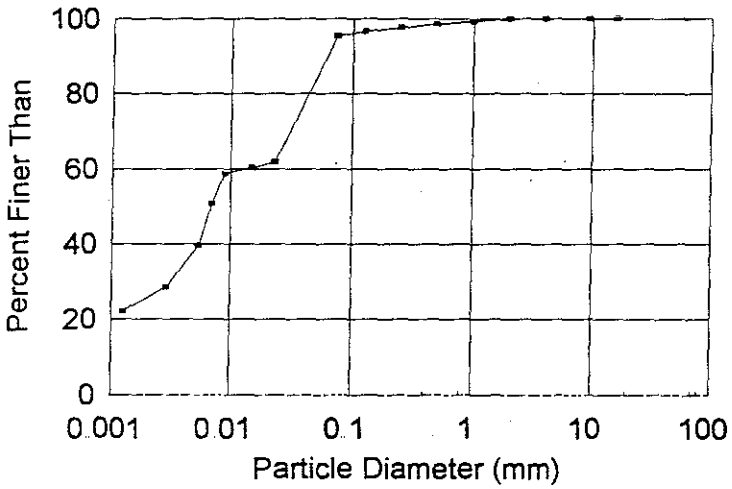
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	101.22	100.00
9.5	0.00	0.00	0.00	101.22	100.00
4	0.00	0.00	0.00	101.22	100.00
2	0.00	0.00	0.00	101.22	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.040	1.039	5.98	0.0236	61.88
5	1.039	1.038	6.24	0.0153	60.29
15	1.038	1.037	6.51	0.0090	58.71
30	1.033	1.032	7.83	0.0070	50.77
60	1.026	1.025	9.55	0.0055	39.67
250	1.019	1.018	11.53	0.0029	28.56
1440	1.015	1.014	12.59	0.0013	22.21

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	0.66	100.56	99.35
0.5	0.68	99.88	98.68
0.25	1.06	98.82	97.63
0.125	1.03	97.79	96.61
0.075	1.21	96.58	95.42
TOTAL	4.64		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	99.35
	0.5	98.68
Fine Sand	0.25	97.63
	0.125	96.61
	0.075	95.42
Silt	0.0236	61.88
	0.0153	60.29
	0.0090	58.71
	0.0070	50.77
	0.0055	39.67
Clay	0.0029	28.56
	0.0013	22.21

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/08/97
Site name:	Cornell Dubilier
Sample No.:	A10372

Sample Data

Mass of sample split on No. 10 sieve (g):	104.6
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	104.6
Percent passing No. 10 sieve (g):	100.00

Mass used in Hydrometer test (g):	104.6
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	104.6

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	103.21

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	103.21
F:	0.00

Soil

Results	A10372

Sieve Analysis

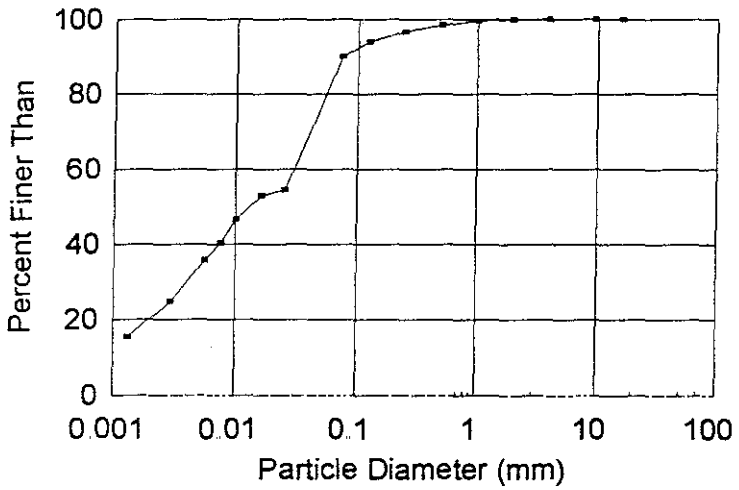
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	103.21	100.00
9.5	0.00	0.00	0.00	103.21	100.00
4	0.00	0.00	0.00	103.21	100.00
2	0.00	0.00	0.00	103.21	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.037	1.035	7.04	0.0256	54.47
5	1.036	1.034	7.20	0.0165	52.91
15	1.032	1.03	8.36	0.0102	46.69
30	1.028	1.026	9.42	0.0076	40.46
60	1.025	1.023	10.21	0.0056	35.79
250	1.018	1.016	12.06	0.0030	24.90
1440	1.012	1.01	13.66	0.0013	15.56

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	0.46	102.75	99.55
0.5	1.13	101.62	98.46
0.25	1.83	99.79	96.69
0.125	2.71	97.08	94.06
0.075	4.19	92.89	90.00
TOTAL	10.32		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	99.55
	0.5	98.46
Fine Sand	0.25	96.69
	0.125	94.06
	0.075	90.00
Silt	0.0256	54.47
	0.0165	52.91
	0.0102	46.69
	0.0076	40.46
	0.0056	35.79
Clay	0.0030	24.90
	0.0013	15.56

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/14/97
Site name:	Comell Dubilier
Sample No.:	A10373

Sample Data

Mass of sample split on No. 10 sieve (g):	104.79
Mass retained on No. 10 sieve (g):	2.28
Mass passing No. 10 sieve (g):	102.51
Percent passing No. 10 sieve (g):	97.82

Mass used in Hydrometer test (g):	102.51
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	102.51

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	101.14

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.001
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.001

Values

K:	0.01365
W:	103.39
F:	2.26

5

Results	A10373

Sieve Analysis

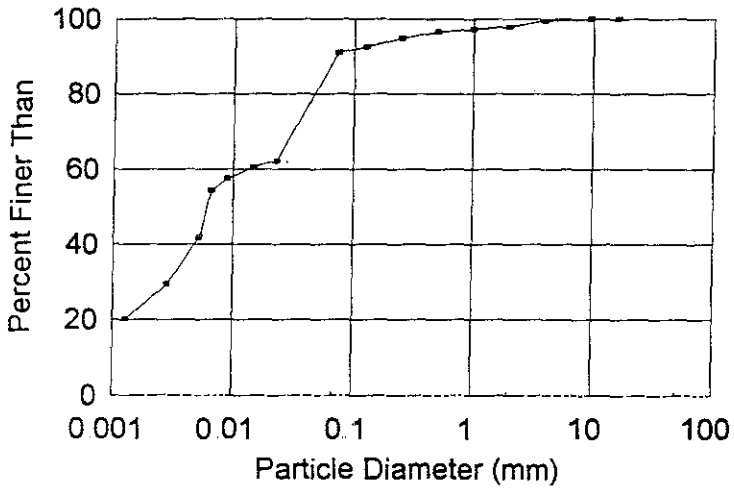
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	103.39	100.00
9.5	0.00	0.00	0.00	103.39	100.00
4	0.58	0.57	0.56	102.83	99.45
2	1.70	1.68	1.66	101.17	97.85

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.041	1.04	5.71	0.0231	62.13
5	1.040	1.039	6.98	0.0149	60.58
15	1.038	1.037	6.51	0.0090	57.47
30	1.036	1.035	7.04	0.0066	54.37
60	1.028	1.027	9.15	0.0053	41.94
250	1.020	1.019	11.27	0.0029	29.51
1440	1.014	1.013	12.86	0.0013	20.19

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	0.51	100.63	97.33
0.5	0.73	99.90	96.62
0.25	1.82	98.08	94.86
0.125	2.41	95.67	92.53
0.075	1.58	94.09	91.01
TOTAL	7.05		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	99.45
	2	97.85
Medium Sand	1	97.33
	0.5	96.62
Fine Sand	0.25	94.86
	0.125	92.53
	0.075	91.01
Silt	0.0231	62.13
	0.0149	60.58
	0.0090	57.47
	0.0066	54.37
	0.0053	41.94
Clay	0.0029	29.51
	0.0013	20.19

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/14/97
Site name:	Cornell Dubilier
Sample No.:	A10374

Sample Data

Mass of sample split on No. 10 sieve (g):	104.64
Mass retained on No. 10 sieve (g):	1.37
Mass passing No. 10 sieve (g):	103.27
Percent passing No. 10 sieve (g):	98.69
Mass used in Hydrometer test (g):	103.27
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	103.27

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	101.89

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.001
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.001

Values

K:	0.01365
W:	103.24
F:	1.35

S

Results	A10374

Sieve Analysis

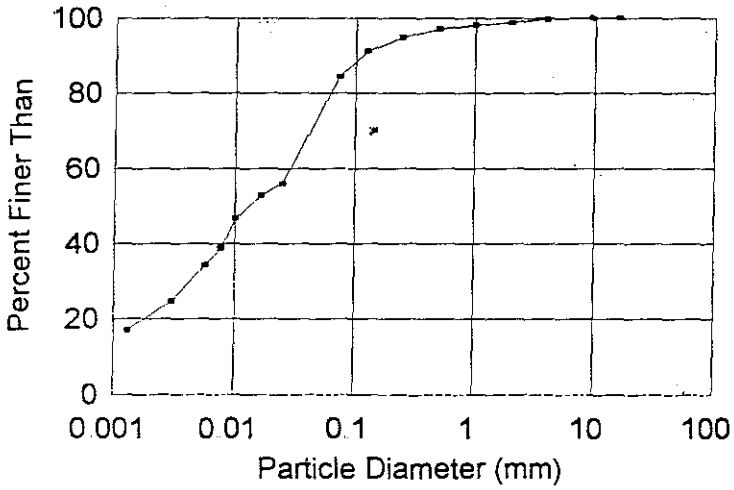
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	103.24	100.00
9.5	0.00	0.00	0.00	103.24	100.00
4	0.26	0.26	0.25	102.99	99.75
2	1.11	1.10	1.08	101.91	98.71

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.037	1.036	6.77	0.0251	56.00
5	1.035	1.034	7.30	0.0165	52.89
15	1.031	1.03	8.36	0.0102	46.67
30	1.026	1.025	9.68	0.0078	38.89
60	1.023	1.022	10.48	0.0057	34.22
250	1.017	1.016	12.06	0.0030	24.89
1440	1.012	1.011	13.39	0.0013	17.11

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	0.64	101.25	98.07
0.5	1.04	100.21	97.06
0.25	2.20	98.01	94.93
0.125	3.93	94.08	91.13
0.075	6.90	87.18	84.44
TOTAL	14.71		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	99.75
	2	98.71
Medium Sand	1	98.07
	0.5	97.06
Fine Sand	0.25	94.93
	0.125	91.13
	0.075	84.44
Silt	0.0251	56.00
	0.0165	52.89
	0.0102	46.67
	0.0078	38.89
	0.0057	34.22
Clay	0.0030	24.89
	0.0013	17.11

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/14/97
Site name:	Cornell Dubilier
Sample No.:	A10375

Sample Data

Mass of sample split on No. 10 sieve (g):	102.17
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	102.17
Percent passing No. 10 sieve (g):	100.00
Mass used in Hydrometer test (g):	102.17
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	102.17

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	100.81

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.001
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.001

Values

K:	0.01365
W:	100.81
F:	0.00

S

Results	A10375

Sieve Analysis

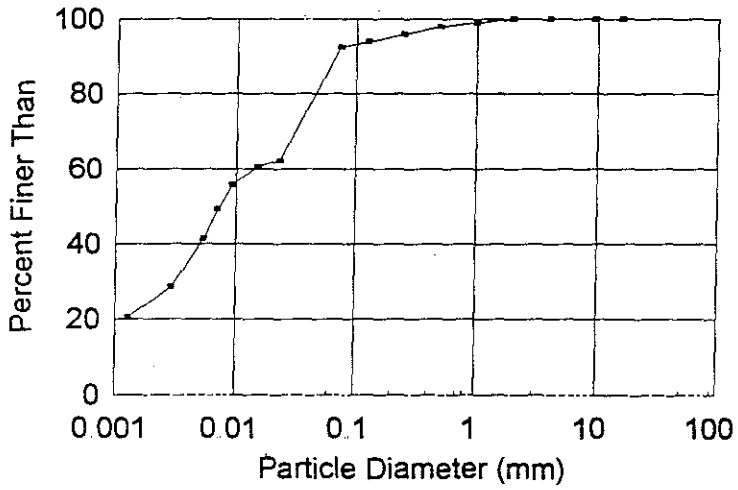
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	100.81	100.00
9.5	0.00	0.00	0.00	100.81	100.00
4	0.00	0.00	0.00	100.81	100.00
2	0.00	0.00	0.00	100.81	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.040	1.035	5.98	0.0236	62.13
5	1.039	1.036	6.24	0.0153	60.54
15	1.036	1.035	7.04	0.0093	55.76
30	1.032	1.031	8.09	0.0071	49.39
60	1.027	1.026	9.42	0.0054	41.42
250	1.019	1.018	11.53	0.0029	28.68
1440	1.014	1.013	12.86	0.0013	20.71

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	1.07	99.74	98.94
0.5	1.05	98.69	97.90
0.25	1.99	96.70	95.92
0.125	2.06	94.64	93.88
0.075	1.47	93.17	92.42
TOTAL	7.64		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	98.94
	0.5	97.90
Fine Sand	0.25	95.92
	0.125	93.88
	0.075	92.42
Silt	0.0236	62.13
	0.0153	60.54
	0.0093	55.76
	0.0071	49.39
	0.0054	41.42
	0.0029	28.68
Clay	0.0013	20.71

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/08/97
Site name:	Cornell Dubilier
Sample No.:	A10380

Sample Data

Mass of sample split on No. 10 sieve (g):	103.4
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	103.4
Percent passing No. 10 sieve (g):	100.00
Mass used in Hydrometer test (g):	103.4
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	103.4

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	102.02

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	102.02
F:	0.00

5

Results A10380

Sieve Analysis

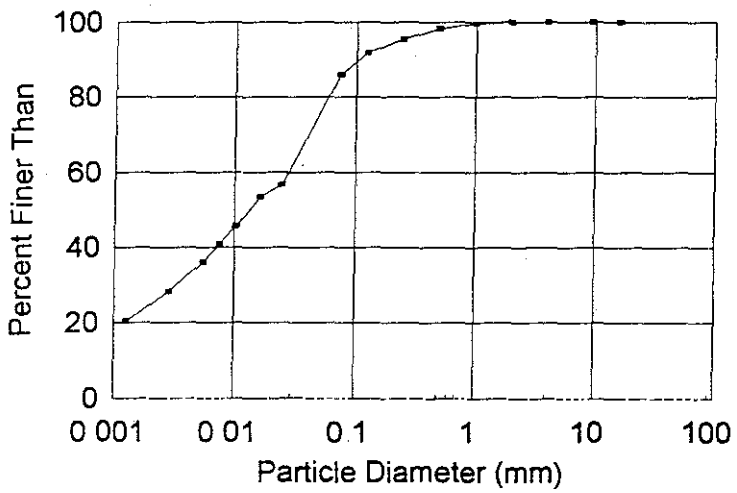
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	102.02	100.00
9.5	0.00	0.00	0.00	102.02	100.00
4	0.00	0.00	0.00	102.02	100.00
2	0.00	0.00	0.00	102.02	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.038	1.036	6.77	0.0251	56.67
5	1.036	1.034	7.30	0.0165	53.52
15	1.031	1.029	8.62	0.0103	45.65
30	1.028	1.026	9.42	0.0076	40.93
60	1.025	1.023	10.21	0.0056	36.21
250	1.020	1.018	11.53	0.0029	28.34
1440	1.015	1.013	12.86	0.0013	20.47

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	0.47	101.55	99.54
0.5	1.20	100.35	98.36
0.25	2.97	97.38	95.45
0.125	3.82	93.56	91.71
0.075	5.76	87.80	86.06
TOTAL	14.22		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	99.54
	0.5	98.36
Fine Sand	0.25	95.45
	0.125	91.71
	0.075	86.06
Silt	0.0251	56.67
	0.0165	53.52
	0.0103	45.65
	0.0076	40.93
	0.0056	36.21
Clay	0.0029	28.34
	0.0013	20.47

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/14/97
Site name:	Corneli Dubilier
Sample No.:	A10381

Sample Data

Mass of sample split on No. 10 sieve (g):	194.23
Mass retained on No. 10 sieve (g):	90.57
Mass passing No. 10 sieve (g):	103.66
Percent passing No. 10 sieve (g):	53.37
Mass used in Hydrometer test (g):	103.66
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	103.66

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	102.28

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.001
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.001

Values

K:	0.01365
W:	191.64
F:	89.36

S

Results A10381

Sieve Analysis

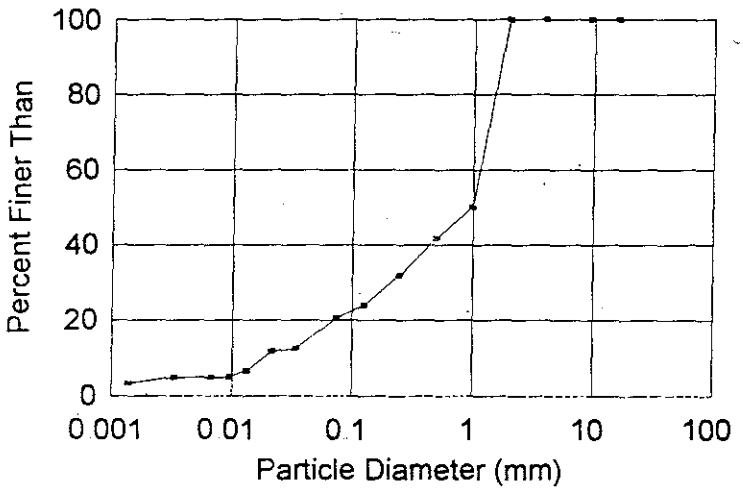
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	191.64	100.00
9.5	16.21	15.98	0.00	191.64	100.00
4	52.00	51.31	0.00	191.64	100.00
2	22.36	22.06	0.00	191.64	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.016	1.015	12.33	0.0335	12.57
5	1.015	1.014	12.59	0.0217	11.73
15	1.009	1.008	14.16	0.0133	6.70
30	1.007	1.006	14.71	0.0096	5.03
60	1.007	1.006	14.71	0.0068	5.03
250	1.007	1.006	14.71	0.0033	5.03
1440	1.005	1.004	15.24	0.0014	3.35

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	6.41	95.87	60.02
0.5	15.61	80.26	41.88
0.25	19.28	60.98	31.82
0.125	14.87	46.11	24.06
0.075	6.52	39.59	20.66
TOTAL	62.69		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	50.02
	0.5	41.88
Fine Sand	0.25	31.82
	0.125	24.06
	0.075	20.66
Silt	0.0339	12.57
	0.0217	11.73
	0.0133	6.70
	0.0096	5.03
	0.0068	5.03
Clay	0.0033	5.03
	0.0014	3.35

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/14/97
Site name:	Cornell Dubilier
Sample No :	A10382

Sample Data

Mass of sample split on No. 10 sieve (g):	172.79
Mass retained on No. 10 sieve (g):	71.87
Mass passing No. 10 sieve (g):	100.92
Percent passing No. 10 sieve (g):	58.41
Mass used in Hydrometer test (g):	100.92
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	100.92

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	99.57

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.001
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.001

Values

K:	0.01365
W:	170.49
F:	70.91

S

Results	A10382

Sieve Analysis

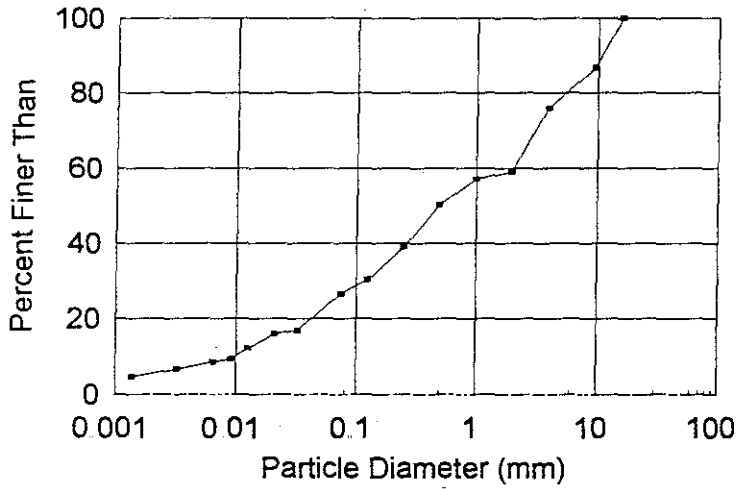
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	170.45	100.00
9.5	23.31	23.00	22.69	147.76	86.69
4	18.87	18.62	18.37	129.42	75.91
2	29.69	29.29	28.90	100.52	58.96

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.019	1.018	11.53	0.0328	16.96
5	1.018	1.017	11.80	0.0210	16.01
15	1.014	1.013	12.86	0.0126	12.25
30	1.011	1.01	13.65	0.0092	9.42
60	1.010	1.009	13.91	0.0066	8.48
250	1.008	1.007	14.44	0.0033	6.59
1440	1.006	1.005	14.97	0.0014	4.71

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	2.47	97.10	56.96
0.5	11.32	85.78	50.32
0.25	19.13	66.65	39.10
0.125	15.01	51.64	30.29
0.075	6.16	45.48	26.68
TOTAL	54.09		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	86.69
Course Sand	4	75.91
	2	58.96
Medium Sand	1	56.96
	0.5	50.32
Fine Sand	0.25	39.10
	0.125	30.29
	0.075	26.68
Silt	0.0328	16.96
	0.0210	16.01
	0.0126	12.25
	0.0092	9.42
	0.0066	8.48
Clay	0.0033	6.59
	0.0014	4.71

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/14/97
Site name:	Cornell Dubilier
Sample No.:	A10383

Sample Data

Mass of sample split on No. 10 sieve (g):	183.42
Mass retained on No. 10 sieve (g):	80.03
Mass passing No. 10 sieve (g):	103.39
Percent passing No. 10 sieve (g):	56.37
Mass used in Hydrometer test (g):	103.39
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	103.39

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	102.01

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.001
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.001

Values

K:	0.01365
W:	180.97
F:	78.96

S

Results A10383

Sieve Analysis

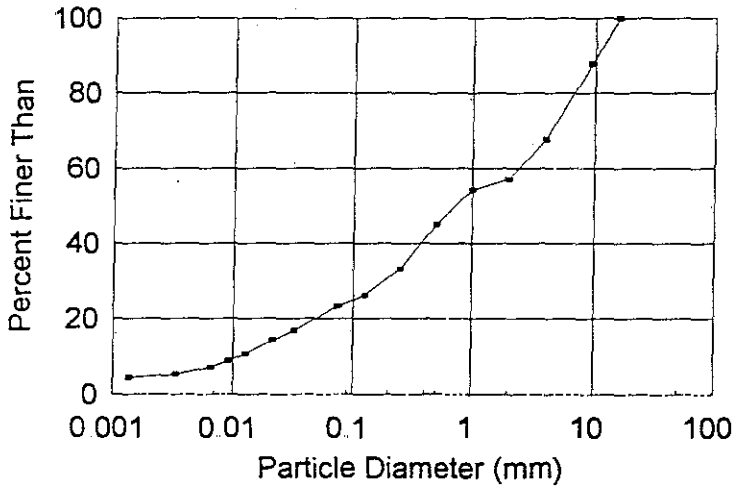
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	180.97	100.00
9.5	22.68	22.38	22.08	158.90	87.80
4	37.49	36.99	36.50	122.40	67.63
2	19.86	19.60	19.33	103.06	56.95

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.020	1.019	11.27	0.0324	15.86
5	1.017	1.016	12.05	0.0212	14.20
15	1.013	1.012	13.12	0.0128	10.65
30	1.011	1.01	13.85	0.0092	8.87
60	1.009	1.008	14.18	0.0066	7.10
250	1.007	1.006	14.71	0.0033	5.32
1440	1.006	1.005	14.97	0.0014	4.44

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	3.98	98.03	54.17
0.5	16.39	81.64	45.11
0.25	21.62	60.02	33.17
0.125	12.63	47.39	26.19
0.075	5.18	42.21	23.32
TOTAL	59.80		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	87.80
Course Sand	4	67.63
	2	56.95
Medium Sand	1	54.17
	0.5	45.11
Fine Sand	0.25	33.17
	0.125	26.19
	0.075	23.32
Silt	0.0324	16.86
	0.0212	14.20
	0.0128	10.65
	0.0092	8.87
	0.0066	7.10
Clay	0.0033	5.32
	0.0014	4.44

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	09/29/97
Site name:	Cornell Dubilier
Sample No.:	A10384

Sample Data

Mass of sample split on No. 10 sieve (g):	180
Mass retained on No. 10 sieve (g):	78.46
Mass passing No. 10 sieve (g):	101.54
Percent passing No. 10 sieve (g):	56.41
Mass used in Hydrometer test (g):	101.54
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	101.54

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	100.19

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	177.60
F:	77.41

S

Results	A10384

Sieve Analysis

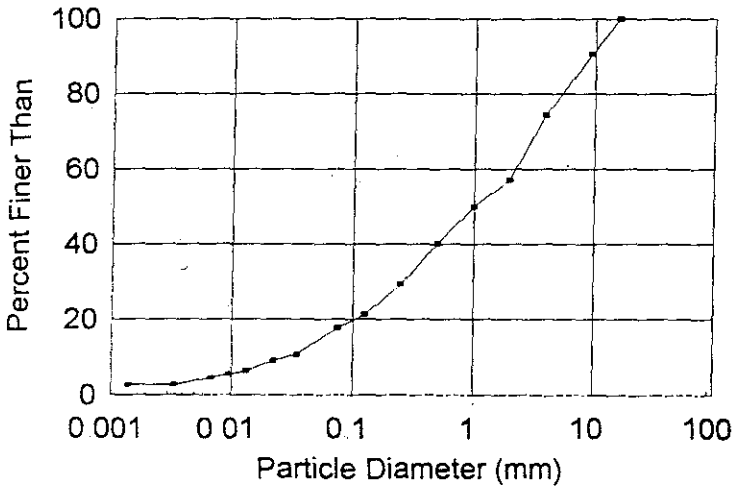
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	177.60	100.00
9.5	17.02	16.79	16.57	161.03	90.67
4	29.95	29.55	29.16	131.87	74.25
2	31.49	31.07	30.66	101.22	56.99

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.014	1.012	13.12	0.0350	10.85
5	1.012	1.01	13.55	0.0226	9.04
15	1.009	1.007	14.44	0.0134	6.33
30	1.008	1.006	14.71	0.0096	5.43
60	1.007	1.005	14.97	0.0068	4.52
250	1.005	1.003	15.50	0.0034	2.71
1440	1.005	1.003	15.50	0.0014	2.71

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	11.52	88.67	49.92
0.5	17.23	71.44	40.22
0.25	19.23	52.21	29.40
0.125	14.42	37.79	21.28
0.075	6.37	31.42	17.69
TOTAL	68.77		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	90.67
Course Sand	4	74.25
	2	56.99
Medium Sand	1	49.92
	0.5	40.22
Fine Sand	0.25	29.40
	0.125	21.28
	0.075	17.69
Silt	0.0350	10.85
	0.0226	9.04
	0.0134	6.33
	0.0096	5.43
	0.0068	4.52
Clay	0.0034	2.71
	0.0014	2.71

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/14/97
Site name:	Cornell Dubilier
Sample No.:	A10385

Sample Data

Mass of sample split on No. 10 sieve (g):	169.26
Mass retained on No. 10 sieve (g):	64.19
Mass passing No. 10 sieve (g):	105.07
Percent passing No. 10 sieve (g):	62.08
Mass used in Hydrometer test (g):	105.07
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	105.07

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	103.67

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.001
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.001

Values

K:	0.01365
W:	167.00
F:	63.33

S

Results	A10385

Sieve Analysis

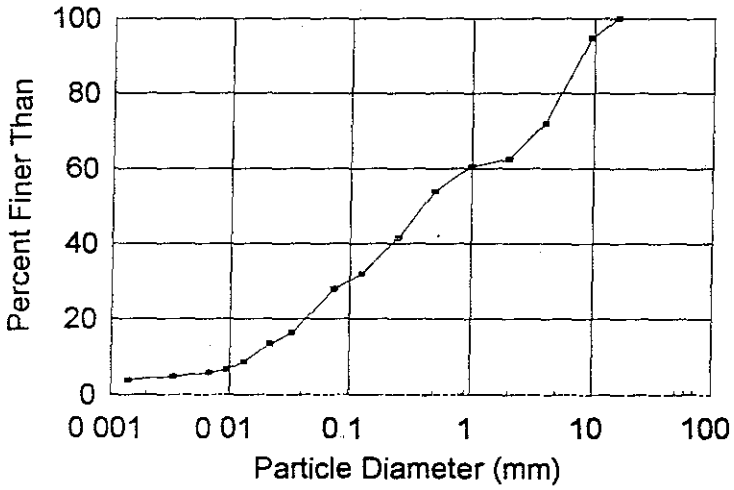
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	167.90	100.00
9.5	8.97	8.85	8.73	158.27	94.77
4	39.30	38.76	38.26	120.01	71.86
2	15.92	15.71	15.50	104.51	62.58

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.018	1.017	11.80	0.0332	16.35
5	1.015	1.014	12.59	0.0217	13.46
15	1.010	1.009	13.91	0.0131	8.66
30	1.008	1.007	14.44	0.0095	6.73
60	1.007	1.006	14.71	0.0068	5.77
250	1.006	1.005	14.97	0.0033	4.81
1440	1.005	1.004	15.24	0.0014	3.85

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	2.69	100.98	60.47
0.5	10.89	90.09	53.94
0.25	20.89	69.20	41.44
0.125	15.89	53.31	31.92
0.075	6.62	46.69	27.96
TOTAL	56.98		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	94.77
Course Sand	4	71.86
	2	62.58
Medium Sand	1	60.47
	0.5	53.94
Fine Sand	0.25	41.44
	0.125	31.92
	0.075	27.96
Silt	0.0332	16.35
	0.0217	13.46
	0.0131	8.66
	0.0095	6.73
	0.0068	5.77
Clay	0.0033	4.81
	0.0014	3.85

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	09/29/97
Site name:	Cornell Dubilier
Sample No.:	A10386

Sample Data

Mass of sample split on No. 10 sieve (g):	222.8
Mass retained on No. 10 sieve (g):	118.21
Mass passing No. 10 sieve (g):	104.59
Percent passing No. 10 sieve (g):	46.94
Mass used in Hydrometer test (g):	104.59
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	104.59

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	103.20

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	219.83
F:	116.63

S

Results	A10386

Sieve Analysis

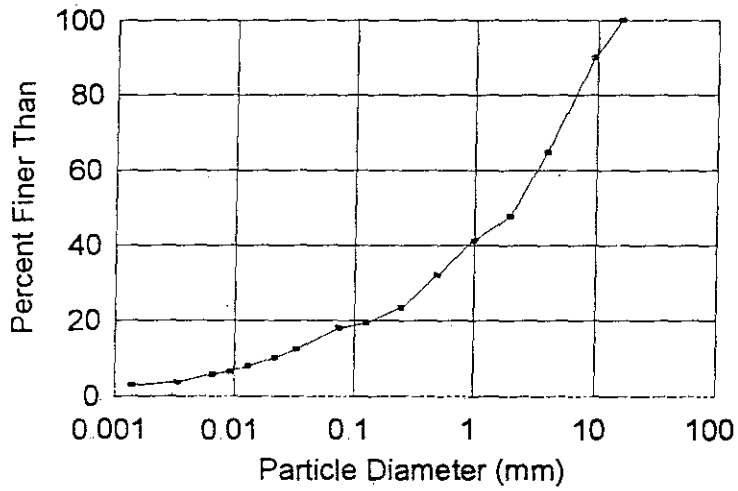
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	219.83	100.00
9.5	22.63	22.33	22.03	197.80	89.98
4	57.06	56.30	55.55	142.25	64.71
2	38.52	38.01	37.50	104.75	47.65

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.019	1.017	11.80	0.0332	12.42
5	1.016	1.014	12.58	0.0217	10.23
15	1.013	1.011	13.39	0.0129	8.04
30	1.011	1.009	13.91	0.0093	6.58
60	1.010	1.008	14.18	0.0066	5.84
250	1.007	1.005	14.97	0.0033	3.65
1440	1.006	1.004	15.24	0.0014	2.92

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	12.38	90.82	41.31
0.5	20.19	70.63	32.13
0.25	18.81	51.82	23.57
0.125	9.08	42.74	19.44
0.075	2.95	39.79	18.10
TOTAL	63.41		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	89.98
Course Sand	4	64.71
	2	47.65
Medium Sand	1	41.31
	0.5	32.13
Fine Sand	0.25	23.57
	0.125	19.44
	0.075	18.10
Silt	0.0332	12.42
	0.0217	10.23
	0.0129	8.04
	0.0093	6.58
	0.0066	5.84
Clay	0.0033	3.65
	0.0014	2.92

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/14/97
Site name:	Cornell Dubilier
Sample No.:	A10387

Sample Data

Mass of sample split on No. 10 sieve (g):	109.43
Mass retained on No. 10 sieve (g):	6.03
Mass passing No. 10 sieve (g):	103.4
Percent passing No. 10 sieve (g):	94.49
Mass used in Hydrometer test (g):	103.4
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	103.4

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	102.02

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.001
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.001

Values

K:	0.01365
W:	107.97
F:	5.95

S

Results	A10387

Sieve Analysis

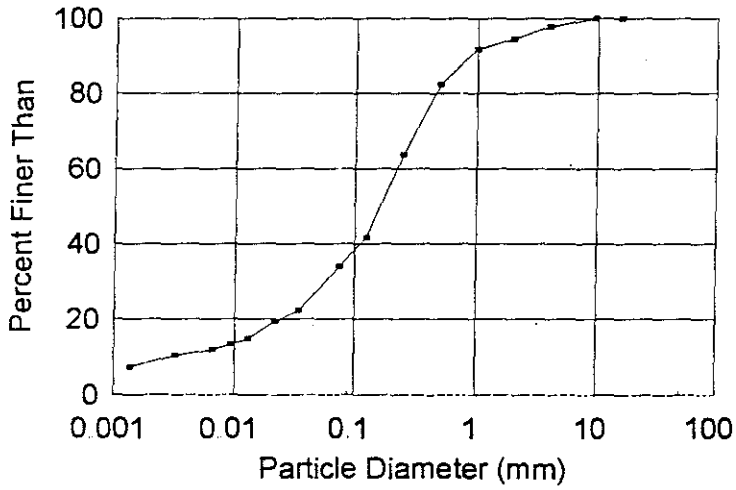
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	107.97	100.00
9.5	0.00	0.00	0.00	107.97	100.00
4	2.45	2.42	2.39	105.59	97.79
2	3.58	3.53	3.49	102.10	94.56

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.016	1.015	12.33	0.0339	22.31
5	1.014	1.013	12.86	0.0219	19.34
15	1.011	1.01	13.65	0.0130	14.87
30	1.010	1.009	13.91	0.0093	13.39
60	1.009	1.008	14.18	0.0066	11.90
250	1.008	1.007	14.44	0.0033	10.41
1440	1.006	1.005	14.97	0.0014	7.44

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	3.01	99.01	91.70
0.5	9.89	89.12	82.54
0.25	20.36	68.76	63.69
0.125	23.85	44.91	41.60
0.075	8.30	36.61	33.91
TOTAL	65.41		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	97.79
	2	94.56
Medium Sand	1	91.70
	0.5	82.54
Fine Sand	0.25	63.69
	0.125	41.60
	0.075	33.91
Silt	0.0339	22.31
	0.0219	19.34
	0.0130	14.87
	0.0093	13.39
	0.0066	11.90
Clay	0.0033	10.41
	0.0014	7.44

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	09/29/97
Site name:	Cornell Dubilier
Sample No.:	A10388

Sample Data

Mass of sample split on No. 10 sieve (g):	102.1
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	102.1
Percent passing No. 10 sieve (g):	100.00
Mass used in Hydrometer test (g):	102.1
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	102.1

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	100.74

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	100.74
F:	0.00

S

Results	A10388

Sieve Analysis

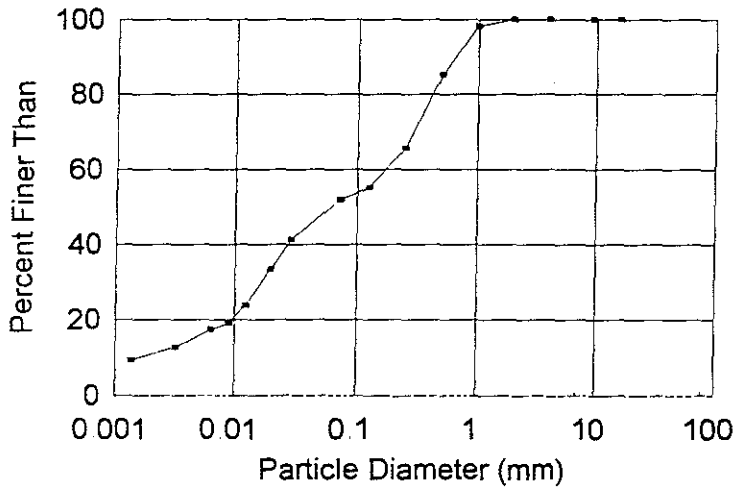
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	100.74	100.00
9.5	0.00	0.00	0.00	100.74	100.00
4	0.00	0.00	0.00	100.74	100.00
2	0.00	0.00	0.00	100.74	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.028	1.026	9.42	0.0295	41.45
5	1.023	1.021	10.74	0.0200	33.48
15	1.017	1.015	12.33	0.0124	23.91
30	1.014	1.012	13.12	0.0090	19.13
60	1.013	1.011	13.39	0.0064	17.54
250	1.010	1.008	14.16	0.0033	12.75
1440	1.008	1.006	14.71	0.0014	9.57

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	1.79	98.95	98.22
0.5	13.01	85.94	85.31
0.25	19.76	66.18	65.69
0.125	10.59	55.59	55.18
0.075	3.28	52.31	51.93
TOTAL	48.43		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	98.22
	0.5	85.31
Fine Sand	0.25	65.69
	0.125	55.18
	0.075	51.93
Silt	0.0296	41.45
	0.0200	33.48
	0.0124	23.91
	0.0090	19.13
	0.0064	17.54
	0.0033	12.75
Clay	0.0014	9.57

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	09/29/97
Site name:	Cornell Dubilier
Sample No.:	A10389

Sample Data

Mass of sample split on No. 10 sieve (g):	184.34
Mass retained on No. 10 sieve (g):	80.93
Mass passing No. 10 sieve (g):	103.41
Percent passing No. 10 sieve (g):	56.10
Mass used in Hydrometer test (g):	103.41
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	103.41

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	102.03

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	181.88
F:	79.85

S

Results	A10389

Sieve Analysis

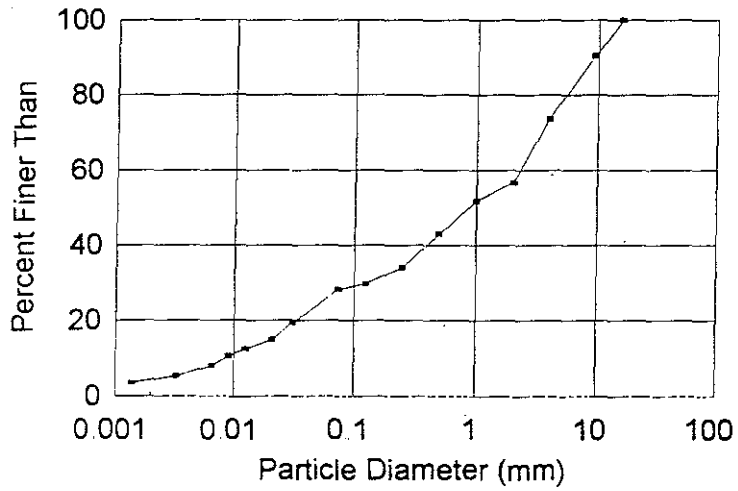
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	181.88	100.00
9.5	17.78	17.54	17.31	164.57	90.48
4	31.40	30.98	30.57	134.00	73.68
2	31.75	31.33	30.91	103.10	56.68

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.024	1.022	10.48	0.0312	19.43
5	1.019	1.017	11.50	0.0210	15.01
15	1.016	1.014	12.59	0.0125	12.36
30	1.014	1.012	13.12	0.0090	10.60
60	1.011	1.009	13.91	0.0066	7.95
250	1.008	1.006	14.71	0.0033	5.30
1440	1.006	1.004	15.24	0.0014	3.53

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	7.83	94.20	51.79
0.5	15.88	78.32	43.06
0.25	16.27	62.05	34.12
0.125	7.98	54.07	29.73
0.075	2.79	51.28	28.19
TOTAL	50.75		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	90.48
Course Sand	4	73.68
	2	56.68
Medium Sand	1	51.79
	0.5	43.06
Fine Sand	0.25	34.12
	0.125	29.73
	0.075	28.19
Silt	0.0312	19.43
	0.0210	15.01
	0.0125	12.36
	0.0090	10.60
	0.0066	7.95
Clay	0.0033	5.30
	0.0014	3.53

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	09/29/97
Site name:	Cornell Dubilier
Sample No.:	A10390

Sample Data

Mass of sample split on No. 10 sieve (g):	195.95
Mass retained on No. 10 sieve (g):	94.1
Mass passing No. 10 sieve (g):	101.85
Percent passing No. 10 sieve (g):	51.96
Mass used in Hydrometer test (g):	101.85
Specific gravity of soil: ,	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	101.85

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	100.49

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	193.34
F:	92.85

S

Results	A10390

Sieve Analysis

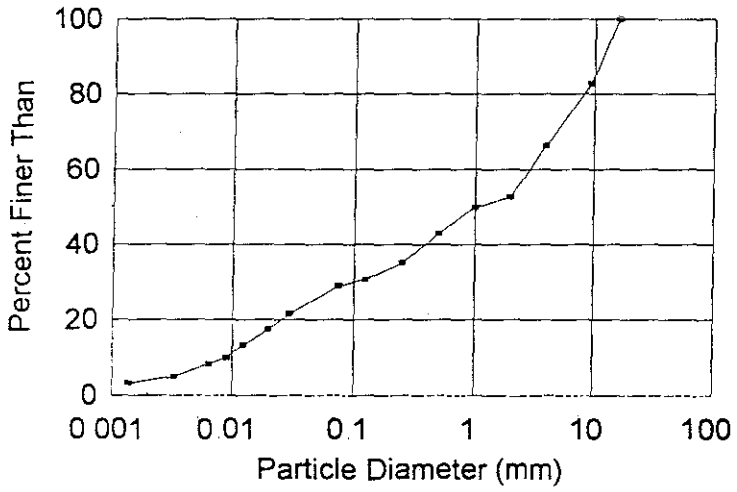
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	193.34	100.00
9.5	34.05	33.60	33.15	160.19	82.85
4	32.90	32.46	32.03	128.16	66.29
2	27.15	26.79	26.43	101.73	52.62

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.028	1.026	9.42	0.0296	21.60
5	1.023	1.021	10.74	0.0200	17.44
15	1.018	1.016	12.06	0.0122	13.29
30	1.014	1.012	13.12	0.0090	9.97
60	1.012	1.01	13.55	0.0065	8.31
250	1.008	1.006	14.71	0.0033	4.98
1440	1.006	1.004	15.24	0.0014	3.32

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	4.14	96.35	49.84
0.5	13.52	82.83	42.84
0.25	14.95	67.88	35.11
0.125	8.47	59.41	30.73
0.075	3.43	55.98	28.96
TOTAL	44.51		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	82.85
Course Sand	4	66.29
	2	52.62
Medium Sand	1	49.84
	0.5	42.84
Fine Sand	0.25	35.11
	0.125	30.73
	0.075	28.96
Silt	0.0296	21.60
	0.0200	17.44
	0.0122	13.29
	0.0090	9.97
	0.0065	8.31
Clay	0.0033	4.98
	0.0014	3.32

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/08/97
Site name:	Cornell Dubilier
Sample No.:	A10391

Sample Data

Mass of sample split on No. 10 sieve (g):	133.4
Mass retained on No. 10 sieve (g):	29.3
Mass passing No. 10 sieve (g):	104.1
Percent passing No. 10 sieve (g):	78.04
Mass used in Hydrometer test (g):	104.1
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	104.1

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	102.71

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	131.62
F:	28.91

Results	A10391

Sieve Analysis

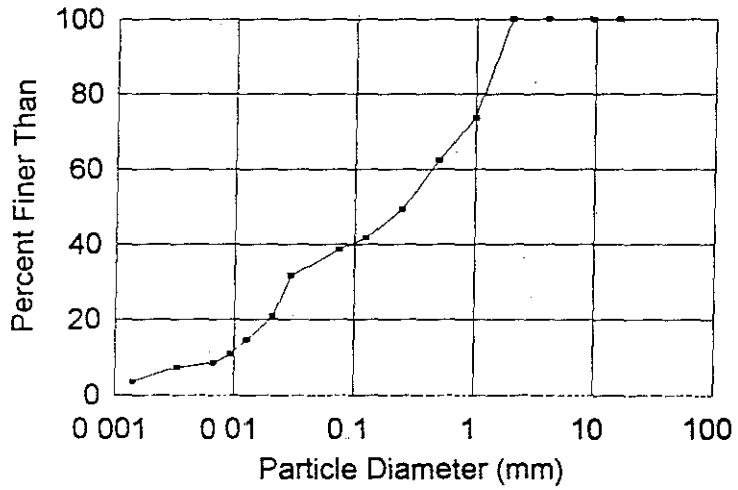
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	131.62	100.00
9.5	0.00	0.00	0.00	131.62	100.00
4	25.03	24.70	0.00	131.62	100.00
2	4.27	4.21	0.00	131.62	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.028	1.026	9.42	0.0296	31.73
5	1.019	1.017	11.80	0.0210	20.74
15	1.014	1.012	13.12	0.0128	14.64
30	1.011	1.009	13.91	0.0093	10.98
60	1.009	1.007	14.44	0.0067	8.54
250	1.008	1.006	14.71	0.0033	7.32
1440	1.005	1.003	15.50	0.0014	3.66

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	5.72	96.99	73.69
0.5	14.91	82.08	62.36
0.25	17.28	64.80	49.23
0.125	9.86	54.94	41.74
0.075	4.16	50.78	38.58
TOTAL	51.93		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	73.69
	0.5	62.36
Fine Sand	0.25	49.23
	0.125	41.74
	0.075	38.58
Silt	0.0296	31.73
	0.0210	20.74
	0.0128	14.64
	0.0093	10.98
	0.0067	8.54
Clay	0.0033	7.32
	0.0014	3.66

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	09/29/97
Site name:	Cornell Dubilier
Sample No.:	A10392

Sample Data

Mass of sample split on No. 10 sieve (g):	196.39
Mass retained on No. 10 sieve (g):	94.52
Mass passing No. 10 sieve (g):	101.87
Percent passing No. 10 sieve (g):	51.87
Mass used in Hydrometer test (g):	101.87
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	101.87

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	100.51

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	193.77
F:	93.26

S

Results A10392

Sieve Analysis

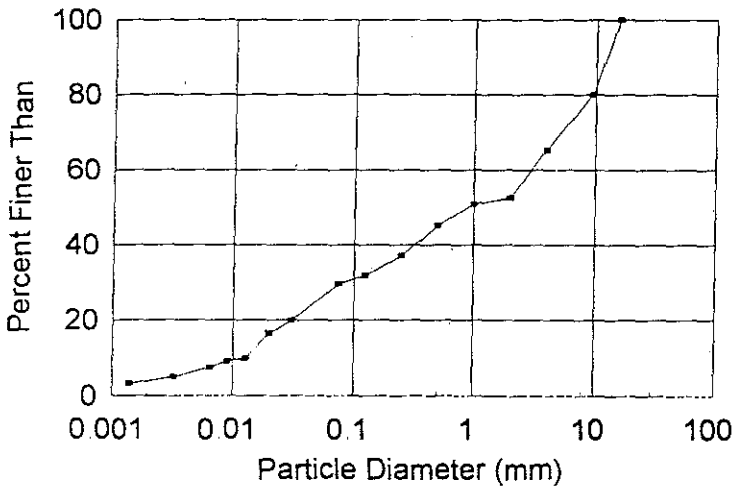
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	193.77	100.00
9.5	39.61	39.08	38.56	155.21	80.10
4	29.56	29.17	28.78	126.43	65.25
2	25.35	25.01	24.68	101.76	52.51

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.026	1.024	9.55	0.0304	19.89
5	1.022	1.02	11.00	0.0203	16.58
15	1.014	1.012	13.12	0.0128	9.95
30	1.013	1.011	13.39	0.0091	9.12
60	1.011	1.009	13.91	0.0066	7.46
250	1.008	1.006	14.71	0.0033	4.97
1440	1.006	1.004	15.24	0.0014	3.32

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	2.02	98.49	50.83
0.5	11.01	87.48	45.15
0.25	15.60	71.88	37.10
0.125	10.11	61.77	31.88
0.075	4.23	57.54	29.70
TOTAL	42.97		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	80.10
Course Sand	4	65.25
	2	52.51
Medium Sand	1	50.83
	0.5	45.15
Fine Sand	0.25	37.10
	0.125	31.88
	0.075	29.70
Silt	0.0304	19.89
	0.0203	16.58
	0.0128	9.95
	0.0091	9.12
	0.0066	7.46
Clay	0.0033	4.97
	0.0014	3.32

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/14/97
Site name:	Cornell Dubilier
Sample No.:	A10393

Sample Data

Mass of sample split on No. 10 sieve (g):	167.72
Mass retained on No. 10 sieve (g):	67.16
Mass passing No. 10 sieve (g):	100.56
Percent passing No. 10 sieve (g):	59.96
Mass used in Hydrometer test (g):	100.56
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	100.56

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	99.22

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.001
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.001

Values

K:	0.01365
W:	165.48
F:	66.26

S

Results A10393

Sieve Analysis

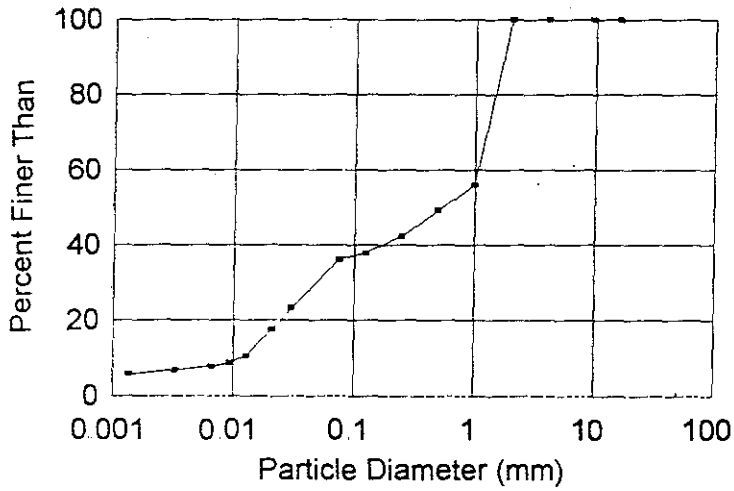
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	165.48	100.00
9.5	15.58	15.37	0.00	165.48	100.00
4	34.31	33.85	0.00	165.48	100.00
2	17.27	17.04	0.00	165.48	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.025	1.024	9.95	0.0304	23.29
5	1.019	1.018	11.53	0.0207	17.47
15	1.012	1.011	13.09	0.0129	10.68
30	1.010	1.009	13.91	0.0093	8.73
60	1.009	1.008	14.18	0.0066	7.76
250	1.008	1.007	14.44	0.0033	6.79
1440	1.007	1.006	14.71	0.0014	5.82

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	6.55	92.67	56.00
0.5	11.19	81.48	49.24
0.25	11.51	69.97	42.28
0.125	7.29	62.68	37.88
0.075	2.81	59.87	36.18
TOTAL	39.35		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	56.00
	0.5	49.24
Fine Sand	0.25	42.28
	0.125	37.88
	0.075	36.18
Silt	0.0304	23.29
	0.0207	17.47
	0.0129	10.68
	0.0093	8.73
	0.0066	7.76
Clay	0.0033	6.79
	0.0014	5.82

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/14/97
Site name:	Cornell Dubilier
Sample No.:	A10394

Sample Data

Mass of sample split on No. 10 sieve (g):	178.49
Mass retained on No 10 sieve (g):	73.64
Mass passing No. 10 sieve (g):	104.85
Percent passing No. 10 sieve (g):	58.74
Mass used in Hydrometer test (g):	104.85
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	104.66

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	103.45

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.001
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.001

Values

K:	0.01365
W:	176.11
F:	72.66

S

Results	A10394

Sieve Analysis

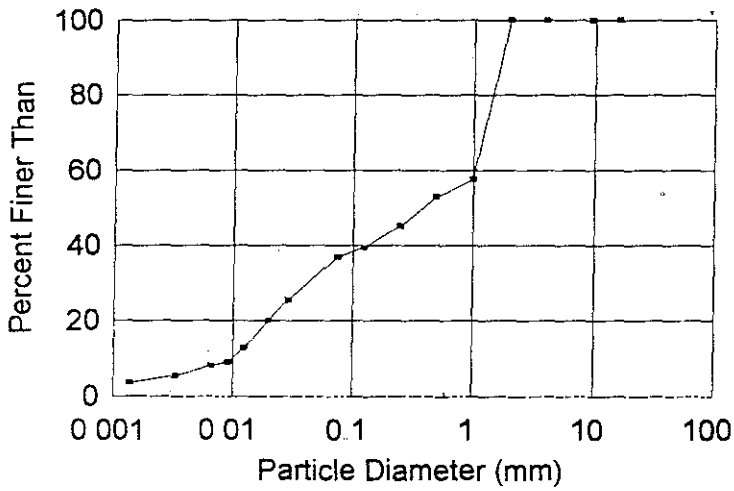
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	176.11	100.00
9.5	19.05	18.80	0.00	176.11	100.00
4	30.53	30.12	0.00	176.11	100.00
2	24.06	23.74	0.00	176.11	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.029	1.028	8.39	0.0288	25.53
5	1.023	1.022	10.48	0.0198	20.06
15	1.015	1.014	12.59	0.0125	12.77
30	1.011	1.01	13.65	0.0092	9.12
60	1.010	1.009	13.91	0.0066	8.21
250	1.007	1.006	14.71	0.0033	5.47
1440	1.005	1.004	15.24	0.0014	3.65

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	2.03	101.42	57.59
0.5	8.30	93.12	52.88
0.25	13.48	79.64	45.22
0.125	10.21	69.43	39.43
0.075	4.33	65.10	36.97
TOTAL	38.35		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	57.59
	0.5	52.88
Fine Sand	0.25	45.22
	0.125	39.43
	0.075	36.97
Silt	0.0288	25.53
	0.0198	20.06
	0.0125	12.77
	0.0092	9.12
	0.0066	8.21
Clay	0.0033	5.47
	0.0014	3.65

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	09/29/97
Site name:	Cornell Dubilier
Sample No.:	A10395

Sample Data

Mass of sample split on No. 10 sieve (g):	102.17
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	102.17
Percent passing No. 10 sieve (g):	100.00

Mass used in Hydrometer test (g):	102.17
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	102.17

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	100.81

Hydrometer Test

Hydrometer type:	151H	
Hydrometer correction:		0.002
Average temperature (C):		20
Temperature correction factor:		0
Total Hydrometer correction:		0.002

Values

K:	0.01365
W:	100.81
F:	0.00

Results	A10395

Sieve Analysis

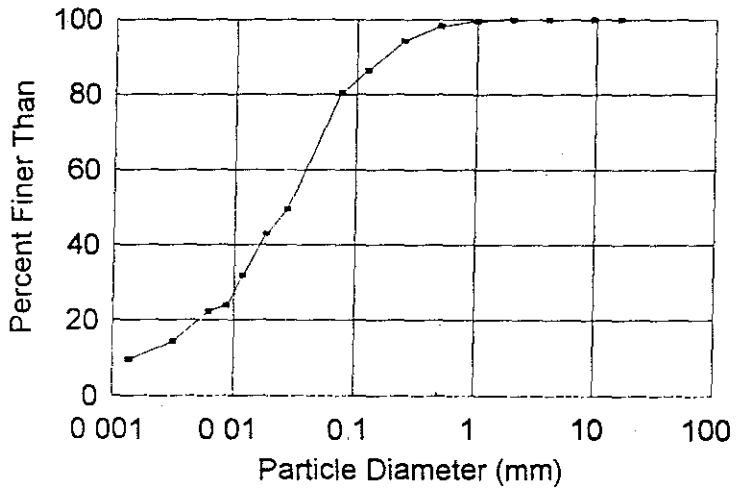
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	100.81	100.00
9.5	0.00	0.00	0.00	100.81	100.00
4	0.00	0.00	0.00	100.81	100.00
2	0.00	0.00	0.00	100.81	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.033	1.031	8.09	0.0275	49.39
5	1.029	1.027	9.15	0.0185	43.02
15	1.022	1.02	11.00	0.0117	31.86
30	1.017	1.015	12.33	0.0087	23.90
60	1.016	1.014	12.59	0.0063	22.30
250	1.011	1.009	13.91	0.0032	14.34
1440	1.008	1.006	14.71	0.0014	9.56

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	0.33	100.48	99.67
0.5	1.41	99.07	98.27
0.25	4.02	95.05	94.29
0.125	7.94	87.11	86.41
0.075	6.05	81.06	80.41
TOTAL	19.75		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	99.67
	0.5	98.27
Fine Sand	0.25	94.29
	0.125	86.41
	0.075	80.41
Silt	0.0275	49.39
	0.0185	43.02
	0.0117	31.86
	0.0087	23.90
	0.0063	22.30
Clay	0.0032	14.34
	0.0014	9.56

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/14/97
Site name:	Cornell Dubilier
Sample No.:	A10396

Sample Data

Mass of sample split on No. 10 sieve (g):	100.25
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	100.25
Percent passing No. 10 sieve (g):	100.00
Mass used in Hydrometer test (g):	100.25
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	100.26

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	98.91

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.001
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.001

Values

K:	0.01365
W:	98.91
F:	0.00

S

Results	A10396

Sieve Analysis

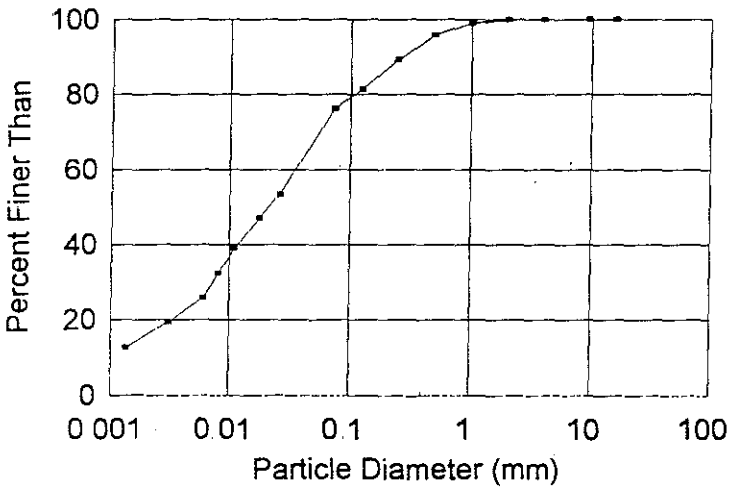
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	98.91	100.00
9.5	0.00	0.00	0.00	98.91	100.00
4	0.00	0.00	0.00	98.91	100.00
2	0.00	0.00	0.00	98.91	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.034	1.033	7.67	0.0265	53.58
5	1.030	1.029	9.52	0.0179	47.09
15	1.025	1.024	9.95	0.0111	38.97
30	1.021	1.02	11.00	0.0083	32.47
60	1.017	1.016	12.05	0.0061	25.98
250	1.013	1.012	13.12	0.0031	19.48
1440	1.009	1.008	14.18	0.0014	12.99

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	1.01	97.90	98.98
0.5	3.11	94.79	95.83
0.25	6.52	88.27	89.24
0.125	7.73	80.54	81.43
0.075	5.14	75.40	76.23
TOTAL	23.51		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	98.98
	0.5	95.83
Fine Sand	0.25	89.24
	0.125	81.43
	0.075	76.23
Silt	0.0265	53.58
	0.0179	47.09
	0.0111	38.97
	0.0083	32.47
	0.0061	25.98
Clay	0.0031	19.48
	0.0014	12.99

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	09/29/97
Site name:	Cornell Dubilier
Sample No.:	A10397

Sample Data

Mass of sample split on No. 10 sieve (g):	101.85
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	101.85
Percent passing No. 10 sieve (g):	100.00
Mass used in Hydrometer test (g):	101.85
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	101.85

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	100.49

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	100.49
F:	0.00

Results	A10397

Sieve Analysis

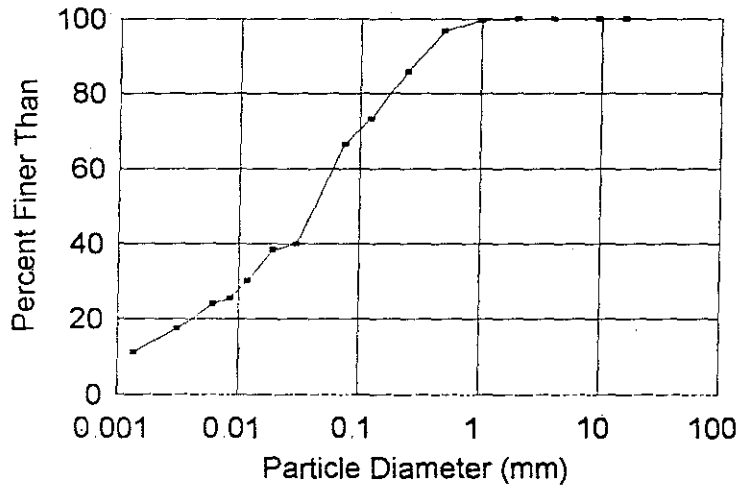
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	100.49	100.00
9.5	0.00	0.00	0.00	100.49	100.00
4	0.00	0.00	0.00	100.49	100.00
2	0.00	0.00	0.00	100.49	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.027	1.025	9.69	0.0300	39.95
5	1.026	1.024	9.96	0.0193	38.36
15	1.021	1.019	11.27	0.0118	30.37
30	1.018	1.016	12.06	0.0087	25.57
60	1.017	1.015	12.33	0.0062	23.97
250	1.013	1.011	13.39	0.0032	17.58
1440	1.009	1.007	14.44	0.0014	11.19

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	0.41	100.08	99.59
0.5	2.81	97.27	96.80
0.25	10.91	86.36	85.94
0.125	12.66	73.70	73.34
0.075	6.84	66.86	66.53
TOTAL	33.63		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	99.59
	0.5	96.80
Fine Sand	0.25	85.94
	0.125	73.34
	0.075	66.53
Silt	0.0300	39.95
	0.0193	38.36
	0.0118	30.37
	0.0087	25.57
	0.0062	23.97
Clay	0.0032	17.58
	0.0014	11.19

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	09/29/97
Site name:	Cornell Dubilier
Sample No.:	A10398

Sample Data

Mass of sample split on No. 10 sieve (g):	100.61
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	100.61
Percent passing No. 10 sieve (g):	100.00

Mass used in Hydrometer test (g):	100.61
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	100.61

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	99.27

Hydrometer Test

Hydrometer type:	151H	
Hydrometer correction:		0.002
Average temperature (C):		20
Temperature correction factor:		0
Total Hydrometer correction:		0.002

Values

K:	0.01365
W:	99.27
F:	0.00

S

Results A10398

Sieve Analysis

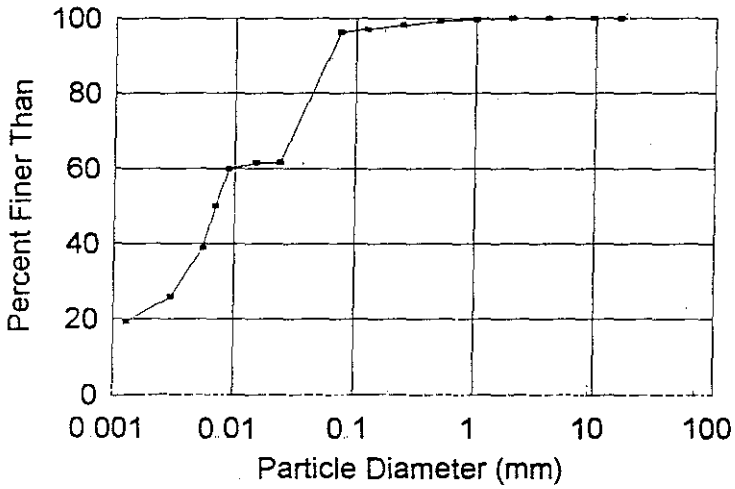
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	99.27	100.00
9.5	0.00	0.00	0.00	99.27	100.00
4	0.00	0.00	0.00	99.27	100.00
2	0.00	0.00	0.00	99.27	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.040	1.038	6.24	0.0241	61.48
8	1.040	1.038	6.24	0.0153	61.48
15	1.039	1.037	6.51	0.0090	59.86
30	1.033	1.031	8.09	0.0071	50.15
60	1.026	1.024	9.95	0.0056	38.83
250	1.018	1.016	12.06	0.0030	25.89
1440	1.014	1.012	13.12	0.0013	19.41

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	0.26	99.01	99.74
0.5	0.53	98.48	99.20
0.25	1.02	97.46	98.18
0.125	1.14	96.32	97.03
0.075	0.81	95.51	96.21
TOTAL	3.76		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	99.74
	0.5	99.20
Fine Sand	0.25	98.18
	0.125	97.03
	0.075	96.21
Silt	0.0241	61.48
	0.0153	61.48
	0.0090	59.86
	0.0071	50.15
	0.0056	38.83
Clay	0.0030	25.89
	0.0013	19.41

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	09/29/97
Site name:	Cornell Dubilier
Sample No.:	A10399

Sample Data

Mass of sample split on No. 10 sieve (g):	106.38
Mass retained on No. 10 sieve (g):	4.16
Mass passing No. 10 sieve (g):	102.22
Percent passing No. 10 sieve (g):	96.09
Mass used in Hydrometer test (g):	102.22
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	102.22

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	100.86

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	104.96
F:	4.10

S

Results A10399

Sieve Analysis

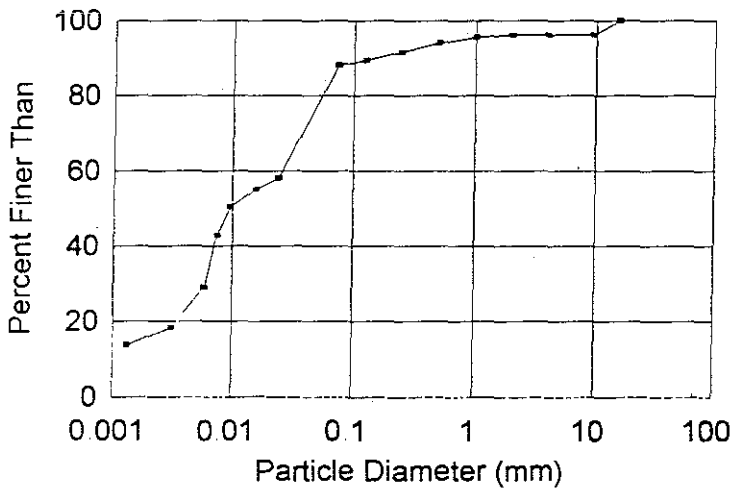
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	104.96	100.00
9.5	4.16	4.10	4.35	100.91	96.14
4	0.00	0.00	0.00	100.91	96.14
2	0.00	0.00	0.00	100.91	96.14

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.040	1.038	8.24	0.0241	58.15
5	1.038	1.036	8.77	0.0159	55.09
15	1.035	1.033	7.57	0.0097	50.49
30	1.030	1.028	8.89	0.0074	42.84
60	1.021	1.019	11.27	0.0059	29.07
250	1.014	1.012	13.12	0.0031	18.36
1440	1.011	1.009	13.91	0.0013	13.77

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	0.58	100.26	95.54
0.5	1.60	98.68	94.01
0.25	2.59	96.09	91.54
0.125	2.19	93.90	89.46
0.075	1.44	92.46	88.09
TOTAL	8.40		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	96.14
Course Sand	4	96.14
	2	96.14
Medium Sand	1	95.54
	0.5	94.01
Fine Sand	0.25	91.54
	0.125	89.46
	0.075	88.09
Silt	0.0241	58.15
	0.0159	55.09
	0.0097	50.49
	0.0074	42.84
	0.0059	29.07
	0.0031	18.36
Clay	0.0013	13.77

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	09/29/97
Site name:	Cornell Dubilier
Sample No.:	A10400

Sample Data

Mass of sample split on No. 10 sieve (g):	100.49
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	100.49
Percent passing No. 10 sieve (g):	100.00
Mass used in Hydrometer test (g):	100.49
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	100.49

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	99.15

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	99.15
F:	0.00

S

Results	A10400

Sieve Analysis

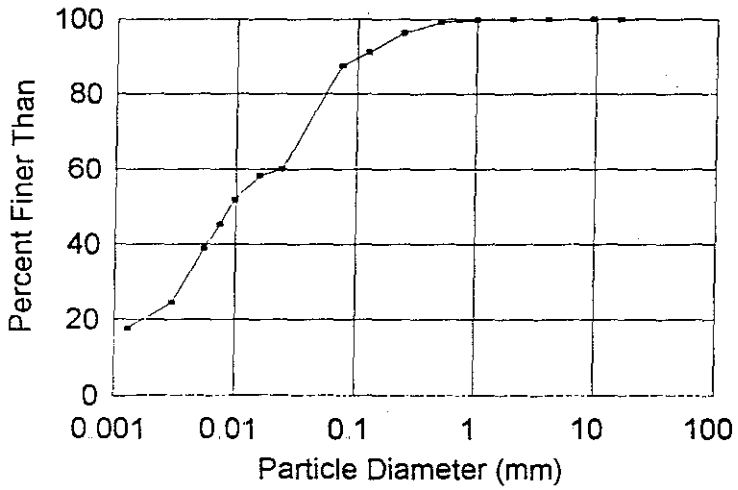
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	99.15	100.00
9.5	0.00	0.00	0.00	99.15	100.00
4	0.00	0.00	0.00	99.15	100.00
2	0.00	0.00	0.00	99.15	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.039	1.037	6.51	0.0248	59.93
5	1.038	1.036	6.77	0.0159	58.31
15	1.034	1.032	7.83	0.0099	51.83
30	1.030	1.028	8.89	0.0074	45.36
60	1.026	1.024	9.95	0.0056	38.88
250	1.017	1.015	12.33	0.0030	24.30
1440	1.013	1.011	13.39	0.0013	17.82

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	0.11	99.04	99.89
0.5	0.76	98.28	99.12
0.25	2.75	95.53	96.35
0.125	5.18	90.35	91.12
0.075	3.66	86.69	87.43
TOTAL	12.46		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	99.89
	0.5	99.12
Fine Sand	0.25	96.35
	0.125	91.12
	0.075	87.43
Silt	0.0246	59.93
	0.0159	58.31
	0.0099	51.83
	0.0074	45.36
	0.0056	38.88
Clay	0.0030	24.30
	0.0013	17.82

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/08/97
Site name:	Cornell Dubilier
Sample No.:	A10486

Sample Data

Mass of sample split on No. 10 sieve (g):	104.2
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	104.2
Percent passing No. 10 sieve (g):	100.00
Mass used in Hydrometer test (g):	104.2
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	104.2

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	102.81

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	102.81
F:	0.00

S3 A14

Results	A10486

Sieve Analysis

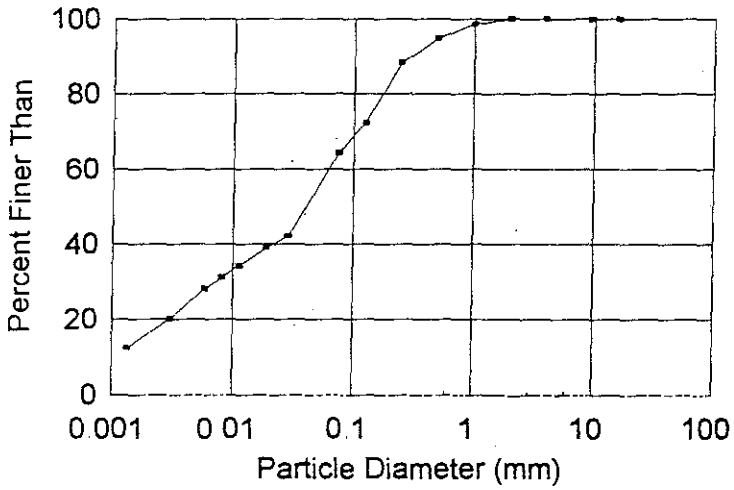
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	102.81	100.00
9.5	0.00	0.00	0.00	102.81	100.00
4	0.00	0.00	0.00	102.81	100.00
2	0.00	0.00	0.00	102.81	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.029	1.027	9.15	0.0292	42.18
5	1.027	1.025	9.52	0.0190	39.05
15	1.024	1.022	10.48	0.0114	34.37
30	1.022	1.02	11.00	0.0083	31.24
60	1.020	1.018	11.53	0.0060	28.12
250	1.015	1.013	12.86	0.0031	20.31
1440	1.010	1.008	14.18	0.0014	12.50

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	1.40	101.41	98.64
0.5	3.82	97.59	94.92
0.25	6.71	90.88	88.40
0.125	16.67	74.21	72.18
0.075	8.19	66.02	64.22
TOTAL	36.79		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	98.64
	0.5	94.92
Fine Sand	0.25	88.40
	0.125	72.18
	0.075	64.22
Silt	0.0292	42.18
	0.0190	39.05
	0.0114	34.37
	0.0083	31.24
	0.0060	28.12
Clay	0.0031	20.31
	0.0014	12.50

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/08/97
Site name:	Cornell Dubilier
Sample No.:	A10487

Sample Data

Mass of sample split on No. 10 sieve (g):	109.5
Mass retained on No. 10 sieve (g):	4.9
Mass passing No. 10 sieve (g):	104.6
Percent passing No. 10 sieve (g):	95.53
Mass used in Hydrometer test (g):	104.6
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	104.6

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	103.21

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	108.04
F:	4.83

S1 A1-2

Results	A10487

Sieve Analysis

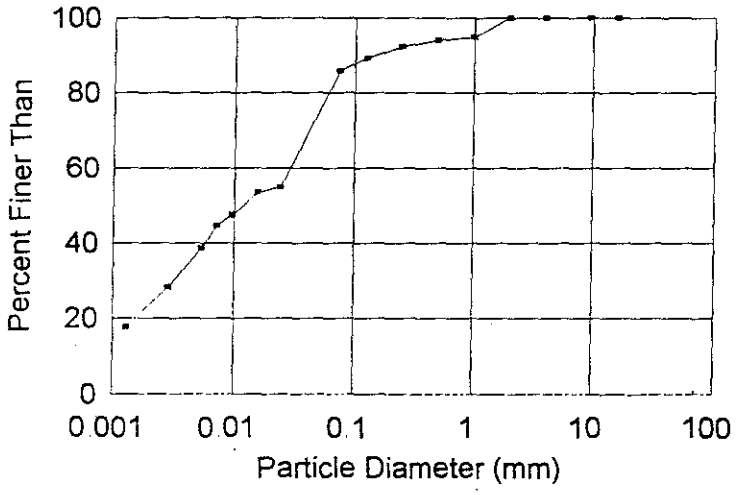
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	108.04	100.00
9.5	0.00	0.00	0.00	108.04	100.00
4	0.00	0.00	0.00	108.04	100.00
2	4.90	4.83	8.00	108.04	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.039	1.037	5.51	0.0246	55.00
5	1.038	1.036	6.77	0.0159	53.52
15	1.034	1.032	7.83	0.0099	47.57
30	1.032	1.03	8.36	0.0072	44.60
60	1.028	1.026	9.42	0.0054	38.65
250	1.021	1.019	11.27	0.0029	28.24
1440	1.014	1.012	13.12	0.0013	17.84

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	0.71	102.50	94.87
0.5	0.91	101.59	94.03
0.25	1.81	99.78	92.35
0.125	3.45	96.33	89.16
0.075	3.56	92.77	85.86
TOTAL	10.44		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	94.87
	0.5	94.03
Fine Sand	0.25	92.35
	0.125	89.16
	0.075	85.86
Silt	0.0246	55.00
	0.0159	53.52
	0.0099	47.57
	0.0072	44.60
	0.0054	38.65
Clay	0.0029	28.24
	0.0013	17.84

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	09/29/97
Site name:	Cornell Dubilier
Sample No.:	A10488

Sample Data

Mass of sample split on No. 10 sieve (g):	104.49
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	104.49
Percent passing No. 10 sieve (g):	100.00

Mass used in Hydrometer test (g):	104.49
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	104.49

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	103.10

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	103.10
F:	0.00

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Results	A10488

Sieve Analysis

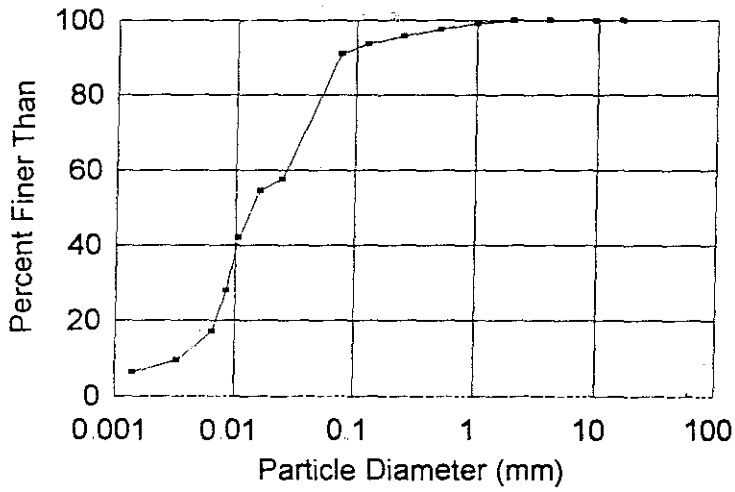
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	103.10	100.00
9.5	0.00	0.00	0.00	103.10	100.00
4	0.00	0.00	0.00	103.10	100.00
2	0.00	0.00	0.00	103.10	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.039	1.037	6.51	0.0246	57.64
5	1.037	1.035	7.04	0.0162	54.52
15	1.029	1.027	9.15	0.0107	42.06
30	1.020	1.018	11.53	0.0085	28.04
60	1.013	1.011	13.39	0.0064	17.14
250	1.008	1.006	14.71	0.0033	9.35
1440	1.006	1.004	15.24	0.0014	6.23

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	0.85	102.25	99.18
0.5	1.68	100.57	97.55
0.25	1.83	98.74	95.77
0.125	2.26	96.48	93.58
0.075	2.68	93.80	90.98
TOTAL	9.30		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	99.18
	0.5	97.55
Fine Sand	0.25	95.77
	0.125	93.58
	0.075	90.98
Silt	0.0246	57.64
	0.0162	54.52
	0.0107	42.06
	0.0085	28.04
	0.0064	17.14
Clay	0.0033	9.35
	0.0014	6.23

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/08/97
Site name:	Cornell Dubilier
Sample No.:	A10489

Sample Data

Mass of sample split on No. 10 sieve (g):	103
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	103
Percent passing No. 10 sieve (g):	100.00
Mass used in Hydrometer test (g):	103
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	103

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	101.63

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	101.63
F:	0.00

cf A1-4

Results A10489

Sieve Analysis

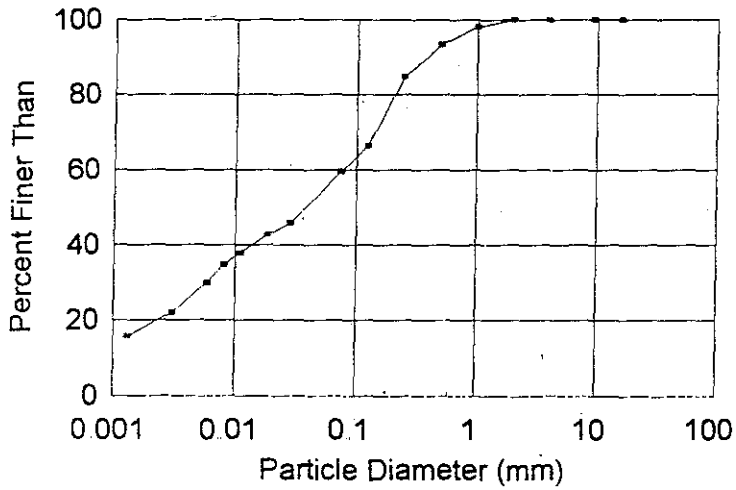
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	101.63	100.00
9.5	0.00	0.00	0.00	101.63	100.00
4	0.00	0.00	0.00	101.63	100.00
2	0.00	0.00	0.00	101.63	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.031	1.029	8.62	0.0283	45.83
5	1.029	1.027	9.15	0.0185	42.67
15	1.026	1.024	9.95	0.0111	37.93
30	1.024	1.022	10.48	0.0081	34.77
60	1.021	1.019	11.27	0.0059	30.03
250	1.016	1.014	12.59	0.0031	22.12
1440	1.012	1.01	13.65	0.0013	15.80

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	1.97	99.66	98.06
0.5	4.74	94.92	93.40
0.25	8.82	86.10	84.72
0.125	18.62	67.48	66.40
0.075	7.05	60.43	59.46
TOTAL	41.20		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	98.06
	0.5	93.40
Fine Sand	0.25	84.72
	0.125	66.40
	0.075	59.46
Silt	0.0283	45.83
	0.0185	42.67
	0.0111	37.93
	0.0081	34.77
	0.0059	30.03
Clay	0.0031	22.12
	0.0013	15.80

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/08/97
Site name:	Corneli Dubilier
Sample No.:	A10490

Sample Data

Mass of sample split on No. 10 sieve (g):	103.1
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	103.1
Percent passing No. 10 sieve (g):	100.00
Mass used in Hydrometer test (g):	103.1
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	103.1

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	101.73

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	101.73
F:	0.00

SS A1-5

Results	A10490

Sieve Analysis

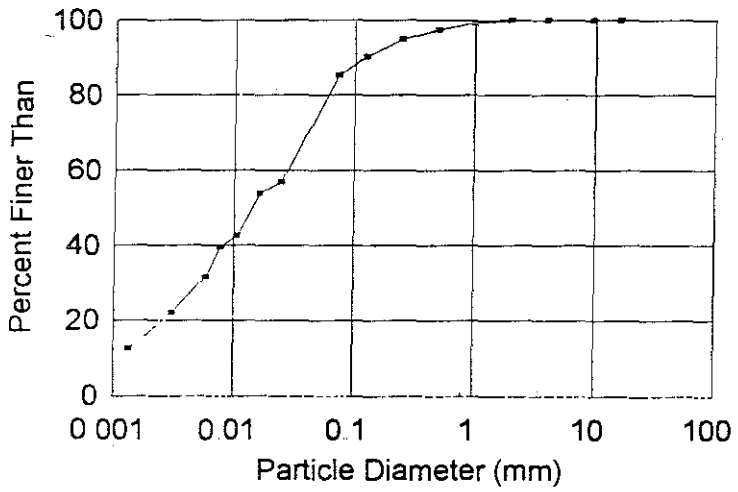
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	101.73	100.00
9.5	0.00	0.00	0.00	101.73	100.00
4	0.00	0.00	0.00	101.73	100.00
2	0.00	0.00	0.00	101.73	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.038	1.036	6.77	0.0251	56.84
5	1.036	1.034	7.30	0.0165	53.68
15	1.029	1.027	9.15	0.0107	42.63
30	1.027	1.025	9.68	0.0078	39.47
60	1.022	1.02	11.00	0.0058	31.58
250	1.016	1.014	12.59	0.0031	22.10
1440	1.010	1.008	14.18	0.0014	12.63

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	0.73	101.00	99.28
0.5	1.84	99.16	97.47
0.25	2.64	96.52	94.88
0.125	4.60	91.92	90.36
0.075	5.17	86.75	85.27
TOTAL	14.98		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	99.28
	0.5	97.47
Fine Sand	0.25	94.88
	0.125	90.36
	0.075	85.27
Silt	0.0251	56.84
	0.0165	53.68
	0.0107	42.63
	0.0078	39.47
	0.0058	31.58
Clay	0.0031	22.10
	0.0014	12.63

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/08/97
Site name:	Cornell Dubilier
Sample No.:	A10491

Sample Data

Mass of sample split on No. 10 sieve (g):	102.5
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	102.5
Percent passing No. 10 sieve (g):	100.00
Mass used in Hydrometer test (g):	102.5
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	102.5

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	101.13

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	101.13
F:	0.00

cd A-1-b

Results	A10491

Sieve Analysis

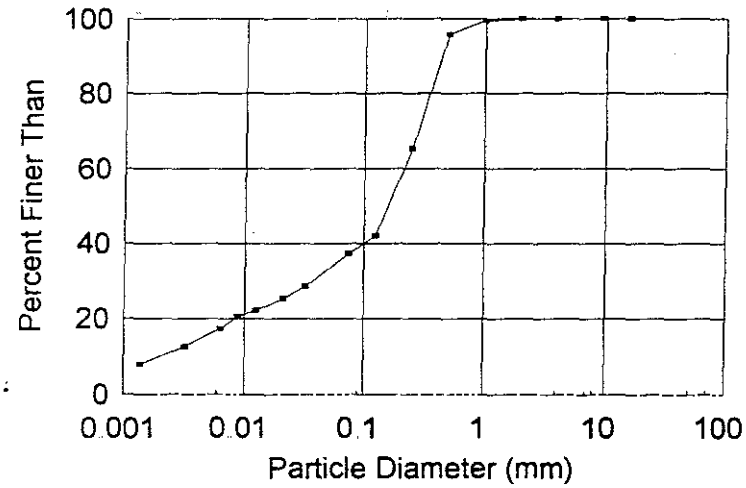
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	101.13	100.00
9.5	0.00	0.00	0.00	101.13	100.00
4	0.00	0.00	0.00	101.13	100.00
2	0.00	0.00	0.00	101.13	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.020	1.018	11.53	0.0328	28.59
5	1.018	1.015	12.06	0.0212	25.41
15	1.016	1.014	12.59	0.0125	22.23
30	1.015	1.013	12.86	0.0089	20.64
60	1.013	1.011	13.39	0.0064	17.47
250	1.010	1.008	14.18	0.0033	12.70
1440	1.007	1.005	14.97	0.0014	7.94

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	0.55	100.68	99.45
0.5	3.62	96.96	95.88
0.25	30.94	66.02	65.28
0.125	23.45	42.57	42.10
0.075	4.91	37.66	37.24
TOTAL	63.47		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	99.46
	0.5	95.88
Fine Sand	0.25	65.28
	0.125	42.10
	0.075	37.24
Silt	0.0328	28.59
	0.0212	25.41
	0.0125	22.23
	0.0089	20.64
	0.0064	17.47
Clay	0.0033	12.70
	0.0014	7.94

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/08/97
Site name:	Cornell Dubilier
Sample No.:	A10492

Sample Data

Mass of sample split on No. 10 sieve (g):	105.4
Mass retained on No. 10 sieve (g):	1.5
Mass passing No. 10 sieve (g):	103.9
Percent passing No. 10 sieve (g):	98.58
Mass used in Hydrometer test (g):	103.9
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	103.9

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	102.51

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	103.99
F:	1.48

S1 A2-1

Results:	A10492

Sieve Analysis

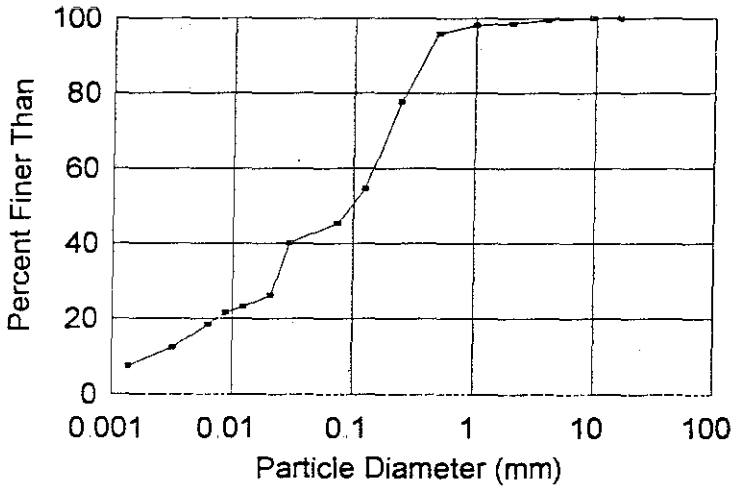
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	103.99	100.00
9.5	0.00	0.00	0.00	103.99	100.00
4	0.59	0.58	0.57	103.42	99.45
2	0.91	0.90	0.89	102.53	98.60

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.028	1.026	9.42	0.0296	40.15
5	1.019	1.017	11.50	0.0210	26.25
15	1.017	1.015	12.33	0.0124	23.17
30	1.016	1.014	12.59	0.0088	21.62
60	1.014	1.012	13.12	0.0064	18.53
250	1.010	1.008	14.18	0.0033	12.35
1440	1.007	1.005	14.97	0.0014	7.72

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	0.39	102.12	98.20
0.5	2.44	99.68	95.86
0.25	18.90	80.78	77.68
0.125	24.05	56.73	54.56
0.075	9.66	47.07	45.27
TOTAL	55.44		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	99.45
	2	98.60
Medium Sand	1	98.20
	0.5	95.86
Fine Sand	0.25	77.68
	0.125	54.56
	0.075	45.27
Silt	0.0296	40.15
	0.0210	26.25
	0.0124	23.17
	0.0088	21.62
	0.0064	18.53
	0.0033	12.35
Clay	0.0014	7.72

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/08/97
Site name:	Cornell Dubilier
Sample No.:	A10493

Sample Data

Mass of sample split on No. 10 sieve (g):	107.1
Mass retained on No. 10 sieve (g):	3.1
Mass passing No. 10 sieve (g):	104
Percent passing No. 10 sieve (g):	97.11
Mass used in Hydrometer test (g):	104
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	104

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	102.61

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	105.67
F:	3.06

sd A2-2

Results	A10493

Sieve Analysis

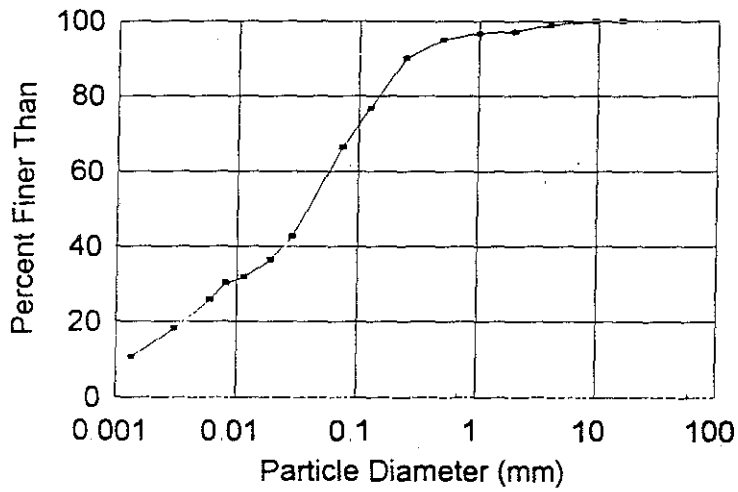
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	105.67	100.00
9.5	0.00	0.00	0.00	105.67	100.00
4	1.02	1.01	0.99	104.66	99.06
2	2.08	2.05	2.02	102.65	97.14

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.030	1.028	8.89	0.0288	42.56
5	1.026	1.024	9.95	0.0193	36.48
15	1.023	1.021	10.74	0.0116	31.92
30	1.022	1.02	11.00	0.0083	30.40
60	1.019	1.017	11.80	0.0061	25.84
250	1.014	1.012	13.12	0.0031	18.24
1440	1.009	1.007	14.44	0.0014	10.64

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	0.40	102.21	96.73
0.5	1.82	100.39	95.00
0.25	5.21	95.18	90.07
0.125	14.08	81.10	76.75
0.075	11.01	70.09	66.33
TOTAL	32.52		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	99.06
	2	97.14
Medium Sand	1	96.73
	0.5	95.00
Fine Sand	0.25	90.07
	0.125	76.75
	0.075	66.33
Silt	0.0288	42.56
	0.0193	36.48
	0.0116	31.92
	0.0083	30.40
	0.0061	25.84
Clay	0.0031	18.24
	0.0014	10.64

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/08/97
Site name:	Cornell Dubilier
Sample No.:	A10494

Sample Data

Mass of sample split on No. 10 sieve (g):	101.6
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	101.6
Percent passing No. 10 sieve (g):	100.00
Mass used in Hydrometer test (g):	101.6
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	101.6

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	100.25

Hydrometer Test

Hydrometer type:	151H	
Hydrometer correction:		0.002
Average temperature (C):		20
Temperature correction factor:		0
Total Hydrometer correction:		0.002

Values

K:	0.01365
W:	100.25
F:	0.00

Soil A4-1

Results A10494

Sieve Analysis

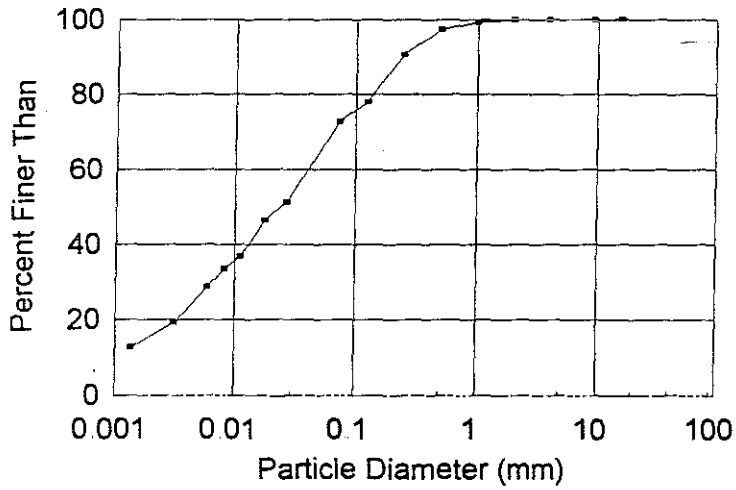
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	100.25	100.00
9.5	0.00	0.00	0.00	100.25	100.00
4	0.00	0.00	0.00	100.25	100.00
2	0.00	0.00	0.00	100.25	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.034	1.032	7.83	0.0270	51.27
5	1.031	1.029	8.52	0.0179	46.46
15	1.025	1.023	10.21	0.0113	36.85
30	1.023	1.021	10.74	0.0082	33.64
60	1.020	1.018	11.53	0.0060	28.84
250	1.014	1.012	13.12	0.0031	19.23
1440	1.010	1.008	14.18	0.0014	12.82

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	0.71	99.64	99.29
0.5	1.82	97.72	97.48
0.25	6.73	90.99	90.76
0.125	12.77	78.22	78.02
0.075	5.23	72.99	72.81
TOTAL	27.26		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	99.29
	0.5	97.48
Fine Sand	0.25	90.76
	0.125	78.02
	0.075	72.81
Silt	0.0270	51.27
	0.0179	46.46
	0.0113	36.85
	0.0082	33.64
	0.0060	28.84
Clay	0.0031	19.23
	0.0014	12.82

PARTICLE SIZE ANALYSIS

Technician's name: Chris French
Date: 09/29/97

Site name: Cornell Dubilier
Sample No.: A10495

Sample Data

Mass of sample split on No. 10 sieve (g):	126.2
Mass retained on No. 10 sieve (g):	23.92
Mass passing No. 10 sieve (g):	102.28
Percent passing No. 10 sieve (g):	81.05
Mass used in Hydrometer test (g):	102.28
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	102.28

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	100.92

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	124.52
F:	23.60

SS A4-2

Results	A10495

Sieve Analysis

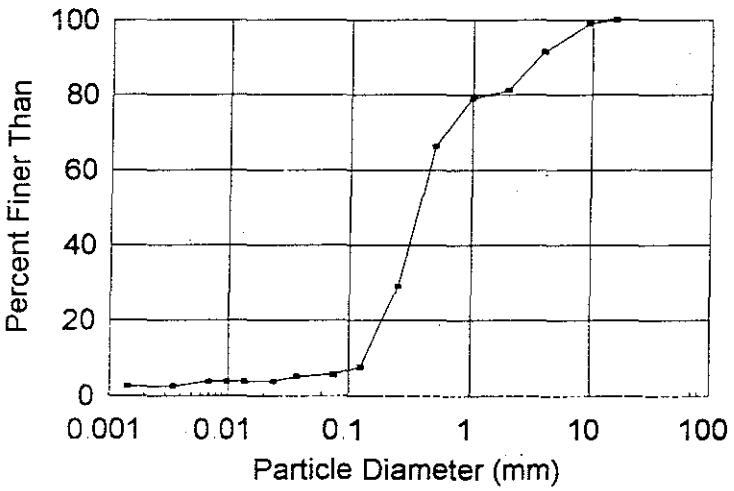
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	124.52	100.00
9.5	1.27	1.25	1.24	123.28	99.01
4	9.63	9.50	9.37	113.91	91.48
2	13.02	12.85	12.68	101.23	81.30

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.006	1.004	15.24	0.0377	5.16
15	1.005	1.003	15.50	0.0240	3.87
15	1.005	1.003	15.50	0.0139	3.87
30	1.005	1.003	15.50	0.0098	3.87
60	1.005	1.003	15.50	0.0069	3.87
250	1.004	1.002	15.77	0.0034	2.58
1440	1.004	1.002	15.77	0.0014	2.58

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	2.53	98.39	79.01
0.5	15.97	82.42	66.19
0.25	46.21	36.21	29.08
0.125	26.55	9.66	7.75
0.075	2.57	7.09	5.69
TOTAL	93.83		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	99.01
Course Sand	4	91.48
	2	81.30
Medium Sand	1	79.01
	0.5	66.19
Fine Sand	0.25	29.08
	0.125	7.75
	0.075	5.69
Silt	0.0377	5.16
	0.0240	3.87
	0.0139	3.87
	0.0098	3.87
	0.0069	3.87
Clay	0.0034	2.58
	0.0014	2.58

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/08/97
Site name:	Cornell Dubilier
Sample No.:	A10496

Sample Data

Mass of sample split on No. 10 sieve (g):	196.6
Mass retained on No. 10 sieve (g):	94.5
Mass passing No. 10 sieve (g):	102.1
Percent passing No. 10 sieve (g):	51.93

Mass used in Hydrometer test (g):	102.1
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	102.1

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	100.74

Hydrometer Test

Hydrometer type:	151H	
Hydrometer correction:		0.002
Average temperature (C):		20
Temperature correction factor:		0
Total Hydrometer correction:		0.002

Values

K:	0.01365
W:	193.66
F:	93.24

SJ AS-1

Results A10496

Sieve Analysis

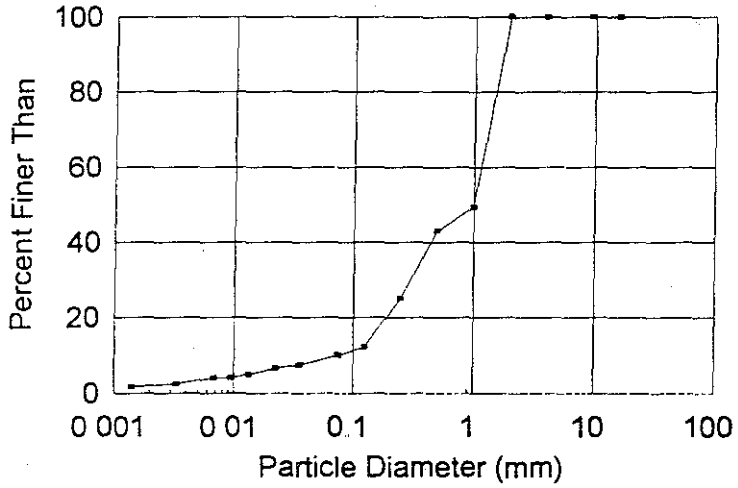
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	193.98	100.00
9.5	0.00	0.00	0.00	193.98	100.00
4	54.23	53.51	0.00	193.98	100.00
2	40.27	39.73	0.00	193.98	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.011	1.005	13.91	0.0360	7.45
5	1.010	1.004	14.18	0.0230	6.62
15	1.008	1.006	14.71	0.0135	4.97
30	1.007	1.005	14.97	0.0096	4.14
60	1.007	1.005	14.97	0.0068	4.14
250	1.005	1.003	15.50	0.0034	2.48
1440	1.004	1.002	15.77	0.0014	1.66

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	4.89	95.85	49.41
0.5	12.41	83.44	43.01
0.25	34.61	48.83	25.17
0.125	25.05	23.78	12.26
0.075	4.26	19.52	10.06
TOTAL	81.22		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	49.41
	0.5	43.01
Fine Sand	0.25	25.17
	0.125	12.26
	0.075	10.06
Silt	0.0360	7.45
	0.0230	6.62
	0.0135	4.97
	0.0096	4.14
	0.0068	4.14
Clay	0.0034	2.48
	0.0014	1.66

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/14/97
Site name:	Cornell Dubilier
Sample No.:	A10497

Sample Data

Mass of sample split on No. 10 sieve (g):	181.2
Mass retained on No. 10 sieve (g):	79.31
Mass passing No. 10 sieve (g):	101.89
Percent passing No. 10 sieve (g):	56.23
Mass used in Hydrometer test (g):	101.89
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	101.89

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	100.53

Hydrometer Test

Hydrometer type:	151H	
Hydrometer correction:		0.001
Average temperature (C):		20
Temperature correction factor:		0
Total Hydrometer correction:		0.001

Values

K:	0.01365
W:	178.76
F:	78.25

S: A5-2

Results	A10497

Sieve Analysis

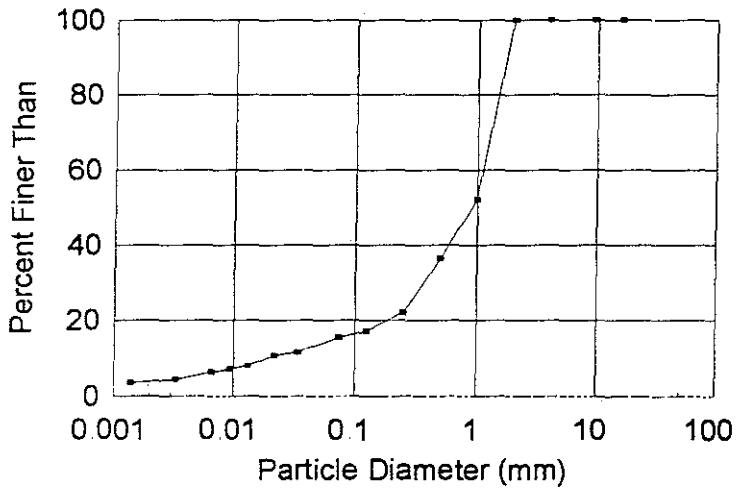
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	178.75	100.00
9.5	2.11	2.08	0.00	178.75	100.00
4	35.75	35.27	0.00	178.75	100.00
2	41.45	40.90	0.00	178.75	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.014	1.013	12.96	0.0346	11.68
5	1.013	1.012	13.12	0.0221	10.78
15	1.010	1.009	13.91	0.0131	8.08
30	1.009	1.008	14.19	0.0094	7.19
60	1.008	1.007	14.44	0.0067	6.29
250	1.006	1.005	14.97	0.0033	4.49
1440	1.005	1.004	15.24	0.0014	3.59

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	7.23	93.30	52.19
0.5	28.14	65.16	36.45
0.25	25.45	39.71	22.21
0.125	8.84	30.87	17.27
0.075	3.21	27.66	15.47
TOTAL	72.87		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	52.19
	0.5	36.45
Fine Sand	0.25	22.21
	0.125	17.27
	0.075	15.47
Silt	0.0346	11.68
	0.0221	10.78
	0.0131	8.08
	0.0094	7.19
	0.0067	6.29
Clay	0.0033	4.49
	0.0014	3.59

PARTICLE SIZE ANALYSIS

Technician's name:	Chris French
Date:	08/08/97
Site name:	Cornell Dubilier
Sample No.:	A10498

Sample Data

Mass of sample split on No. 10 sieve (g):	100.4
Mass retained on No. 10 sieve (g):	0
Mass passing No. 10 sieve (g):	100.4
Percent passing No. 10 sieve (g):	100.00

Mass used in Hydrometer test (g):	100.4
Specific gravity of soil:	2.65
Correction factor:	1
Corrected mass of soil used in hydrometer test (g):	100.4

Hygroscopic Moisture

Wet mass of hygroscopic test sample (g):	15
Oven-dry mass of test sample (g):	14.8
Percent hygroscopic moisture:	1.33
Corrected mass of soil used in hydrometer test (g):	99.06

Hydrometer Test

Hydrometer type:	151H
Hydrometer correction:	0.002
Average temperature (C):	20
Temperature correction factor:	0
Total Hydrometer correction:	0.002

Values

K:	0.01365
W:	99.06
F:	0.00

A6-1

Results A10498

Sieve Analysis

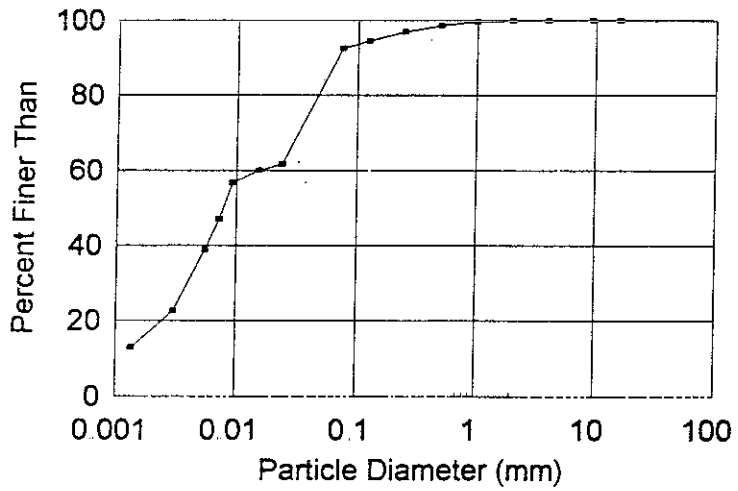
Sieve Size (mm)	Mass Retained (g)	Hygroscopic Corrected Mass Retained (g)	Mass Retained Corrected for F (g)	Mass Passing (g)	Percent Finer Than
16	0.00	0.00	0.00	99.06	100.00
9.5	0.00	0.00	0.00	99.06	100.00
4	0.00	0.00	0.00	99.06	100.00
2	0.00	0.00	0.00	99.06	100.00

Hydrometer Test Analysis

Time, T (Minutes)	Hydrometer Reading	Corrected Reading	Length, L (cm)	Diameter (mm)	Percent Suspended
2	1.040	1.038	6.24	0.0241	61.61
5	1.039	1.037	6.51	0.0156	59.99
15	1.037	1.035	7.04	0.0093	56.74
30	1.031	1.029	8.62	0.0073	47.02
60	1.026	1.024	9.95	0.0056	38.91
250	1.016	1.014	12.59	0.0031	22.70
1440	1.010	1.008	14.18	0.0014	12.97

Sieve Analysis <No.10

Size (mm)	Mass Retained (g)	Mass Passing (g)	Percent Finer Than
1	0.38	98.68	99.62
0.5	0.98	97.70	98.63
0.25	1.66	96.04	96.96
0.125	2.40	93.64	94.53
0.075	1.96	91.68	92.55
TOTAL	7.38		



ASTM Grain Size	Particle Dia. (mm)	Percent Finer
Fine Gravel	16	100.00
	9.5	100.00
Course Sand	4	100.00
	2	100.00
Medium Sand	1	99.62
	0.5	98.63
Fine Sand	0.25	96.95
	0.125	94.53
	0.075	92.55
Silt	0.0241	61.61
	0.0156	59.99
	0.0093	56.74
	0.0073	47.02
	0.0056	38.91
Clay	0.0031	22.70
	0.0014	12.97

APPENDIX D

Amphipod Toxicity Evaluation Final Report
Cornell-Dubilier Site
South Plainfield, NJ
April 1998

FINAL REPORT

TOXICOLOGICAL EVALUATION OF SEDIMENT COLLECTED AT THE CORNELL DUBILIER ELECTRONICS SITE, SOUTH PLAINFIELD, NJ

November 22, 1997

REPORT #: 7286

PREPARED FOR:

WESTON - REAC
GSA RARITAN DEPOT
BUILDING 209
EDISON, NJ 08837

recycled paper

asi 499 Point Breeze Road • Flemington, New Jersey 08822 • Telephone (908) 788-8700 FAX (908) 788-9165

Report:	Toxicological Evaluation of Sediment Collected from Cornell Dubilier Electronics Site, South Plainfield, New Jersey
Sponsor:	Weston - REAC GSA Raritan Depot Building 209 Edison, NJ 08837
Testing Facility:	Aqua Survey, Inc. 499 Point Breeze Road Flemington, NJ 08822 USA
Study Number:	97-286
Report:	7286
Study Initiation Date:	June 21, 1997
Date Reported:	November 22, 1997
Personnel:	A. Novotny S. Hornberger J. Rios T. Dolce C. Doyle E. Landon M. Papalski Y. Terrell

Robert M. Wolfertz 11/21/97

Robert M. Wolfertz Date
Vice President

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recycled paper

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I. Introduction

The objective of this test was to determine the toxic effects of sediment collected from the Cornell Dubilier Electronics Site in South Plainfield, New Jersey, to the benthic invertebrate, *Hyalella azteca*. The measure of toxicity is a statistically significant reduction in survival and/or growth of exposed organisms as compared to a reference following exposure for 14 days. Survival in all samples following the 14-day exposure ranged from 76.7% to 94.2%. Survival in sample A3-1 was statistically significant when compared to that of the reference, sample A9-1, indicating acute toxicity. There was no statistically significant reduction in growth of the amphipods ($p \leq 0.05$) when compared to the control or reference, indicating no measurable chronic toxicity to the amphipod *H. azteca*.

Table 1: Survival and Growth Results from 14-day Solid Phase Toxicity Test with *H. azteca*.

Sample ID	ASI ID	Location	% Survival	Mean Length in mm.
Pretest	n/a	n/a	n/a	1.4
Control	71174	n/a	83.3	2.7
J10265 (ref.)	71164	A9-1	91.7	2.4
J10264	71165	A3-1	76.7*	2.7
J10262	71166	A6-2	88.3	2.7
J10497	71167	A5-2	82.5	2.5
J10494	71168	A4-1	90.8	2.4
J10493	71169	A2-2	94.2	2.8
J10486	71170	A1-1	90.8	2.8

* = Statistically significant, compared to Reference, $p \leq 0.05$.

II. Materials and Methods

All samples were collected by Weston personnel from the Cornell Dubilier Electronics Site in South Plainfield, New Jersey, and were received in acceptable condition at Aqua Survey on June 21, 1997. A control sediment was prepared at Aqua Survey, sample A9-1 was used as the reference sediment, and the test sediments were samples A3-1, A6-2, A5-2, A4-1, A2-2, and A1-1

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The methods employed in this test followed guidelines outlined in the following references:

American Public Health Association. 1985. Standard Methods for the Examination of Water and Wastewater, 16th ed., 379 pp.

Nebeker et al. 1984. Biological Methods for Determining Toxicity of Contaminated Freshwater Sediments to Invertebrates, Envir. Tox. Chem., Vol 3: 617-630.

U.S. EPA, 1979, Handbook for Analytical Quality Control in Water and Wastewater Laboratories, EPA/600/4-79/019.

III. Test Conditions

Species
The test species for this test was *Hyalella azteca*, which is a representative benthic invertebrate.

Size/Age/Physical Condition
Animals used in this test were collected from a mass culture. The exact age could not be determined. However, based on the length of the organisms (1.0-2.1 mm), their age should be approximately 0 - 7 days old. The organisms appeared to be in good condition.

Source/Acclimation
All of the animals used were obtained from ASI's in-house culture. Overlay water used was the same as the culture water; therefore no acclimatization was necessary.

Source of Overlay Water
Overlay water was ASI culture water (well water).

Test Temperature
23 ± 1 °C

Test Vessels
The test vessels were new 1-L nalgene beakers covered with a petri plate and beaker fill attachment. Aeration was provided through a filtered, forced air system and plastic-tipped airlines.

Photoperiod
The test was conducted on a 16-hour light/8-hour dark photoperiod with two, 30-minute phase-in/phase-out periods.

Test Levels
Six replicates of undiluted test sediment were tested and compared to six replicates of control sediment.

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Reference
Reference sediment was tested concurrently with the test samples.

Performance Controls
Performance controls are designed to assess the quality of the test organisms and the capabilities of the testing laboratory to successfully perform the toxicity tests. The sediment for performance controls was a mixture of sediment collected from ASI's culture ponds and washed silica sand. ASI culture water (well water) was used as the overlay water during testing. Controls were run with the same number of organisms as the test samples.

IV. Test Procedures

Sediment Sample Preparation
All samples were sieved by pressing the mixed material through a 2-mm sieve. Materials remaining on the sieve were discarded. Samples were homogenized with a plastic spoon by hand until uniform in texture and consistency.

Approximately 200 mL of test sediment was placed into each of six replicate test vessels. The vessels were then filled with dilution water using a head chamber fitted with a 1/4-inch ID drain tube. The tube was bent slightly at the bottom to divert the water away from the sediment. The system was allowed to settle under gentle aeration overnight before organisms were added.

Beginning the Test
Test chambers were monitored for temperature, pH, and dissolved oxygen using a YSI multi-parameter probe. Total ammonia was measured in every chamber using an Orion 290A ion-specific meter fitted with an Orion 95-12 ammonia probe. Conductivity was determined with a YSI Model 33 conductivity meter on a composite sample of each of the eight replicates. Alkalinity and hardness were also determined in the composite sample using standard titrametric methods.

Animals were chosen at random from the culture and counted into 30-mL transport cups. Ten organisms were added to each cup. Once all the cups had ten organisms, organism counts were verified by a second person and the cups were then randomly assigned to chambers. The test began when organisms were introduced to all chambers.

Daily Maintenance
Dissolved oxygen, pH, and temperature were determined daily in every test vessel using a YSI 600 multi-parameter probe and a YSI 610-DM data logger. All test chambers were examined daily and observed behaviors noted. Total ammonia readings were taken each day from the overlay water in one representative sample from each treatment. Animals were fed one mL of standard YCT solution every other day.

Test Duration
The sediment toxicity test was 14 days in duration.

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Ending the Test

At the conclusion of the test, dissolved oxygen, temperature, pH and ammonia were measured in each beaker. A composite of the overlay water from each treatment was analyzed for conductivity, alkalinity, and hardness.

Animals were removed by sieving the sediment through a 500-µm mesh screen using a minimal amount of fresh overlay water. The amphipods retained on the screen were removed with a pipet. The number of survivors was noted, and survivors were euthanized in a solution of 70% methanol. Once dead, the amphipods were measured to the nearest 0.1 mm using a dissecting microscope and micrometer.

Statistical Analyses

At the conclusion of the test, the data were entered into the statistical software, Toxstat™ as appropriate. Survival data were transformed using arcsine squareroot and tested for normality and homogeneity. Based on the results, parametric or non-parametric analysis of variance and comparison of means were used to determine which samples were statistically significant from the reference. Those treatments exhibiting either no or extremely low survival were excluded from the analysis. Growth data were entered into the database untransformed, and tested for normality and homogeneity. The data were then analyzed using analysis of variance and Dunnett's multiple comparison test to determine which organisms were statistically significant from the control and the reference.

Reference Toxicant

A standard reference toxicant (SRT) test with cadmium chloride was performed. The toxicant was dissolved in dilution water to make a stock solution which was diluted to achieve the desired concentration. A substrate of nylon mesh screen was provided.

V. Results

Survival

Average survival ranged from 76.7% to 94.2% all treatments. Performance control survival was 83.3%, which exceeds the USEPA and ASTM minimum criteria of 80%. Sample A3-1 was the only sample shown to be significantly significant from the reference, and was acutely toxic to the amphipod, *Hyalella azteca* after a fourteen day exposure.

Growth

The organisms used in testing ranged from 1.0 to 2.1 mm in length at the start of the test. Surviving organisms averaged from 1.4 to 5.3 mm in length in the various treatments by the end of the test. Data from replicate A3-1 were not included in the calculation of statistics for length, as the survival in that replicate was statistically significant from the reference. There was no statistically significant difference between the organisms exposed to test sediments and those exposed to either the control or reference sediment, therefore we report no measureable chronic toxicity to the amphipod, *Hyalella azteca* in a fourteen day exposure.

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Water Quality

The target test temperature was 22.0 to 24.0°C. The test solution temperature ranged from 22.0 to 24.0°C. The target dissolved oxygen was greater than 4.0 mg/L. Dissolved oxygen was maintained at or above 4.2 mg/L in all chambers. Aeration was commenced prior to introduction of organisms on day 0 due to an expected decline in dissolved oxygen levels. The pH ranged from 7.0 to 9.1. Total ammonia in the overlay water ranged from undetected to 3.26 mg/L (MDL 0.08 mg/L). Although the total ammonia in some of the test vessels changed by greater than 50 percent, the maximum difference recommended by the U.S.EPA test guidelines, this change is believed not to have caused the observed toxicity. Alkalinity ranged from 180 to 260 mg/L $CaCO_3$. Specific conductance ranged from 520 - 620 umhos/cm. Hardness ranged from 112 to 164 mg/L $CaCO_3$. Based on previous tests with this organism, none of these water quality indicators are sufficient to explain the observed mortality.

Complete water quality data are presented in Tables 3 - 7 at the end of this section.

Standard Reference Toxicant

The 96-hour LC_{50} for the reference toxicant was determined to be 8.33 μg Cd/L. This is within the expected range of 0 - 42.7 μg/L for this organism at ASI. A summary of the live count data for this test is presented below in Table 2, and the water quality parameters as well as a control chart are included in the appendix.

Table 2: Results of 96-hour Standard Reference Toxicant Test with $CdCl_2$
Tests were initiated with 10 *Hyalella azteca* per concentration.

Concentration (μg Cd/L)	Final Live Counts
Control	8
4.0	8
8.0	6
16.0	2
32.0	0
64.0	0

LC_{50} = 8.33 (5.40 - 11.9)μg Cd/L

VI. Source of Documentation

All original data will be maintained at:

Aqua Survey, Inc.
499 Point Breeze Road
Flemington, NJ 08822

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Table 3

CLIENT:	Roy F. Weston	TEST DATE:	6/25/97	PARAMETER:	Live Count
JOB #:	97-286	INITIAL COUNT:	20	ORGANISM:	*H. azteca*

Position #	ID#	Sample	Final Count	Percent Survival
43	0.1	Control	16	
30	0.2		17	
27	0.3		17	
41	0.4		16	
26	0.5		16	
10	0.6		18	83.3%
44	1.1	J10265	19	
25	1.2	A9-1	20	
1	1.3		19	
9	1.4		16	
23	1.5		18	
24	1.6		18	91.7%
48	2.1	J10264	17	
33	2.2	A3-1	14	
19	2.3		14	
2	2.4		17	
22	2.5		17	
18	2.6		13	76.7% *
46	3.1	J10262	20	
15	3.2	A6-2	17	
47	3.3		17	
35	3.4		17	
16	3.5		17	
38	3.6		18	88.3%
8	4.1	J10497	17	
39	4.2	A5-2	15	
21	4.3		11	
40	4.4		18	
45	4.5		20	
11	4.6		18	82.5%
32	5.1	J10494	20	
20	5.2	A4-1	19	
42	5.3		17	
14	5.4		20	
3	5.5		17	
31	5.6		16	90.8%
7	6.1	J10493	19	
5	6.2	A2-2	17	
29	6.3		20	
28	6.4		19	
17	6.5		19	
12	6.6		19	94.2%
6	7.1	J10486	17	
37	7.2	A1-1	18	
4	7.3		18	
34	7.4		17	
36	7.5		19	
13	7.6		20	90.8%

* Statistically significant, compared to the Reference, $p \leq 0.05$

AQUA SURVEY, INC.
SOLID PHASE READINGS

Table 4
CLIENT: Roy F. Weston TEST START DATE: 6/25/97 PARAMETER: Temp. (degrees C)
JOB #: 97-286 ORGANISM: *H. azteca*

Positio	ID#	Sample	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Low	High
43	0.1	Control	23.9	22.7	22.6	22.6	22.6	22.7	22.6	22.5	22.6	22.8	22.4	22.5	22.8	22.5	22.6		
30	0.2		24.0	22.7	22.7	22.6	22.8	22.9	22.9	22.8	22.9	22.7	22.4	22.2	23.0	22.5	22.4		
27	0.3		24.0	22.5	22.9	22.8	23.0	23.0	23.1	22.7	22.7	22.6	22.4	22.5	23.1	22.8	22.6		
41	0.4		24.0	22.7	22.8	22.7	22.8	22.8	22.7	22.7	22.8	22.7	22.5	22.4	22.9	22.5	22.6		
26	0.5		24.0	22.6	22.8	22.7	22.9	22.9	22.9	22.6	22.7	22.5	22.4	22.4	22.9	22.6	22.6		
10	0.6		23.9	22.5	22.7	22.6	22.8	22.8	22.7	22.7	22.7	22.6	22.5	22.4	22.8	22.3	22.5	22.2	24.0
44	1.1	J10265	23.7	22.7	22.7	22.7	22.8	22.8	22.8	22.7	22.7	22.8	22.3	22.5	22.9	22.4	22.6		
25	1.2	A9-1	24.0	22.7	22.7	22.7	22.8	22.8	22.9	22.7	22.5	22.7	22.4	22.3	22.8	22.4	22.6		
1	1.3		23.9	22.6	22.6	22.5	22.5	22.6	22.5	22.3	22.5	22.5	22.4	22.3	22.4	22.0	22.0		
9	1.4		24.0	22.7	22.8	22.5	22.8	22.9	22.8	22.7	22.8	22.7	22.5	22.4	23.2	22.5	22.5		
23	1.5		24.0	22.8	22.8	22.8	22.9	22.9	22.9	22.6	22.7	22.6	22.4	22.4	22.9	22.5	22.6		
24	1.6		23.9	22.6	22.8	22.8	22.9	22.7	22.9	22.7	22.6	22.7	22.4	22.2	22.7	22.5	22.6	22.0	24.0
48	2.1	J10264	23.9	22.7	22.9	22.7	22.9	23.0	22.9	22.7	22.7	22.8	22.6	22.6	22.9	22.6	22.6		
33	2.2	A3-1	24.0	22.7	22.8	22.8	22.8	22.9	22.9	22.7	22.7	22.7	22.6	22.6	23.0	22.4	22.5		
19	2.3		24.0	22.8	22.8	22.7	22.9	22.8	22.8	22.7	22.7	22.7	22.4	22.4	23.0	22.4	22.5		
2	2.4		23.9	22.3	22.6	22.4	22.6	22.6	22.5	22.4	22.6	22.5	22.3	22.4	22.5	22.1	22.1		
22	2.5		24.0	22.7	22.7	22.7	22.9	22.8	22.8	22.5	22.7	22.6	22.3	22.2	22.8	22.5	22.5		
18	2.6		24.0	22.7	22.8	22.7	22.9	22.7	22.7	22.7	22.7	22.6	22.2	22.4	22.7	22.4	22.5	22.1	24.0
46	3.1	J10262	23.9	22.8	22.8	22.7	22.8	22.9	22.8	22.7	22.7	22.8	22.5	22.6	23.0	22.5	22.6		
15	3.2	A6-2	24.0	22.7	22.8	22.6	22.9	22.8	22.7	22.6	22.7	22.6	22.3	22.4	22.9	22.4	22.5		
47	3.3		24.0	22.8	22.7	22.6	22.7	22.9	22.8	22.6	22.8	22.8	22.5	22.4	22.7	22.5	22.6		
35	3.4		23.9	22.7	22.8	22.8	22.8	22.8	22.8	22.6	22.6	22.7	22.5	22.5	22.9	22.5	22.5		
16	3.5		24.0	22.7	22.7	22.7	22.8	22.8	22.7	22.6	22.7	22.7	22.3	22.5	22.7	22.4	22.5		
38	3.6		24.0	22.8	22.8	22.8	22.8	22.9	22.8	22.7	22.7	22.7	22.4	22.4	23.0	22.4	22.5	22.3	24.0
8	4.1	J10497	24.0	22.8	22.7	22.5	22.8	22.8	22.6	22.6	22.7	22.7	22.4	22.4	23.0	22.4	22.4		
39	4.2	A5-2	23.9	22.7	22.8	22.7	22.8	22.9	22.7	22.7	22.7	22.8	22.5	22.3	22.9	22.5	22.5		
21	4.3		24.0	22.7	22.8	22.6	22.9	22.8	22.8	22.7	22.7	22.7	22.5	22.3	22.8	22.4	22.5		
40	4.4		24.0	22.6	22.8	22.7	22.7	22.9	22.8	22.7	22.7	22.8	22.6	22.5	22.9	22.5	22.6		
45	4.5		23.7	22.7	22.7	22.7	22.8	22.9	22.7	22.7	22.8	22.7	22.4	22.5	22.9	22.5	22.6		
11	4.6		24.0	22.6	22.7	22.6	22.7	22.8	22.7	22.7	22.7	22.6	22.5	22.5	22.8	22.4	22.5	22.3	24.0
32	5.1	J10494	24.0	22.7	22.7	22.7	22.8	22.9	22.9	22.7	22.8	22.8	22.6	22.6	23.0	22.5	22.5		
20	5.2	A4-1	24.0	22.9	22.8	22.6	22.8	22.8	22.8	22.7	22.7	22.7	22.5	22.4	22.8	22.4	22.5		
42	5.3		23.9	22.7	22.8	22.8	22.8	22.8	22.8	22.7	22.7	22.7	22.5	22.4	22.9	22.5	22.6		
14	5.4		24.0	22.6	22.7	22.6	22.8	22.8	22.6	22.5	22.7	22.6	22.4	22.3	22.9	22.3	22.5		
3	5.5		23.9	22.2	22.6	22.3	22.6	22.7	22.7	22.6	22.7	22.6	22.2	22.2	23.0	22.2	22.2		
31	5.6		24.0	22.7	22.8	22.8	22.9	22.9	22.9	22.7	22.8	22.7	22.5	22.5	22.9	22.5	22.5	22.2	24.0
7	6.1	J10493	24.0	22.7	22.7	22.5	22.8	22.8	22.8	22.6	22.7	22.6	22.3	22.3	23.3	22.4	22.4		
5	6.2	A2-2	24.0	22.7	22.7	22.4	22.7	22.8	22.7	22.6	22.7	22.7	22.2	22.4	23.1	22.1	22.3		
29	6.3		24.0	22.8	22.8	22.8	22.9	22.8	22.8	22.7	22.8	22.5	22.4	22.4	22.7	22.5	22.3		
28	6.4		24.0	22.7	22.8	22.8	22.9	23.0	22.9	22.7	22.8	22.7	22.3	22.5	23.2	22.7	22.6		
17	6.5		24.0	22.7	22.8	22.7	22.8	22.8	22.7	22.6	22.6	22.7	22.4	22.4	22.9	22.4	22.5		
12	6.6		24.0	22.8	22.7	22.6	22.7	22.7	22.7	22.6	22.6	22.7	22.2	22.5	23.0	22.3	22.5	22.1	24.0
6	7.1	J10486	24.0	22.6	22.7	22.5	22.8	22.8	22.6	22.6	22.7	22.5	22.1	22.1	22.7	22.2	22.4		
37	7.2	A1-1	24.0	22.7	22.7	22.7	22.8	22.9	22.8	22.6	22.7	22.7	22.5	22.6	23.0	22.5	22.5		
4	7.3		24.0	22.7	22.6	22.5	22.6	22.8	22.6	22.5	22.6	22.7	22.1	22.2	22.7	22.3	22.3		
34	7.4		24.0	22.6	22.9	22.8	23.0	22.9	22.9	22.7	22.7	22.7	22.6	22.6	23.0	22.4	22.5		
36	7.5		23.9	22.7	22.8	22.7	22.9	22.9	22.8	22.7	22.7	22.8	22.6	22.6	23.0	22.5	22.5		
13	7.6		24.0	22.5	22.7	22.7	22.8	22.8	22.7	22.6	22.6	22.7	22.4	22.5	23.1	22.4	22.5	22.1	24.0
																	Ranges	22.0	24.0

AQUA SURVEY, INC.
SOLID PHASE READINGS

Table 5

CLIENT: Roy F. Weston TEST START DATE: 6/25/97 PARAMETER: D.O. (mg/L)
JOB #: 97-286 ORGANISM: *H. azteca*

Position #	ID#	Sample	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Low	High
43	0.1	Control	6.4	7.7	7.7	7.7	7.8	7.6	7.6	8.2	7.9	7.3	7.6	7.9	7.7	8.1	7.5		
30	0.2		6.6	7.7	7.5	7.5	7.4	7.4	7.7	7.8	7.3	7.1	7.5	7.8	7.1	8.1	7.4		
27	0.3		6.4	7.9	7.2	7.5	7.5	7.4	7.5	7.6	7.7	7.3	7.7	8.0	7.8	8.0	7.4		
41	0.4		6.2	7.7	7.6	7.7	7.7	7.6	7.5	8.1	7.8	7.3	7.6	7.9	7.9	8.1	7.4		
26	0.5		6.5	7.7	7.5	7.6	7.5	7.4	7.6	7.6	7.8	7.3	7.7	8.1	7.9	8.1	7.4		
10	0.6		6.9	7.7	7.6	7.4	7.6	7.4	7.8	7.4	7.6	7.3	7.6	7.8	8.0	8.2	7.4	6.2	8.2
44	1.1	J10265	6.9	7.7	7.5	7.6	7.8	7.6	7.7	8.1	7.9	7.3	7.6	7.9	6.9	8.1	7.5		
25	1.2	A9-1	6.1	7.7	7.7	7.5	7.6	7.4	7.7	7.8	7.7	7.2	7.7	8.1	7.8	8.2	7.4		
1	1.3		6.0	7.8	7.8	7.8	8.1	7.3	7.5	8.5	8.2	7.1	7.5	8.0	6.6	8.3	7.7		
9	1.4		6.0	7.7	7.6	7.4	7.7	7.4	7.8	7.7	7.7	7.2	7.5	7.8	7.9	8.3	7.4		
23	1.5		5.8	7.6	7.6	7.5	7.5	7.3	7.5	7.7	7.7	7.2	7.7	8.1	7.2	8.2	7.4		
24	1.6		6.1	7.7	7.7	7.5	7.6	7.5	7.7	7.7	7.7	7.2	7.7	8.1	7.8	8.2	7.4	5.8	8.5
48	2.1	J10264	6.0	7.7	7.5	7.6	7.6	7.4	7.8	8.1	7.8	7.4	7.6	7.9	7.9	8.3	7.5		
33	2.2	A3-1	5.6	7.7	7.7	7.6	7.7	7.4	7.7	8.1	7.9	7.2	7.4	7.7	7.7	8.1	7.4		
19	2.3		4.2	7.7	6.6	7.5	7.5	7.3	7.5	7.5	7.5	7.3	7.8	8.1	8.0	8.3	7.4		
2	2.4		4.5	7.5	7.7	7.7	8.0	7.3	6.5	8.2	8.0	7.2	7.5	7.9	7.4	8.1	7.6		
22	2.5		5.0	7.6	7.6	7.6	7.6	7.4	7.6	7.7	7.7	7.2	7.7	8.1	8.0	8.2	7.4		
18	2.6		6.9	7.7	6.4	7.5	7.6	7.4	7.7	7.5	7.6	7.3	7.8	8.1	8.0	8.3	7.4	4.2	8.3
46	3.1	J10262	6.6	7.7	7.6	7.7	7.7	7.6	7.9	8.2	7.9	7.4	7.6	7.9	7.8	8.1	7.5		
15	3.2	A6-2	7.1	7.7	7.5	7.5	7.5	7.3	7.8	8.1	7.7	7.3	7.7	8.0	7.7	8.3	7.4		
47	3.3		6.8	7.7	7.6	7.6	7.8	7.5	7.9	8.2	7.9	7.4	7.6	7.9	7.9	8.2	7.5		
35	3.4		6.0	7.6	7.4	7.5	7.5	7.5	7.5	7.9	7.8	7.2	7.5	7.8	7.8	8.0	7.4		
16	3.5		6.6	7.7	7.6	7.6	7.6	7.3	7.8	8.1	7.8	7.3	7.7	8.1	7.9	8.3	7.4		
38	3.6		6.5	7.6	7.6	7.6	7.6	7.4	7.8	8.0	7.7	7.3	7.5	7.8	7.7	8.1	7.4	6.0	8.3
8	4.1	J10497	6.0	7.6	7.7	7.4	7.8	7.4	7.8	7.6	7.7	7.2	7.5	7.7	7.8	8.4	7.4		
39	4.2	A5-2	6.0	7.7	7.6	7.6	7.6	7.4	7.7	8.0	7.8	7.2	7.5	7.9	7.9	8.1	7.4		
21	4.3		6.5	7.6	7.7	7.6	7.6	7.3	7.5	7.7	7.6	7.2	7.7	8.1	8.0	8.4	7.4		
40	4.4		6.2	7.7	7.6	7.6	7.7	7.4	7.6	8.0	7.9	7.2	7.5	7.9	7.9	8.2	7.4		
45	4.5		6.8	7.7	7.6	7.7	7.8	7.6	7.9	8.2	7.9	7.4	7.6	7.9	7.8	8.1	7.5		
11	4.6		6.3	7.7	7.5	7.5	7.6	7.4	7.7	7.5	7.7	7.3	7.6	7.9	7.7	8.2	7.4	6.0	8.4
32	5.1	J10494	6.5	7.7	7.6	7.6	7.7	7.4	7.7	7.9	7.8	7.1	7.4	7.7	7.7	8.1	7.4		
20	5.2	A4-1	5.8	7.6	7.7	7.6	7.5	7.3	7.4	7.5	7.5	7.2	7.7	8.1	8.0	8.4	7.5		
42	5.3		6.3	7.7	7.6	7.7	7.7	7.6	7.5	8.1	7.9	7.3	7.6	7.9	7.3	8.1	7.5		
14	5.4		6.8	7.7	7.2	7.5	7.5	7.3	7.9	8.1	7.8	7.3	7.7	8.0	7.5	8.3	7.4		
3	5.5		6.0	7.6	7.6	7.7	7.9	7.3	6.6	7.7	7.9	7.2	7.5	7.9	7.3	8.0	7.5		
31	5.6		6.7	7.7	7.5	7.6	7.5	7.4	7.7	7.9	7.6	7.1	7.5	7.8	7.7	8.1	7.4	5.8	8.4
7	6.1	J10493	5.9	7.7	7.5	7.5	7.8	7.4	7.4	7.5	7.7	7.3	7.4	7.7	7.6	8.3	7.4		
5	6.2	A2-2	5.9	7.7	7.6	7.6	7.8	7.3	7.2	7.8	7.8	7.2	7.5	7.8	7.4	8.0	7.4		
29	6.3		5.9	7.7	7.6	7.5	7.4	7.5	7.8	7.7	7.4	7.2	7.6	8.4	7.8	8.0	7.4		
28	6.4		6.1	7.8	7.5	7.5	7.6	7.4	7.5	7.7	7.6	7.2	7.7	8.0	7.8	8.1	7.4		
17	6.5		7.3	7.7	7.4	7.6	7.7	7.4	7.7	8.1	7.8	7.3	7.8	8.1	7.9	8.3	7.4		
12	6.6		6.0	7.7	7.6	7.6	7.6	7.6	7.8	7.8	7.9	7.3	7.6	7.9	7.9	8.2	7.4	5.9	8.4
6	7.1	J10486	6.5	7.7	7.6	7.6	7.8	7.5	7.4	7.3	7.7	7.3	7.5	7.8	7.7	8.1	7.4		
37	7.2	A1-1	6.2	7.6	7.6	7.6	7.5	7.4	7.8	8.1	7.8	7.3	7.5	7.8	7.8	8.1	7.4		
4	7.3		6.1	7.7	7.7	7.7	7.9	7.3	7.2	7.8	7.9	7.2	7.5	7.9	7.5	8.0	7.5		
34	7.4		6.0	7.8	7.6	7.5	7.5	7.4	7.6	8.0	7.8	7.2	7.5	7.7	7.7	8.1	7.4		
36	7.5		5.8	7.6	7.2	7.5	7.5	7.5	7.5	7.9	7.8	7.2	7.5	7.8	7.8	8.1	7.4		
13	7.6		6.0	7.7	6.9	7.5	7.6	7.5	7.7	8.0	8.0	7.3	7.6	7.9	7.4	8.3	7.4	5.8	8.3
																	Ranges	4.2	8.5

*Test was aerated prior to introduction of organisms on 6/25/97

JN 7/22

AQUA SURVEY, INC.
14-DAY SOLID PHASE READINGS

Table 6

CLIENT: Roy F. Weston TEST START DATE: 6/25/97 PARAMETER: pH (su)

JOB #: 97-286 ORGANISM: *H. azteca*

Position #	ID#	Sample	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Low	High
43	0.1	Control	7.3	8.2	8.1	8.3	8.1	8.2	8.3	8.3	8.3	8.3	8.7	8.6	8.6	8.3	8.7		
30	0.2		7.6	8.0	8.3	8.3	8.3	8.2	8.2	8.3	8.3	7.9	8.6	8.4	8.6	8.3	8.6		
27	0.3		7.6	8.2	8.2	8.3	8.3	8.2	8.3	8.3	8.3	8.3	8.4	8.6	8.7	8.4	8.6		
41	0.4		7.5	8.1	8.2	8.4	8.3	8.3	8.3	8.3	8.3	8.4	8.9	8.8	8.6	8.4	8.8		
26	0.5		7.5	7.9	8.1	8.3	8.2	8.1	8.2	8.2	8.2	8.3	8.4	8.5	8.4	8.3	8.5		
10	0.6		7.4	8.2	8.3	8.3	8.3	8.2	8.3	8.3	8.3	8.4	8.6	8.7	8.7	8.4	8.7	7.3	8.9
44	1.1	J10265	7.4	8.1	7.8	8.1	8.1	8.1	8.1	8.1	8.2	8.3	8.8	8.6	8.7	8.2	8.7		
25	1.2	A9-1	7.4	8.0	8.0	8.0	7.9	7.9	7.9	8.0	8.0	8.1	8.5	8.5	8.6	8.2	8.5		
1	1.3		7.0	8.2	8.2	7.6	7.9	8.0	7.9	8.1	7.9	7.7	8.2	8.3	8.0	8.0	8.0		
9	1.4		7.3	8.2	8.1	8.1	8.1	8.0	8.1	8.0	8.1	8.4	8.7	8.8	8.4	8.4	8.7		
23	1.5		7.3	8.0	8.1	8.1	8.1	7.9	8.0	8.0	8.1	8.2	8.6	8.6	8.5	8.3	8.6		
24	1.6		7.3	7.9	8.0	8.0	8.0	7.9	7.9	8.0	8.0	8.2	8.6	8.6	8.6	8.2	8.5	7.0	8.8
48	2.1	J10264	7.5	8.0	8.1	8.1	7.8	8.0	8.0	8.0	8.0	8.2	8.5	8.7	9.0	8.5	8.8		
33	2.2	A3-1	7.5	7.9	8.1	8.1	8.0	7.9	7.9	7.9	8.0	8.1	8.5	8.4	8.2	8.1	8.5		
19	2.3		7.3	8.0	7.8	8.0	8.0	7.9	7.9	7.9	7.9	8.1	8.5	8.5	8.4	8.2	8.5		
2	2.4		7.3	8.1	8.2	8.1	8.2	8.0	7.5	8.1	8.1	8.1	8.2	8.4	8.4	8.2	8.2		
22	2.5		7.4	8.1	8.0	8.1	8.1	8.0	8.1	8.0	8.0	8.2	8.7	8.8	8.3	8.2	8.6		
18	2.6		7.3	8.1	7.8	8.1	8.0	7.9	7.9	8.0	7.9	8.2	8.6	8.7	8.7	8.3	8.6	7.3	9.0
46	3.1	J10262	7.6	8.2	8.1	8.2	8.0	8.1	8.2	8.1	8.2	8.4	8.7	8.8	9.1	8.5	8.8		
15	3.2	A6-2	7.4	8.2	8.1	8.2	8.1	8.0	7.9	8.1	8.1	8.2	8.5	8.6	8.6	8.4	8.6		
47	3.3		7.5	8.1	8.1	8.2	7.9	8.0	8.1	8.1	8.0	8.3	8.6	8.8	8.9	8.4	8.8		
35	3.4		7.4	8.1	8.0	8.1	8.0	7.9	8.0	8.0	8.0	8.1	8.3	8.5	8.6	8.2	8.5		
16	3.5		7.7	8.2	8.0	8.2	8.1	8.0	7.9	8.1	8.1	8.2	8.7	8.9	8.8	8.4	8.7		
38	3.6		7.3	8.2	8.1	8.2	8.1	8.0	8.1	8.1	8.1	8.1	8.6	8.8	8.8	8.4	8.5	7.3	9.1
8	4.1	J10497	7.6	8.2	8.3	8.3	8.2	8.2	8.3	8.3	8.3	8.3	8.6	8.9	8.4	8.7	8.6		
39	4.2	A5-2	7.5	8.1	8.3	8.3	8.2	8.1	8.2	8.2	8.3	8.2	8.6	8.9	9.0	8.5	8.7		
21	4.3		7.7	8.1	8.2	8.2	8.2	8.2	8.3	8.3	8.4	8.2	8.4	8.6	8.8	8.5	8.5		
40	4.4		7.6	8.1	8.1	8.3	8.2	8.2	8.3	8.3	8.3	8.3	8.6	8.8	9.0	8.4	8.7		
45	4.5		7.5	8.1	8.2	8.3	8.1	8.1	8.3	8.3	8.3	8.4	8.8	8.7	9.0	8.5	8.7		
11	4.6		7.6	8.1	8.2	8.3	8.3	8.2	8.3	8.4	8.5	8.5	8.6	8.6	9.1	8.6	8.8	7.5	9.1
32	5.1	J10494	7.5	8.0	8.1	8.2	8.2	8.1	8.2	8.2	8.2	8.2	8.6	8.5	8.6	8.2	8.6		
20	5.2	A4-1	7.4	8.0	8.1	8.2	8.1	8.0	8.1	8.1	8.1	8.1	8.3	8.4	8.0	8.2	8.5		
42	5.3		7.3	8.2	8.2	8.1	8.1	8.1	8.2	8.1	8.2	8.4	8.6	8.6	8.7	8.2	8.7		
14	5.4		7.4	8.1	8.0	8.1	8.1	8.0	7.7	8.1	8.0	8.2	8.6	8.7	8.2	8.2	8.6		
3	5.5		7.4	8.3	8.2	8.3	8.2	8.0	8.0	8.2	8.2	8.2	8.3	8.3	8.3	8.2	8.4		
31	5.6		7.5	8.1	8.0	8.2	8.1	8.1	8.2	8.1	8.1	8.2	8.6	8.5	8.7	8.2	8.7	7.3	8.7
7	6.1	J10493	7.3	8.1	8.1	8.1	8.0	8.0	8.1	8.1	8.1	8.2	8.5	8.4	8.3	8.4	8.5		
5	6.2	A2-2	7.4	8.2	8.2	8.1	8.1	8.0	8.1	8.2	8.2	8.2	8.4	8.3	8.3	8.2	8.4		
29	6.3		7.4	8.0	7.9	8.0	7.9	7.9	8.0	8.0	7.9	7.5	8.4	8.5	7.7	8.2	8.5		
28	6.4		7.4	8.0	8.1	8.2	8.1	8.1	8.1	8.1	8.0	8.2	8.5	8.6	8.7	8.2	8.6		
17	6.5		7.5	8.1	8.1	8.2	8.2	8.1	8.2	8.3	8.2	8.3	8.6	8.6	8.6	8.4	8.7		
12	6.6		7.4	8.2	8.0	8.2	8.1	8.1	8.1	8.2	8.3	8.5	8.7	8.9	8.1	8.4	8.7	7.3	8.9
6	7.1	J10486	7.2	8.1	8.1	8.2	8.1	8.0	8.1	8.1	8.1	8.3	8.5	8.6	8.6	8.2	8.5		
37	7.2	A1-1	7.2	8.0	8.1	8.1	8.1	7.9	8.0	8.0	8.0	8.1	8.4	8.5	8.1	8.1	8.5		
4	7.3		7.4	8.2	8.1	8.1	8.1	7.9	7.9	8.1	8.0	8.2	8.5	8.4	8.3	8.1	8.4		
34	7.4		7.3	8.1	8.0	8.1	8.0	7.9	8.0	8.0	8.0	8.1	8.3	8.3	8.3	8.1	8.4		
36	7.5		7.2	8.1	8.0	8.1	8.0	7.9	8.0	8.1	8.1	8.1	8.4	8.5	8.7	8.3	8.5		
13	7.6		7.4	8.1	7.8	8.1	8.0	7.8	7.9	8.1	8.1	8.3	8.7	8.7	8.5	8.5	8.7	7.2	8.7
																	Ranges	7.0	9.1

JT 7/21

AQUA SURVEY, INC.

Table 7 — 14-DAY SOLID PHASE READINGS

CLIENT: Roy F. Weston — TEST START DATE: 6/25/97 — PARAMETER: Total NH3 (mg/L)
JOB #: 97-286 — ORGANISM: *H. azteca*

Position #	ID#	Sample	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Low	High
43	0.1	Control	1.36														ND		
30	0.2		ND														ND		
27	0.3		ND														ND		
41	0.4		ND														ND		
26	0.5		ND														ND		
10	0.6		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.36
44	1.1	J10265	0.46														ND		
25	1.2	A9-1	0.55														ND		
1	1.3		0.46	0.29	0.39	0.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.24	ND		
9	1.4		0.49														ND		
23	1.5		0.54														ND		
24	1.6		0.55														ND	ND	0.55
48	2.1	J10264	0.92														ND		
33	2.2	A3-1	0.90														ND		
19	2.3		0.91														ND		
2	2.4		0.83	1.60	2.72	3.01	3.26	2.89	2.60	0.82	0.13	ND	ND	ND	ND	ND	ND		
22	2.5		0.90														ND		
18	2.6		0.87														ND	ND	3.26
46	3.1	J10262	1.36														ND		
15	3.2	A6-2	1.23	1.78	2.55	2.22	1.44	0.43	ND	ND	ND	ND	ND	ND	ND	ND	ND		
47	3.3		1.40														ND		
35	3.4		1.33														ND		
16	3.5		1.30														ND		
38	3.6		1.34														ND	ND	2.55
8	4.1	J10497	ND	0.14	0.18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
39	4.2	A5-2	ND														ND		
21	4.3		ND														ND		
40	4.4		ND														ND		
45	4.5		ND														ND		
11	4.6		ND														ND	ND	0.18
32	5.1	J10494	ND														ND		
20	5.2	A4-1	ND														ND		
42	5.3		ND														ND		
14	5.4		ND														ND		
3	5.5		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
31	5.6		ND														ND	ND	ND
7	6.1	J10493	0.39														ND		
5	6.2	A2-2	0.50	0.70	1.01	0.48	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
29	6.3		0.39														ND		
28	6.4		0.49														ND		
17	6.5		0.42														ND		
12	6.6		0.39														ND	ND	1.01
6	7.1	J10486	1.38														ND		
37	7.2	A1-1	1.43														ND		
4	7.3		1.35	2.13	2.80	2.38	1.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
34	7.4		1.44														ND		
36	7.5		1.44														ND		
13	7.6		1.40														ND	ND	2.80
																	Ranges	ND	3.26

Raw Data

ASI 97-286

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2273-01
RFW Contact: Scott Grossman Phone (908) 321-4200

No: 05339

SHEET NO. 1 OF 1

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Tox Test
*	J10265	A9-1	Sd	6-20-97	2	32oz glass/4°C	X
	J10264	A3-1		6-20-97			
	J10262	A6-2		6-19-97			
	J10497	A5-2		6-19-97			
	J10494	A4-1		↓			
	J10493	A2-2		↓			
	J10486	A1-1	↓	6-18-97	↓	↓	↓

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

cooler #2328

Note: Sediment for tox test Hyalella azteca

QC: Cen

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
All Analysis	Jennifer Ford	6/20/97	A. Hornberger	6/21/97	10:30						

FORM #4

8/94

Received @ 12°C

ASI, INC.
SAMPLE RECEIVING FORM

Client: Weston REAC 97-286

Shipped Via: Fed. Ex # of Shipping Containers: 1

Type of Shipping Container: Cooler

Custody Seal: Present ✓ Absent _ Broken _

Condition of Shipping Containers: Acceptable ✓ Unacceptable _

	ASI #	Sample ID	Type of Container	Number of Containers	Condition of Sample†	Temp. °C	Ice ÷	Type of Sample*
1.	71164	J10265 A9-1	G/1l	2	A	13°C	cold water	fresh water sed.
2.	71165	J10264 A3-1		2	A			
3.	71166	J10262 A6-2		2	A			
4.	71167	J10497 A5-2		2	A			
5.	71168	J10494 A4-1		2	A			
6.	71169	J10493 A2-2		2	A			
7.	71170	J10486 A1-1	↓	2	A	↓	↓	↓
8.								
9.								
10.								

Notes: (Discrepancies Between Sample Label and COC Record)

Opened /Received by: L. Thompson Date/Time: 6/21 10:30

S - Soil
Se - Sediment
Sl - Sludge
W - Water
E - Effluent

A - Acceptable
U - Unusable or Contaminated

I - Ice
D - Dry Ice
B - Blue Ice
N - None

7/96

Job # 97-286, H. azteca 14 day solid phase test

Position	Sample	ASI No.	
43	Control	71174	0.1
30	"	*	0.2
27		*	0.3
41		*	0.4
26		*	0.5
10		*	0.6
44	J10265	71164	1.1
25	A9-1	*	1.2
1		*	1.3
9		*	1.4
23		*	1.5
24		*	1.6
48	J10264	71165	2.1
33	A3-1	*	2.2
19		*	2.3
2		*	2.4
22		*	2.5
18		*	2.6
46	J10262	71166	3.1
15	A6-2	*	3.2
47		*	3.3
35		*	3.4
16		*	3.5
38		*	3.6
8	J10497	71167	4.1
39	A5-2	*	4.2
21		*	4.3
40		*	4.4
45		*	4.5
11		*	4.6
32	J10494	71168	5.1
20	A4-1	*	5.2
42		*	5.3
14		*	5.4
3		*	5.5
31		*	5.6
7	J10493	71169	6.1
5	A2-2	*	6.2
29		*	6.3
28		*	6.4
17		*	6.5
12		*	6.6
6	J10486	71170	7.1
37	A1-1		7.2
4			7.3
34			7.4
36			7.5
13			7.6

97-286 14-day Solid Phase

Aqua Survey, Inc.
Solid Phase Readings

Client: RFW Test Start Date: 6/25/97 Parameter: Counts

Job #: 97-296 Test End Date: 7/9/97 Organism: H. azteca

Beaker	Initial Count	Final Count	Beaker	Initial Count	Final Count	Notes
1	20	19	25	20	20	
2	20	17	26	20	16	
3	20	17	27	20	17	
4	20	18	28	20	19	
5	20	17	29	20	20	
6	20	17	30	20	17	
7	20	19	31	20	16	
8	20	17	32	20	20	
9	20	16	33	20	17	
10	20	18	34	20	17	
11	20	18	35	20	17	
12	20	19	36	20	19	
13	20	20	37	20	18	
14	20	20	38	20	18	
15	20	17	39	20	15	
16	20	17	40	20	18	
17	20	19	41	20	16	
18	20	18	42	20	17	
19	20	14	43	20	16	
20	20	19	44	20	19	
21	20	11	45	20	20	
22	20	17	46	20	20	
23	20	18	47	20	17	
24	20	18	48	20	17	
Date	6/25/97	7/9/97	Date	6/25/97	7/9/97	
Initials	CAN	CAN	Initials	CAN	CAN	

Aqua Survey, Inc.
Solid Phase Readings

Client: RFWREAC Test Start Date: 6/25/97 Parameter: Alkalinity, Hardness, Co

Job #: 97-286 Test End Date: 7/9/97 Organism: H. azteca

	Initial			Final		
Sample ID #	Alkalinity	Hardness	Conductivity	Alkalinity	Hardness	Conductivity
71174	196	112	530	260	160	620
71164	180	116	520	196	124	540
71165	224	124	550	208	140	550
71166	196	124	530	196	120	530
71167	204	124	527	248	156	600
[illegible]	188	136	532	200	132	545
[illegible]	216	156	557	260	164	580
[illegible]	204	140	547	196	112	520
Date	6/25/97	6/25/97	6/25/97	7/9/97	7/9/97	7/9/97
Initials	CAN	CAN	CAN	RF	RF	RF.

Notes: Initial parameters read. Some D.O. levels were low. [illegible] prior to stocking test on 6/25/97 CAN

Sample 71170 (J10486) had tube-dwelling worms present on surface after sieving. CAN 6/25/97

Sample 71165 Same as above CAN

AQUA SURVEY, INC.
SOLID PHASE

Client: REWREAC Test Start Date: 6/25/97

Job #: 97-206 Organism: H AZTECA Water: W211

Date	Day	Volume	1st Exchange		2nd Exchange		3rd Exchange		4th Exchange	
			Time	Initials	Time	Initials	Time	Initials	Time	Initials
6/25	0	200mL	N/A	CAN						
6/26	1		N/A	CAN						
6/27	2	200mL	2:00P	AH						
6/28	3		NA	NA						
6/29	4	200mL	12:[illegible]	[illegible]						
[illegible]	5									
7/1	6	200mL	8:30 AM	AH			N/A			
7/2	7									
7/3	8	200mL	4:00	CAN						
7/4	9									
7/5	10	200mL	10:30	CAN						
7/6	11									
7/7	12	200mL	3 pm	TD						
7/8	13									
7/9	14	100mL	NA							

Notes:

Aqua Survey, Inc.
Solid Phase Readings

Client: REW REFAC Test Start Date: 6/25/07 Parameter: Ammonia

Job #: 07-2906 Organism: H. azteca

	Beaker	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Notes
*	1	0.46	0.29	0.39	0.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.24	ND	
*	2	0.83	1.60	2.72	3.01	3.26	2.89	2.60	0.82	0.13	ND	ND	ND	ND	ND	ND	
*	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
*	4	1.35	2.13	2.80	2.38	1.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
*	5	0.50	0.70	1.01	0.48	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	6	1.59														ND	
	7	0.59														ND	
*	8	[illegible]	[illegible]	0.18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	ND	ND	ND	ND	
	9	0.49														ND	
*	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	11	ND														ND	
	12	0.39														ND	
	13	1.70														ND	
	14	[illegible]														ND	
*	15	1.23	1.78	2.55	2.22	1.44	[illegible]	[illegible]	ND	ND	ND	[illegible]	ND	ND	ND	ND	
	16	1.30														ND	
	17	0.42														ND	
	18	0.87														ND	
	19	0.91														ND	
	20	ND														ND	
	21	ND														ND	
	22	0.90														ND	
	23	0.54														ND	
	24	0.55														ND	
	Date	6/25	6/27	6/27	6/28	6/29	6/30	7/1	7/2	7/3	7/4	7/5	7/6	7/7	7/8	7/9	
	Initials	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH	

Aqua Survey, Inc.
Solid Phase Readings

Client: KENNEHC Test Start Date: 6/25/97 Parameter: Ammonia

Job #: 97-2316 Organism: Hyalella

Beaker	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Notes
25	0.55														ND	
26	ND														ND	
27	ND														ND	
28	0.49														ND	
29	0.39														ND	
30	ND														ND	
31	ND														ND	
32	ND														ND	
33	0.96														ND	
34	1.48														ND	
35	1.33														ND	
36	1.44														ND	
37	1.43														ND	
38	1.34														ND	
39	ND														ND	
40	ND														ND	
41	ND														ND	
42	ND														ND	
43	1.36														ND	
44	0.46														ND	
45	ND														ND	
46	1.36														ND	
47	1.40														ND	
48	1092														ND	
Date	6/25														7/9	
Initials	AH														R	

Aqua Survey, Inc.
Solid Phase Readings

Client: REW REAC Test Start Date: 6/25/97 Parameter: Observations

Job #: 97-256 Organism: H. azteca

Key: D = Dead S = Surface N = Nothing Unusual

Beaker	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Notes
1	②	N	N	N①	N'	N'	N'	N①	1S	5S①	6S	4S	5S	4S	4S	
2	①	2S	2S	N①	N'	N'	N'	N①	N①	1S①	1S	N	7S	3S	N	
3	②	2S	N	N	N	N	N	N	1S	1S	N	N	3S	3S	2S	
4	①	N	N	N	N	N	N	N①	2S	3S①	2S	3S	5S	4S	2S	
5	②	N	N	N	N	N	N	N	N	N	N	N	2S	N	2S	
6	①	N	N	N①	N'	N'	N	N①	2S①	2S①	3S	1S	4S	1S	1S	
7	②	N	N	N①	N'	N'	3S	N①	2S	2S	2S	2S	5S	1S	N	
8	②	N	N	N	[illegible]		[illegible]	N	1S	1S	1S	2S	1S	2S	1S	
9	②	N	1S	1S	N'	N'	N	N'	1S	2S①	2S	3S	2S	4S	3S	
10	②	N	N	N	N	N	2S	N	2S	2S	3S	4S	4S	4S	N	
11	②	N	N	N	N	N	1S	N	2S	N	3S	1S	2S	3S	N	
12	②	N	1S	N①	N'	N'	N'	N①	N	N①	N	1S	4S	2S	2S	
13	①	N	①N	N①	N'	N'	N'	N①	2S	N①	N	N	N	N	2S	
14	②	N	1S	N	1S	S	2S	N	2S	N	N	N	1S	N	2S	
15	②	N	2S	N	N	N	N	N	N	N①	1S	2S	N	N	N	
16	②	N	N	N	N	N	N	N	N	1S	2S	3S	3S	1S	3S	
17	②	N	N	N	N	N	N	N①	N	1S	2S	N	N	N	2S	
18	①	1S	①N	N	N	N	N'	N①	4S	5S①	4S	N	3S	2S	1S	
19	①	1S	①3S	N'	N'	2S	N	N①	5S	4S①	6S	5S	5S	3S	1S	
20	②	N	N	N	N	1S	2S	N	1S	3S	2S	3S	5S	3S	1S	
21	②	N	N	N	N	N	N	N	N	N	1S	1S	N	2S	2S	
22	①	N	①4S	N①	N'	N	N'	N①	N①	N①	1S	N	1S	2S	2S	
23	②	N	①N'	N'	N'	N'	3S'	N①	2S	N①	N	1S	2S	N	N	
24	②	N	N	N①	2S'	N'	1S'	N①	1S	2S①	1S	N	4S	3S	N	
Date	6/25	6/26	6/27	6/28	6/29	6/30	7/1	7/2	7/3	7/4	7/5	7/6	7/7	7/8	7/9	
Initials	CAN	CAN/TF	CAN/SH	[illegible]	[illegible]	[illegible]	SH/[illegible]	CAN	CAN/SH	TD	CAN	CAN	TD	CAN	CAN	

① tube-dwelling worms on sediment surface
② some organisms on surface [illegible]

Aqua Survey, Inc.
Solid Phase Readings

Client: RFW REAC Test Start Date: 6/25/97 Parameter: Observations

Job #: 97-286 Organism: Hazteca

Key: D = Dead S = Surface N = Nothing Unusual

Beaker	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Notes
25	②	N	N	N	N①	N'	N'	N①	2S	4S①	3S	4S	1S	2S	N	
26	②	N	N	N	N	N	1S	N	1S	1S	1S	N	2S	N	N	
27	②	N	N	N	N	N	N	N	1S	1S	N	N	2S	N	N	
28	②	N	N	N①	N①	N'	1S'	N	N	1S①	1S	2S	1S	N	1S	
29	②	N	N	N	N	N	N	2S	1S	1S①	3S	2S	6S	5S	N	
30	②	N	N	N	N	N	N	N	1S	4S	5S	3S	9S	6S	3S	
31	②	1S	N	N	1S	4S	N	3S	1S	N	2S	N	3S	3S	2S	
32	②	N	N	N	1S	N	N	N	3S	2S	N	3S	4S	2S	2S	
33	①	N	①N	N①	N'	N	1S'	N①	3S	3S①	2S	1S	4S	2S	3S	
34	①	N	①N	N①	N'	N'	1S'	2S	3S	3S①	2S	1S	4S	2S	2S	
35	②	N	1S	N	N	1S	1S	N	N	N	3S	N	N	3S	2S	
36	①	N	①N	N①	N'	N'	1S'	1S①	1S	2S①	1S	1S	2S	3S	1S	
37	①	N	①N	N①	N'	1S'	1S'	1S①	4S	3S①	3S	2S	6S	N	1S	
38	②	N	N	N	N	N	N	N	N	N	N	1S	2S	6S	3S	
39	②	N	N	N	N	1S	1S	1S	N	N	N	N	2S	6S	1S	
40	②	N	1S	N	N	N	2S	N	N	N	N	N	1S	2S	1S	
41	②	N	N	N	1S	N	N	N	N	1S	N	N	N	N	2S	
42	②	1S	N	N	2S	3S	2S	3S	5S	6S	4S	3S	N	N	3S	
43	②	N	N	N	N	N	3S	2S	3S	1S	1S	3S	1S	N	4S	
44	②	N	①N	N①	N'	1S①	3S'	2S①	5S	4S	5S	6S	6S	4S	2S	
45	②	N	N	N	N	N	1S	1S	3S	4S	4S	2S	1S	3S	3S	
46	②	N	N	N	N	N	N	N	N	N	1S	N	N	2S	2S	
47	②	N	N	N	N	N	N	N	N	N	N	N	2S	1S	1S	
48	①	N	①N	N①	N'	N'	1S'	N①	3S	3S	3S	2S	3S	2S	1S	
Date	6/25	6/26	6/27	6/28	6/29	6/30	7/1	7/2	7/3	7/4	7/5	7/6	7/7	7/8	7/9	
Initials	CAN	CAN/TP	CAN/SH	[illegible]	[illegible]	[illegible]	[illegible]	CAN	CAN	TP	CAN	CAN	TP	CAN	CAN	

① tube-dwelling worms on surface

② some organisms on surface: forced down under the water on day

Aqua Survey, Inc.
Solid Phase Readings

Client: RFW/REAC Test Start Date: 6/25/97 Parameter: Feeding

Job #: 97-286 Organism: H. azteca

Beaker	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Notes
1	NO	NO	Yes	No	No	No	No	Yes	No	No	Yes	No	No	yes	No	
2	|		|							↓			|	|	|	
3	|		|							|			|	|	
4	|		|							|			|	|	
5	|		|							|			|	|	
6	|		|							|			|	|	
7	|		|							|			|	|	
8	|										|			|	|	
9	|		|							|			|	|	
10	|		|							|			|	|	
11	|		|							|			|	|	
12	|		|							|			|	|	
13	|		|							|			|	|	
14	|		|							|			|	|	
15	|		|							|			|	|	
16	|		|							|			|	|	
17	|		|							|			|	|	
18	|		|							|			|	|	
19	|		|							|			|	|	
20	|		|							|			|	|	
21	|		|							|			|	|	
22	|		|							|			|	|	
23	|		|							|			|	|	
24	↓		↓							↓			↓	↓	↓	
Date	6/25	6/26	6/27	6/28	6/29	6/30	7/1	7/2	7/3	7/4	7/5	7/6	7/7	7/8	7/9	
Initials	CAN	CAN	CAN	CAN	CAN	CAN	CAN	SA	CAN	TD	CAN	CAN	TD	TD	MA	

Aqua Survey, Inc.
Solid Phase Readings

Client: REM/REAC Test Start Date: _____ Parameter: Feeding

Job #: 97-286 Organism: Hyalella

Beaker	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Notes
25	No	NO	Yes							NO			NO	Yes	No	
26	|		|							|			|	|	|	
27	|		|							|			|	|	|	
28	|		|							|			|	|	|	
29	|		|							|			|	|	|	
30	|		|							|			|	|	|	
31	|		|							|			|	|	|	
32	|										|			|	|	|	
33										|			|	|	|	
34	|		|							|			|	|	|	
35	|		|							|			|	|		
36	|		|							|						
37	|		|							|						
38	|		|							|						
39	|										|						
40	|										|						
41	|										|						
42	|		|							|						
43	|		|							|						
44	|		|							|						
45	|		|							|						
46	|		|							|						
47	|		|							|						
48	↓		↓							↓			↓	↓	↓	
Date	6/25	6/26	6/27							TO			TO	TO	TO	
Initials	DN	DN	DN							7/4			7/7	7/8	7/9	

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YSI 6000 Time Series Report

Date mm/dd/yy	Time hh:mm:ss	Temp C	SpCond uS/cm	Salinity PPT	DO mg/L	pH
6/25/97	14:03:25	23.86	502.00	0.2	6.03	6.97
6/25/97	14:05:43	23.85	545.00	0.3	4.46	7.29
6/25/97	14:06:23	23.94	523.00	0.2	5.99	7.43
6/25/97	14:07:09	23.97	527.00	0.2	6.08	7.37
6/25/97	14:07:55	23.97	555.00	0.3	5.94	7.35
6/25/97	14:08:49	23.96	532.00	0.3	6.50	7.21
6/25/97	14:10:42	23.96	546.00	0.3	5.92	7.30
6/25/97	14:11:27	23.96	518.00	0.2	5.96	7.58
6/25/97	14:12:11	23.99	507.00	0.2	6.03	7.32
6/25/97	14:13:14	23.91	519.00	0.2	6.93	7.38
6/25/97	14:13:52	23.99	520.00	0.2	6.33	7.62
6/25/97	14:14:36	23.98	557.00	0.3	5.99	7.40
6/25/97	14:15:07	23.98	577.00	0.3	5.97	7.40
6/25/97	14:15:25	23.99	506.00	0.2	6.76	7.42
6/25/97	14:15:44	23.99	527.00	0.2	7.12	7.38
6/25/97	14:16:15	23.98	527.00	0.2	6.60	7.71
6/25/97	14:16:35	23.99	550.00	0.3	7.26	7.47
6/25/97	14:16:56	24.00	547.00	0.3	6.89	7.30
6/25/97	14:17:53	23.98	550.00	0.3	4.15	7.31
6/25/97	14:18:24	23.97	556.00	0.3	5.79	7.43
6/25/97	14:18:56	23.97	527.00	0.2	6.48	7.65
6/25/97	14:19:28	23.98	564.00	0.3	4.98	7.42
6/25/97	14:20:02	23.96	505.00	0.2	5.83	7.30
6/25/97	14:20:26	23.91	508.00	0.2	6.12	7.32
6/25/97	14:20:54	23.97	501.00	0.2	6.07	7.37
6/25/97	14:21:33	23.97	517.00	0.2	6.53	7.49
6/25/97	14:22:01	24.00	518.00	0.2	6.44	7.55
6/25/97	14:23:04	23.97	554.00	0.3	6.05	7.39
6/25/97	14:23:41	23.95	577.00	0.3	5.94	7.38
6/25/97	14:24:11	24.00	517.00	0.2	6.60	7.55
6/25/97	14:24:39	24.00	510.00	0.2	6.69	7.53
6/25/97	14:25:10	23.99	506.00	0.2	6.51	7.46
6/25/97	14:25:39	24.00	544.00	0.3	5.58	7.45
6/25/97	14:26:38	23.95	537.00	0.3	5.96	7.25
6/25/97	14:28:22	23.87	527.00	0.2	6.02	7.43
6/25/97	14:28:51	23.86	558.00	0.3	5.83	7.20
6/25/97	14:29:16	23.98	529.00	0.2	6.22	7.18
6/25/97	14:29:34	24.00	526.00	0.2	6.47	7.28
6/25/97	14:30:07	23.89	519.00	0.2	5.97	7.45
6/25/97	14:30:49	23.95	529.00	0.2	6.22	7.59
6/25/97	14:31:21	23.95	519.00	0.2	6.23	7.49
6/25/97	14:31:52	23.90	507.00	0.2	6.25	7.32
6/25/97	14:32:17	23.89	521.00	0.2	6.40	7.32
6/25/97	14:32:40	23.67	533.00	0.3	6.92	7.42
6/25/97	14:32:59	23.74	528.00	0.2	6.79	7.45
6/25/97	14:33:29	23.87	527.00	0.2	6.57	7.56
6/25/97	14:33:46	24.00	529.00	0.3	6.81	7.45
6/25/97	14:34:05	23.90	545.00	0.3	6.03	7.50

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YSI 6000 Time Series Report

Date mm/dd/yy	Time hh:mm:ss	Temp C	SpCond uS/cm	Salinity PPT	DO mg/L	pH
6/26/97	12:46:49	22.64	508.00	0.2	7.80	8.15
6/26/97	12:56:26	22.26	560.00	0.3	7.52	8.13
6/26/97	13:01:51	22.22	535.00	0.3	7.58	8.29
6/26/97	13:02:29	22.69	528.00	0.2	7.67	8.22
6/26/97	13:03:04	22.66	572.00	0.3	7.68	8.17
6/26/97	13:03:18	22.60	546.00	0.3	7.69	8.08
6/26/97	13:03:34	22.67	582.00	0.3	7.67	8.10
6/26/97	13:03:48	22.80	537.00	0.3	7.64	8.19
6/26/97	13:04:03	22.73	512.00	0.2	7.66	8.15
6/26/97	13:04:24	22.46	530.00	0.3	7.73	8.23
6/26/97	13:04:41	22.62	535.00	0.3	7.72	8.13
6/26/97	13:05:06	22.78	580.00	0.3	7.69	8.16
6/26/97	13:05:28	22.51	600.00	0.3	7.73	8.08
6/26/97	13:05:42	22.63	517.00	0.2	7.70	8.07
6/26/97	13:06:04	22.68	537.00	0.3	7.70	8.17
6/26/97	13:06:33	22.74	539.00	0.3	7.67	8.16
6/26/97	13:06:53	22.69	573.00	0.3	7.66	8.06
6/26/97	13:07:08	22.68	569.00	0.3	7.67	8.11
6/26/97	13:07:26	22.78	575.00	0.3	7.66	8.02
6/26/97	13:07:39	22.86	562.00	0.3	7.61	8.02
6/26/97	13:07:54	22.72	548.00	0.3	7.62	8.07
6/26/97	13:08:08	22.70	586.00	0.3	7.63	8.08
6/26/97	13:08:22	22.78	512.00	0.2	7.63	8.03
6/26/97	13:08:35	22.61	512.00	0.2	7.67	7.94
6/26/97	13:08:59	22.67	502.00	0.2	7.69	8.02
6/26/97	13:09:12	22.60	535.00	0.3	7.71	7.91
6/26/97	13:12:08	22.50	528.00	0.2	7.89	8.17
6/26/97	13:12:23	22.68	587.00	0.3	7.77	8.03
6/26/97	13:12:36	22.79	604.00	0.3	7.71	8.04
6/26/97	13:12:50	22.71	533.00	0.3	7.70	8.04
6/26/97	13:13:07	22.68	519.00	0.2	7.71	8.13
6/26/97	13:13:22	22.74	515.00	0.2	7.69	8.00
6/26/97	13:13:34	22.71	563.00	0.3	7.69	7.94
6/26/97	13:14:30	22.61	548.00	0.3	7.77	8.06
6/26/97	13:14:50	22.69	537.00	0.3	7.64	8.07
6/26/97	13:15:04	22.65	560.00	0.3	7.63	8.07
6/26/97	13:15:19	22.68	533.00	0.3	7.63	8.02
6/26/97	13:15:39	22.75	539.00	0.3	7.63	8.15
6/26/97	13:15:56	22.66	530.00	0.3	7.66	8.09
6/26/97	13:16:11	22.63	543.00	0.3	7.69	8.14
6/26/97	13:16:25	22.70	532.00	0.3	7.67	8.13
6/26/97	13:16:46	22.70	506.00	0.2	7.67	8.15
6/26/97	13:17:14	22.73	537.00	0.3	7.68	8.21
6/26/97	13:17:30	22.69	534.00	0.3	7.66	8.08
6/26/97	13:17:43	22.69	538.00	0.3	7.66	8.06
6/26/97	13:17:59	22.76	533.00	0.3	7.66	8.17
6/26/97	13:18:09	22.83	530.00	0.3	7.65	8.06
6/26/97	13:18:20	22.73	564.00	0.3	7.66	8.00

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C:\PC6000\READINGS\286HA2.DAT

YSI 6000 Time Series Report

Date mm/dd/yy	Time hh:mm:ss	Temperature C	DO mg/L	pH
6/27/97	9:47:06	22.59	7.81	8.24
6/27/97	9:47:37	22.57	7.70	8.16
6/27/97	9:48:10	22.61	7.56	8.23
6/27/97	9:49:26	22.62	7.67	8.12
6/27/97	9:50:07	22.70	7.58	8.24
6/27/97	9:50:42	22.67	7.57	8.13
6/27/97	9:51:16	22.72	7.49	8.08
6/27/97	9:52:27	22.65	7.66	8.27
6/27/97	9:53:00	22.77	7.61	8.05
6/27/97	9:53:35	22.67	7.55	8.30
6/27/97	9:54:10	22.70	7.52	8.24
6/27/97	9:55:31	22.67	7.63	8.01
6/27/97	9:58:31	22.65	6.88	7.77
6/27/97	9:59:05	22.67	7.16	8.04
6/27/97	10:00:05	22.79	7.45	8.13
6/27/97	10:01:09	22.69	7.55	8.01
6/27/97	10:01:42	22.76	7.37	8.12
6/27/97	10:02:18	22.76	6.39	7.78
6/27/97	10:03:06	22.84	6.61	7.84
6/27/97	10:04:29	22.76	7.71	8.08
6/27/97	10:05:11	22.80	7.66	8.22
6/27/97	10:05:36	22.72	7.60	8.03
6/27/97	10:06:34	22.77	7.56	8.07
6/27/97	10:08:15	22.76	7.72	7.95
6/27/97	10:08:49	22.71	7.66	7.97
6/27/97	10:09:21	22.78	7.45	8.08
6/27/97	10:09:50	22.88	7.19	8.21
6/27/97	10:10:48	22.81	7.53	8.05
6/27/97	10:12:44	22.75	7.59	7.93
6/27/97	10:13:13	22.72	7.46	8.26
6/27/97	10:14:01	22.79	7.54	8.03
6/27/97	10:14:31	22.72	7.56	8.12
6/27/97	10:15:36	22.75	7.65	8.09
6/27/97	10:16:07	22.89	7.55	7.98
6/27/97	10:16:38	22.77	7.41	7.98
6/27/97	10:17:10	22.76	7.23	8.02
6/27/97	10:18:29	22.73	7.62	8.08
6/27/97	10:19:06	22.83	7.61	8.11
6/27/97	10:19:39	22.77	7.60	8.26
6/27/97	10:19:59	22.79	7.60	8.09
6/27/97	10:21:02	22.75	7.62	8.24
6/27/97	10:21:31	22.81	7.63	8.15
6/27/97	10:22:02	22.64	7.67	8.14
6/27/97	10:22:34	22.73	7.52	7.83
6/27/97	10:23:43	22.74	7.60	8.19
6/27/97	10:24:22	22.76	7.62	8.14
6/27/97	10:24:51	22.70	7.64	8.10
6/27/97	10:25:34	22.86	7.53	8.09

C:\PC6000\READINGS\286HA4.DAT

YSI 6000 Time Series Report

Date mm/dd/yy	Time hh:mm:ss	Temperature C	DO mg/L	pH
6/29/97	10:48:21	22.53	8.08	7.91
6/29/97	10:48:49	22.57	7.98	8.20
6/29/97	10:49:09	22.60	7.91	8.22
6/29/97	10:49:53	22.63	7.88	8.05
6/29/97	10:50:10	22.68	7.82	8.09
6/29/97	10:50:56	22.78	7.81	8.12
6/29/97	10:51:11	22.80	7.79	8.04
6/29/97	10:51:26	22.76	7.77	8.20
6/29/97	10:51:51	22.82	7.73	8.09
6/29/97	10:52:48	22.80	7.58	8.34
6/29/97	10:53:00	22.72	7.62	8.26
6/29/97	10:53:16	22.72	7.64	8.10
6/29/97	10:53:42	22.80	7.61	7.97
6/29/97	10:54:33	22.83	7.47	8.06
6/29/97	10:55:01	22.90	7.54	8.10
6/29/97	10:55:17	22.80	7.61	8.09
6/29/97	10:55:38	22.80	7.67	8.15
6/29/97	10:56:28	22.88	7.57	8.04
6/29/97	10:56:52	22.90	7.50	8.01
6/29/97	10:57:06	22.79	7.49	8.09
6/29/97	10:57:31	22.87	7.55	8.22
6/29/97	10:58:15	22.94	7.55	8.06
6/29/97	10:58:32	22.87	7.52	8.05
6/29/97	10:58:56	22.87	7.57	7.97
6/29/97	10:59:15	22.84	7.60	7.94
6/29/97	10:59:54	22.93	7.54	8.23
6/29/97	11:00:22	23.02	7.50	8.27
6/29/97	11:00:45	22.86	7.60	8.11
6/29/97	11:02:13	22.90	7.40	7.92
6/29/97	11:02:32	22.79	7.40	8.28
6/29/97	11:02:56	22.85	7.48	8.13
6/29/97	11:03:40	22.84	7.71	8.21
6/29/97	11:04:32	22.83	7.66	8.02
6/29/97	11:05:03	22.96	7.52	7.99
6/29/97	11:05:26	22.82	7.52	8.02
6/29/97	11:05:50	22.85	7.54	8.02
6/29/97	11:06:43	22.80	7.52	8.08
6/29/97	11:07:03	22.80	7.55	8.14
6/29/97	11:07:25	22.79	7.62	8.18
6/29/97	11:07:39	22.74	7.70	8.16
6/29/97	11:08:37	22.80	7.66	8.34
6/29/97	11:08:58	22.81	7.70	8.12
6/29/97	11:09:16	22.63	7.78	8.12
6/29/97	11:09:44	22.79	7.78	8.07
6/29/97	11:10:37	22.77	7.75	8.05
6/29/97	11:11:04	22.80	7.71	7.97
6/29/97	11:11:51	22.70	7.76	7.88
6/29/97	11:12:21	22.88	7.61	7.80

C:\PC6000\READINGS\286HA6.DAT

YSI 6000 Time Series Report

Date mm/dd/yy	Time hh:mm:ss	Temperature C	DO mg/L	pH
7/01/97	14:41:36	22.47	7.47	7.94
7/01/97	14:41:58	22.52	6.51	7.54
7/01/97	14:42:31	22.65	6.63	7.96
7/01/97	14:42:58	22.59	7.17	7.93
7/01/97	14:43:22	22.72	7.21	8.08
7/01/97	14:43:45	22.63	7.35	8.13
7/01/97	14:44:03	22.75	7.42	8.08
7/01/97	14:45:16	22.60	7.81	8.31
7/01/97	14:45:51	22.81	7.78	8.07
7/01/97	14:46:18	22.67	7.78	8.27
7/01/97	14:46:39	22.69	7.74	8.33
7/01/97	14:47:11	22.66	7.78	8.14
7/01/97	14:47:43	22.74	7.74	7.92
7/01/97	14:55:47	22.60	7.86	7.66
7/01/97	14:56:03	22.70	7.79	7.89
7/01/97	14:56:34	22.70	7.75	7.94
7/01/97	14:56:57	22.73	7.72	8.19
7/01/97	14:57:26	22.73	7.73	7.94
7/01/97	14:57:52	22.84	7.54	7.90
7/01/97	14:58:16	22.81	7.43	8.07
7/01/97	14:58:39	22.82	7.48	8.27
7/01/97	14:58:55	22.80	7.55	8.10
7/01/97	14:59:22	22.85	7.53	8.01
7/01/97	15:00:31	22.86	7.71	7.92
7/01/97	15:01:09	22.88	7.68	7.94
7/01/97	15:01:37	22.94	7.64	8.23
7/01/97	15:02:11	23.08	7.52	8.30
7/01/97	15:02:38	22.94	7.53	8.09
7/01/97	15:04:24	22.79	7.80	7.95
7/01/97	15:04:44	22.86	7.67	8.23
7/01/97	15:05:03	22.87	7.66	8.16
7/01/97	15:05:22	22.86	7.68	8.16
7/01/97	15:05:54	22.87	7.68	7.92
7/01/97	15:06:15	22.92	7.58	7.95
7/01/97	15:06:35	22.84	7.54	7.98
7/01/97	15:06:49	22.82	7.52	8.00
7/01/97	15:08:14	22.79	7.81	8.00
7/01/97	15:08:36	22.75	7.77	8.05
7/01/97	15:08:53	22.74	7.73	8.22
7/01/97	15:09:18	22.77	7.63	8.26
7/01/97	15:09:37	22.69	7.51	8.28
7/01/97	15:09:57	22.81	7.48	8.17
7/01/97	15:10:24	22.61	7.64	8.28
7/01/97	15:10:51	22.78	7.67	8.09
7/01/97	15:11:52	22.73	7.86	8.25
7/01/97	15:12:09	22.77	7.86	8.15
7/01/97	15:12:34	22.76	7.86	8.06
7/01/97	15:12:58	22.92	7.78	7.98

C:\PC6000\READINGS\286HA7.DAT

YSI 6000 Time Series Report

Date mm/dd/yy	Time hh:mm:ss	Temperature C	DO mg/L	pH
7/02/97	9:51:41	22.33	8.48	8.13
7/02/97	9:52:17	22.38	8.24	8.11
7/02/97	9:54:57	22.61	7.72	8.15
7/02/97	9:55:28	22.53	7.79	8.06
7/02/97	9:55:59	22.62	7.79	8.15
7/02/97	9:57:09	22.60	7.32	8.12
7/02/97	9:57:37	22.64	7.46	8.10
7/02/97	9:58:08	22.62	7.63	8.29
7/02/97	9:58:30	22.71	7.68	7.99
7/02/97	9:59:35	22.65	7.35	8.30
7/02/97	9:59:57	22.66	7.52	8.38
7/02/97	10:00:28	22.61	7.80	8.23
7/02/97	10:00:52	22.59	7.95	8.06
7/02/97	10:01:47	22.53	8.11	8.07
7/02/97	10:02:02	22.59	8.08	8.10
7/02/97	10:02:22	22.55	8.10	8.09
7/02/97	10:02:52	22.62	8.07	8.25
7/02/97	10:03:57	22.66	7.50	7.97
7/02/97	10:04:27	22.67	7.51	7.93
7/02/97	10:04:54	22.65	7.53	8.12
7/02/97	10:05:19	22.65	7.72	8.29
7/02/97	10:06:06	22.54	7.68	8.01
7/02/97	10:06:34	22.64	7.65	8.03
7/02/97	10:07:09	22.70	7.74	7.97
7/02/97	10:07:41	22.74	7.77	8.02
7/02/97	10:08:34	22.62	7.57	8.21
7/02/97	10:08:51	22.71	7.56	8.26
7/02/97	10:09:18	22.69	7.67	8.08
7/02/97	10:11:04	22.69	7.69	8.02
7/02/97	10:11:37	22.78	7.77	8.30
7/02/97	10:12:08	22.72	7.87	8.12
7/02/97	10:12:38	22.72	7.93	8.17
7/02/97	10:13:48	22.68	8.11	7.94
7/02/97	10:14:16	22.73	7.98	7.97
7/02/97	10:14:42	22.61	7.91	8.01
7/02/97	10:15:12	22.69	7.85	8.05
7/02/97	10:16:17	22.64	8.08	8.03
7/02/97	10:16:47	22.70	8.03	8.08
7/02/97	10:17:17	22.67	8.01	8.24
7/02/97	10:17:42	22.66	8.00	8.28
7/02/97	10:18:48	22.65	8.13	8.30
7/02/97	10:19:17	22.68	8.13	8.12
7/02/97	10:19:43	22.50	8.16	8.25
7/02/97	10:20:14	22.70	8.11	8.09
7/02/97	10:21:13	22.67	8.19	8.28
7/02/97	10:21:40	22.66	8.19	8.11
7/02/97	10:22:05	22.60	8.17	8.10
7/02/97	10:22:37	22.67	8.11	7.98

C:\PC6000\READINGS\286HA8.DAT

YSI 6000 Time Series Report

Date mm/dd/yy	Time hh:mm:ss	Temperature C	DO mg/L	pH
7/03/97	10:22:39	22.50	8.19	7.90
7/03/97	10:23:14	22.64	8.02	8.05
7/03/97	10:23:43	22.65	7.89	8.18
7/03/97	10:24:07	22.63	7.86	8.04
7/03/97	10:24:31	22.67	7.80	8.15
7/03/97	10:25:26	22.69	7.71	8.13
7/03/97	10:25:47	22.70	7.72	8.05
7/03/97	10:26:06	22.66	7.72	8.30
7/03/97	10:26:34	22.76	7.71	8.08
7/03/97	10:27:32	22.73	7.58	8.33
7/03/97	10:27:57	22.69	7.67	8.48
7/03/97	10:28:25	22.63	7.90	8.25
7/03/97	10:28:47	22.61	8.00	8.10
7/03/97	10:29:36	22.74	7.78	8.01
7/03/97	10:29:56	22.70	7.73	8.10
7/03/97	10:30:16	22.66	7.76	8.07
7/03/97	10:30:29	22.62	7.78	8.21
7/03/97	10:31:29	22.72	7.64	7.93
7/03/97	10:31:47	22.72	7.53	7.86
7/03/97	10:32:09	22.66	7.45	8.09
7/03/97	10:32:35	22.66	7.57	8.40
7/03/97	10:33:23	22.67	7.69	8.03
7/03/97	10:33:47	22.66	7.66	8.09
7/03/97	10:34:07	22.60	7.72	7.95
7/03/97	10:34:25	22.54	7.72	8.03
7/03/97	10:35:18	22.66	7.81	8.23
7/03/97	10:35:38	22.66	7.73	8.29
7/03/97	10:36:16	22.76	7.63	7.99
7/03/97	10:39:54	22.77	7.35	7.90
7/03/97	10:40:18	22.86	7.27	8.27
7/03/97	10:40:58	22.78	7.59	8.14
7/03/97	10:41:25	22.78	7.75	8.20
7/03/97	10:42:14	22.69	7.91	7.96
7/03/97	10:42:40	22.68	7.83	7.95
7/03/97	10:42:54	22.63	7.81	7.98
7/03/97	10:43:17	22.65	7.78	8.08
7/03/97	10:44:08	22.68	7.75	8.01
7/03/97	10:44:27	22.67	7.73	8.13
7/03/97	10:44:46	22.71	7.78	8.27
7/03/97	10:45:08	22.67	7.85	8.34
7/03/97	10:46:04	22.82	7.80	8.32
7/03/97	10:46:23	22.70	7.85	8.17
7/03/97	10:46:40	22.64	7.90	8.25
7/03/97	10:47:06	22.66	7.94	8.16
7/03/97	10:47:48	22.76	7.87	8.30
7/03/97	10:48:08	22.66	7.93	8.19
7/03/97	10:48:56	22.76	7.93	8.00
7/03/97	10:49:17	22.71	7.81	8.01

C:\PC6000\READINGS\286HA9.DAT

YSI 6000 Time Series Report

Date mm/dd/yy	Time hh:mm:ss	Temp C	SpCond uS/cm	Salinity PPT	DO mg/L	pH
7/04/97	7:42:21	22.51	527.00	0.2	7.14	7.72
7/04/97	7:42:31	22.51	577.00	0.3	7.18	8.06
7/04/97	7:42:39	22.60	553.00	0.3	7.17	8.17
7/04/97	7:42:49	22.67	552.00	0.3	7.16	8.19
7/04/97	7:42:56	22.68	609.00	0.3	7.17	8.16
7/04/97	7:43:55	22.53	539.00	0.3	7.26	8.28
7/04/97	7:44:01	22.58	616.00	0.3	7.25	8.21
7/04/97	7:44:08	22.66	583.00	0.3	7.24	8.25
7/04/97	7:44:14	22.71	527.00	0.2	7.22	8.35
7/04/97	7:45:18	22.55	594.00	0.3	7.28	8.42
7/04/97	7:45:24	22.61	581.00	0.3	7.29	8.47
7/04/97	7:45:31	22.66	612.00	0.3	7.28	8.48
7/04/97	7:45:38	22.69	586.00	0.3	7.29	8.34
7/04/97	7:46:30	22.60	549.00	0.3	7.28	8.19
7/04/97	7:46:36	22.64	525.00	0.2	7.29	8.20
7/04/97	7:46:42	22.68	534.00	0.3	7.25	8.23
7/04/97	7:46:48	22.70	608.00	0.3	7.26	8.26
7/04/97	7:47:38	22.62	564.00	0.3	7.28	8.16
7/04/97	7:47:45	22.65	556.00	0.3	7.28	8.11
7/04/97	7:47:51	22.69	555.00	0.3	7.24	8.10
7/04/97	7:47:56	22.70	580.00	0.3	7.21	8.24
7/04/97	7:48:45	22.59	568.00	0.3	7.23	8.20
7/04/97	7:48:51	22.63	540.00	0.3	7.21	8.18
7/04/97	7:48:57	22.68	528.00	0.3	7.19	8.16
7/04/97	7:49:03	22.69	539.00	0.3	7.18	8.13
7/04/97	7:51:19	22.51	587.00	0.3	7.28	8.32
7/04/97	7:51:25	22.59	585.00	0.3	7.25	8.31
7/04/97	7:51:32	22.68	609.00	0.3	7.20	8.24
7/04/97	7:53:29	22.54	605.00	0.3	7.21	7.47
7/04/97	7:53:37	22.67	599.00	0.3	7.14	7.88
7/04/97	7:54:13	22.72	532.00	0.3	7.09	8.19
7/04/97	7:54:20	22.77	544.00	0.3	7.11	8.20
7/04/97	7:55:06	22.68	567.00	0.3	7.23	8.10
7/04/97	7:55:12	22.71	538.00	0.3	7.23	8.08
7/04/97	7:55:18	22.74	532.00	0.3	7.21	8.08
7/04/97	7:55:23	22.76	557.00	0.3	7.20	8.10
7/04/97	7:56:16	22.68	541.00	0.3	7.25	8.12
7/04/97	7:56:23	22.74	565.00	0.3	7.25	8.14
7/04/97	7:56:30	22.78	580.00	0.3	7.24	8.22
7/04/97	7:56:36	22.79	602.00	0.3	7.24	8.33
7/04/97	7:57:21	22.66	591.00	0.3	7.32	8.42
7/04/97	7:57:28	22.74	537.00	0.3	7.33	8.37
7/04/97	7:57:35	22.76	645.00	0.3	7.33	8.33
7/04/97	7:57:41	22.75	558.00	0.3	7.34	8.34
7/04/97	7:58:32	22.73	570.00	0.3	7.37	8.43
7/04/97	7:58:37	22.77	540.00	0.3	7.37	8.41
7/04/97	7:58:43	22.78	544.00	0.3	7.38	8.29
7/04/97	7:58:48	22.81	559.00	0.3	7.37	8.16

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YSI 6000 Time Series Report

Date mm/dd/yy	Time hh:mm:ss	Temp C	SpCond uS/cm	Salinity PPT	DO mg/L	pH
7/05/97	12:00:47	22.39	531.00	0.3	7.48	8.18
7/05/97	12:01:01	22.29	586.00	0.3	7.52	8.24
7/05/97	12:01:13	22.23	553.00	0.3	7.53	8.28
7/05/97	12:04:48	22.07	558.00	0.3	7.50	8.45
7/05/97	12:04:58	22.16	619.00	0.3	7.46	8.35
7/05/97	12:05:14	22.09	541.00	0.3	7.47	8.49
7/05/97	12:05:28	22.30	625.00	0.3	7.44	8.45
7/05/97	12:05:41	22.36	589.00	0.3	7.47	8.58
7/05/97	12:05:53	22.52	523.00	0.2	7.52	8.72
7/05/97	12:06:03	22.52	605.00	0.3	7.56	8.63
7/05/97	12:06:13	22.46	588.00	0.3	7.60	8.61
7/05/97	12:06:25	22.24	623.00	0.3	7.62	8.74
7/05/97	12:06:35	22.35	581.00	0.3	7.61	8.68
7/05/97	12:06:46	22.36	553.00	0.3	7.65	8.57
7/05/97	12:06:58	22.34	517.00	0.2	7.70	8.51
7/05/97	12:07:08	22.34	533.00	0.3	7.72	8.68
7/05/97	12:07:19	22.35	610.00	0.3	7.75	8.55
7/05/97	12:07:32	22.23	567.00	0.3	7.78	8.60
7/05/97	12:07:43	22.36	542.00	0.3	7.75	8.47
7/05/97	12:07:50	22.49	554.00	0.3	7.71	8.27
7/05/97	12:07:59	22.47	593.00	0.3	7.70	8.41
7/05/97	12:08:10	22.31	570.00	0.3	7.72	8.67
7/05/97	12:08:20	22.39	540.00	0.3	7.70	8.59
7/05/97	12:08:30	22.38	530.00	0.3	7.69	8.58
7/05/97	12:08:39	22.41	544.00	0.3	7.69	8.49
7/05/97	12:08:48	22.35	597.00	0.3	7.70	8.37
7/05/97	12:08:56	22.35	594.00	0.3	7.69	8.44
7/05/97	12:09:06	22.29	625.00	0.3	7.68	8.52
7/05/97	12:09:42	22.39	647.00	0.3	7.60	8.39
7/05/97	12:09:59	22.41	614.00	0.3	7.50	8.59
7/05/97	12:10:09	22.45	544.00	0.3	7.47	8.56
7/05/97	12:10:18	22.56	546.00	0.3	7.44	8.61
7/05/97	12:10:27	22.58	571.00	0.3	7.44	8.46
7/05/97	12:10:36	22.55	534.00	0.3	7.46	8.31
7/05/97	12:10:47	22.54	532.00	0.3	7.46	8.25
7/05/97	12:10:59	22.55	553.00	0.3	7.46	8.35
7/05/97	12:11:10	22.46	536.00	0.3	7.51	8.43
7/05/97	12:11:27	22.38	563.00	0.3	7.54	8.62
7/05/97	12:11:36	22.46	592.00	0.3	7.53	8.58
7/05/97	12:11:45	22.55	618.00	0.3	7.53	8.62
7/05/97	12:11:54	22.51	616.00	0.3	7.56	8.89
7/05/97	12:12:06	22.46	539.00	0.3	7.59	8.63
7/05/97	12:12:15	22.41	647.00	0.3	7.61	8.70
7/05/97	12:12:34	22.26	564.00	0.3	7.63	8.80
7/05/97	12:12:43	22.39	589.00	0.3	7.61	8.75
7/05/97	12:12:53	22.49	539.00	0.3	7.59	8.74
7/05/97	12:13:01	22.50	543.00	0.3	7.60	8.63
7/05/97	12:13:08	22.60	556.00	0.3	7.60	8.51

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YSI 6000 Time Series Report

Date mm/dd/yy	Time hh:mm:ss	Temp C	SpCond uS/cm	Salinity PPT	DO mg/L	pH
7/06/97	11:50:28	22.32	537.00	0.3	7.98	8.32
7/06/97	11:50:41	22.35	598.00	0.3	7.90	8.37
7/06/97	11:50:53	22.22	555.00	0.3	7.89	8.31
7/06/97	11:51:08	22.19	553.00	0.3	7.88	8.38
7/06/97	11:51:20	22.37	631.00	0.3	7.84	8.26
7/06/97	11:51:37	22.14	538.00	0.3	7.79	8.62
7/06/97	11:51:49	22.33	622.00	0.3	7.71	8.39
7/06/97	11:52:03	22.41	595.00	0.3	7.73	8.91
7/06/97	11:52:14	22.42	524.00	0.2	7.78	8.82
7/06/97	11:52:24	22.42	605.00	0.3	7.82	8.71
7/06/97	11:52:32	22.46	596.00	0.3	7.86	8.62
7/06/97	11:52:42	22.48	614.00	0.3	7.86	8.89
7/06/97	11:52:53	22.52	564.00	0.3	7.88	8.73
7/06/97	11:53:05	22.32	548.00	0.3	7.99	8.70
7/06/97	11:53:16	22.43	513.00	0.2	8.01	8.62
7/06/97	11:53:26	22.45	526.00	0.2	8.05	8.86
7/06/97	11:53:35	22.42	611.00	0.3	8.08	8.61
7/06/97	11:53:45	22.42	560.00	0.3	8.10	8.72
7/06/97	11:53:55	22.42	549.00	0.3	8.11	8.51
7/06/97	11:54:06	22.43	550.00	0.3	8.09	8.38
7/06/97	11:54:18	22.30	590.00	0.3	8.11	8.58
7/06/97	11:54:29	22.24	570.00	0.3	8.11	8.78
7/06/97	11:54:37	22.35	534.00	0.3	8.08	8.59
7/06/97	11:54:47	22.20	529.00	0.3	8.11	8.57
7/06/97	11:54:58	22.34	541.00	0.3	8.07	8.45
7/06/97	11:55:08	22.36	597.00	0.3	8.05	8.50
7/06/97	11:55:17	22.49	600.00	0.3	8.01	8.58
7/06/97	11:55:26	22.49	628.00	0.3	8.00	8.57
7/06/97	11:56:10	20.16 @	689.00	0.3	8.40	8.45
7/06/97	11:56:25	22.23	617.00	0.3	7.84	8.37
7/06/97	11:56:36	22.46	542.00	0.3	7.75	8.52
7/06/97	11:56:48	22.62	549.00	0.3	7.71	8.47
7/06/97	11:56:59	22.60	571.00	0.3	7.73	8.41
7/06/97	11:57:09	22.58	531.00	0.3	7.74	8.32
7/06/97	11:57:22	22.48	530.00	0.3	7.77	8.51
7/06/97	11:57:33	22.59	551.00	0.3	7.77	8.47
7/06/97	11:57:43	22.59	532.00	0.3	7.79	8.46
7/06/97	11:58:03	22.44	557.00	0.3	7.84	8.75
7/06/97	11:58:18	22.30	596.00	0.3	7.90	8.89
7/06/97	11:58:31	22.48	627.00	0.3	7.89	8.79
7/06/97	11:58:41	22.44	626.00	0.3	7.91	8.84
7/06/97	11:58:56	22.39	540.00	0.3	7.90	8.61
7/06/97	11:59:07	22.49	686.00	0.3	7.87	8.57
7/06/97	11:59:17	22.51	563.00	0.3	7.86	8.59
7/06/97	11:59:29	22.51	588.00	0.3	7.86	8.67
7/06/97	11:59:42	22.62	532.00	0.3	7.86	8.80
7/06/97	11:59:54	22.42	538.00	0.3	7.93	8.81
7/06/97	12:00:04	22.59	552.00	0.3	7.92	8.66

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YSI 6000 Time Series Report

Date mm/dd/yy	Time hh:mm:ss	Temp C	SpCond uS/cm	Salinity PPT	DO mg/L	pH
7/07/97	13:18:55	22.42	540.00	0.3	6.58	8.00
7/07/97	13:19:35	22.48	605.00	0.3	7.41	8.38
7/07/97	13:19:57	23.02	506.00	0.2	7.26	8.25
7/07/97	13:20:37	22.67	544.00	0.3	7.52	8.31
7/07/97	13:20:55	23.10	574.00	0.3	7.40	8.28
7/07/97	13:21:36	22.73	525.00	0.2	7.67	8.56
7/07/97	13:22:00	23.26	572.00	0.3	7.61	8.27
7/07/97	13:23:54	23.02	552.00	0.3	7.80	8.37
7/07/97	13:24:12	23.19	488.00	0.2	7.86	8.42
7/07/97	13:24:50	22.79	608.00	0.3	7.98	8.66
7/07/97	13:25:15	22.84	588.00	0.3	7.74	9.06
7/07/97	13:26:06	23.02	577.00	0.3	7.89	8.12
7/07/97	13:26:29	23.05	515.00	0.2	7.39	8.51
7/07/97	13:27:06	22.87	511.00	0.2	7.48	8.21
7/07/97	13:27:16	22.87	506.00	0.2	7.69	8.59
7/07/97	13:28:15	22.66	525.00	0.2	7.93	8.83
7/07/97	13:28:31	22.93	550.00	0.3	7.92	8.58
7/07/97	13:29:00	22.74	553.00	0.3	8.02	8.69
7/07/97	13:29:18	23.03	513.00	0.2	8.01	8.39
7/07/97	13:30:04	22.81	534.00	0.3	7.99	8.04
7/07/97	13:30:15	22.81	585.00	0.3	7.96	8.79
7/07/97	13:30:47	22.84	541.00	0.3	7.95	8.33
7/07/97	13:30:55	22.86	527.00	0.2	7.16	8.49
7/07/97	13:31:24	22.74	523.00	0.2	7.80	8.59
7/07/97	13:31:35	22.81	539.00	0.3	7.83	8.62
7/07/97	13:32:10	22.92	576.00	0.3	7.87	8.40
7/07/97	13:32:22	23.05	592.00	0.3	7.81	8.72
7/07/97	13:32:33	23.15	629.00	0.3	7.81	8.72
7/07/97	13:33:32	22.65	635.00	0.3	7.75	7.71
7/07/97	13:33:43	22.96	616.00	0.3	7.13	8.58
7/07/97	13:34:12	22.90	541.00	0.3	7.67	8.67
7/07/97	13:34:23	23.00	548.00	0.3	7.67	8.63
7/07/97	13:34:53	22.96	543.00	0.3	7.70	8.24
7/07/97	13:35:02	23.04	512.00	0.2	7.70	8.31
7/07/97	13:35:42	22.89	527.00	0.2	7.79	8.59
7/07/97	13:35:52	22.98	540.00	0.3	7.76	8.70
7/07/97	13:36:35	22.96	499.00	0.2	7.77	8.12
7/07/97	13:36:55	22.97	546.00	0.3	7.72	8.84
7/07/97	13:37:31	22.90	599.00	0.3	7.88	8.99
7/07/97	13:37:40	22.92	614.00	0.3	7.89	9.04
7/07/97	13:38:11	22.86	588.00	0.3	7.91	8.61
7/07/97	13:38:19	22.91	535.00	0.3	7.25	8.65
7/07/97	13:38:59	22.77	709.00	0.4	7.69	8.58
7/07/97	13:39:11	22.85	567.00	0.3	6.87	8.68
7/07/97	13:39:43	22.90	594.00	0.3	7.75	8.96
7/07/97	13:39:52	22.95	530.00	0.3	7.77	9.06
7/07/97	13:40:29	22.73	533.00	0.3	7.89	8.90
7/07/97	13:40:38	22.91	548.00	0.3	7.85	8.95

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YSI 6000 Time Series Report

Date mm/dd/yy	Time hh:mm:ss	Temperature C	DO mg/L	pH
7/08/97	10:57:26	21.98	8.29	7.99
7/08/97	10:57:55	22.09	8.11	8.20
7/08/97	10:58:20	22.24	8.02	8.24
7/08/97	10:59:01	22.25	8.00	8.10
7/08/97	10:59:20	22.13	7.98	8.24
7/08/97	11:00:44	22.23	8.09	8.17
7/08/97	11:01:34	22.35	8.25	8.35
7/08/97	11:02:12	22.41	8.35	8.69
7/08/97	11:02:44	22.50	8.33	8.38
7/08/97	11:04:01	22.33	8.21	8.39
7/08/97	11:04:33	22.40	8.15	8.60
7/08/97	11:04:59	22.34	8.21	8.40
7/08/97	11:05:18	22.42	8.26	8.49
7/08/97	11:06:19	22.33	8.34	8.23
7/08/97	11:06:49	22.38	8.28	8.41
7/08/97	11:07:13	22.36	8.31	8.41
7/08/97	11:07:39	22.36	8.32	8.36
7/08/97	11:08:39	22.36	8.26	8.26
7/08/97	11:08:59	22.37	8.33	8.23
7/08/97	11:09:24	22.42	8.41	8.22
7/08/97	11:09:46	22.36	8.41	8.48
7/08/97	11:10:47	22.46	8.16	8.24
7/08/97	11:11:16	22.47	8.16	8.28
7/08/97	11:11:55	22.53	8.21	8.16
7/08/97	11:12:09	22.37	8.24	8.16
7/08/97	11:12:53	22.62	8.11	8.27
7/08/97	11:13:20	22.76	8.03	8.43
7/08/97	11:13:53	22.68	8.07	8.23
7/08/97	11:15:00	22.48	8.04	8.19
7/08/97	11:15:18	22.47	8.07	8.34
7/08/97	11:15:57	22.48	8.08	8.23
7/08/97	11:16:22	22.46	8.10	8.22
7/08/97	11:17:10	22.37	8.09	8.08
7/08/97	11:17:33	22.36	8.07	8.08
7/08/97	11:18:00	22.49	8.03	8.24
7/08/97	11:18:23	22.47	8.07	8.30
7/08/97	11:19:22	22.47	8.09	8.06
7/08/97	11:19:43	22.43	8.06	8.43
7/08/97	11:20:12	22.53	8.12	8.52
7/08/97	11:20:37	22.47	8.18	8.43
7/08/97	11:22:01	22.54	8.08	8.37
7/08/97	11:22:33	22.53	8.07	8.23
7/08/97	11:23:03	22.45	8.09	8.30
7/08/97	11:23:19	22.37	8.08	8.24
7/08/97	11:24:21	22.49	8.05	8.49
7/08/97	11:24:43	22.46	8.11	8.51
7/08/97	11:25:02	22.50	8.17	8.39
7/08/97	11:25:26	22.60	8.27	8.48

C:\PC6000\READINGS\286HA14.DAT

YSI 6000 Time Series Report

Date mm/dd/yy	Time hh:mm:ss	Temp C	SpCond uS/cm	Salinity PPT	DO mg/L	pH
7/09/97	7:40:08	22.02	554.00	0.3	7.66	7.96
7/09/97	7:40:16	22.11	624.00	0.3	7.57	8.22
7/09/97	7:40:23	22.21	569.00	0.3	7.52	8.37
7/09/97	7:40:33	22.31	551.00	0.3	7.47	8.38
7/09/97	7:40:39	22.33	616.00	0.3	7.43	8.35
7/09/97	7:40:46	22.35	533.00	0.3	7.40	8.46
7/09/97	7:40:52	22.37	578.00	0.3	7.39	8.47
7/09/97	7:41:01	22.40	587.00	0.3	7.37	8.64
7/09/97	7:41:07	22.45	538.00	0.3	7.37	8.74
7/09/97	7:41:13	22.49	614.00	0.3	7.37	8.68
7/09/97	7:41:19	22.51	596.00	0.3	7.37	8.75
7/09/97	7:41:25	22.51	594.00	0.3	7.38	8.74
7/09/97	7:41:31	22.49	541.00	0.3	7.39	8.69
7/09/97	7:41:37	22.48	558.00	0.3	7.41	8.63
7/09/97	7:41:42	22.49	522.00	0.2	7.41	8.59
7/09/97	7:41:47	22.50	540.00	0.3	7.42	8.65
7/09/97	7:41:52	22.51	584.00	0.3	7.42	8.65
7/09/97	7:41:59	22.51	564.00	0.3	7.43	8.59
7/09/97	7:42:04	22.52	546.00	0.3	7.44	8.53
7/09/97	7:42:09	22.52	563.00	0.3	7.45	8.45
7/09/97	7:42:15	22.54	590.00	0.3	7.44	8.51
7/09/97	7:42:21	22.54	583.00	0.3	7.43	8.64
7/09/97	7:42:27	22.56	548.00	0.3	7.43	8.60
7/09/97	7:42:34	22.56	540.00	0.3	7.43	8.52
7/09/97	7:42:39	22.57	554.00	0.3	7.43	8.45
7/09/97	7:42:45	22.56	597.00	0.3	7.43	8.49
7/09/97	7:42:50	22.59	603.00	0.3	7.41	8.56
7/09/97	7:42:55	22.63	622.00	0.3	7.38	8.59
7/09/97	7:43:28	22.29	653.00	0.3	7.44	8.54
7/09/97	7:43:33	22.40	629.00	0.3	7.42	8.58
7/09/97	7:43:40	22.47	550.00	0.3	7.40	8.66
7/09/97	7:43:45	22.52	550.00	0.3	7.39	8.64
7/09/97	7:43:51	22.53	568.00	0.3	7.41	8.50
7/09/97	7:43:57	22.53	523.00	0.2	7.42	8.43
7/09/97	7:44:04	22.52	542.00	0.3	7.42	8.48
7/09/97	7:44:10	22.54	533.00	0.3	7.40	8.52
7/09/97	7:44:18	22.54	518.00	0.2	7.41	8.48
7/09/97	7:44:24	22.54	557.00	0.3	7.41	8.51
7/09/97	7:44:32	22.54	612.00	0.3	7.41	8.66
7/09/97	7:44:38	22.58	627.00	0.3	7.41	8.74
7/09/97	7:44:45	22.58	621.00	0.3	7.43	8.76
7/09/97	7:44:51	22.59	548.00	0.3	7.45	8.72
7/09/97	7:44:57	22.59	686.00	0.3	7.46	8.67
7/09/97	7:45:07	22.57	581.00	0.3	7.48	8.65
7/09/97	7:45:15	22.57	603.00	0.3	7.48	8.65
7/09/97	7:45:22	22.60	548.00	0.3	7.48	8.77
7/09/97	7:45:28	22.58	542.00	0.3	7.49	8.81
7/09/97	7:45:38	22.60	554.00	0.3	7.49	8.77

AQUA SURVEY, INC.

CULTURE LAB DISTRIBUTION FORM

DATE: 6-25-97

TEST JOB#: 97-296 CLIENT: Weston-REAC

TEST LOCATION: IN-LAB [✓] FIELD [ ]

TEST SPECIES: H. azteca

TOTAL NUMBER ORGANISMS TRANSFERRED: 1100+

AQUA SURVEY, INC. CULTURE LAB INVESTIGATORS: EL

A. ORGANISMS

1. ASI CULTURE/HOLDING UNIT: H. Spkm

2. RECEIVING LOG #: N/A

3. CULTURE LOG #: 97-0467

4. AGE/SIZE INFORMATION: 2-5mm

B. HOLDING [ ] CULTURE [✓] WATER PARAMETERS

1. TEMPERATURE: 22.0°C

2. SALINITY: N/A

3. WATER SOURCE: Well water

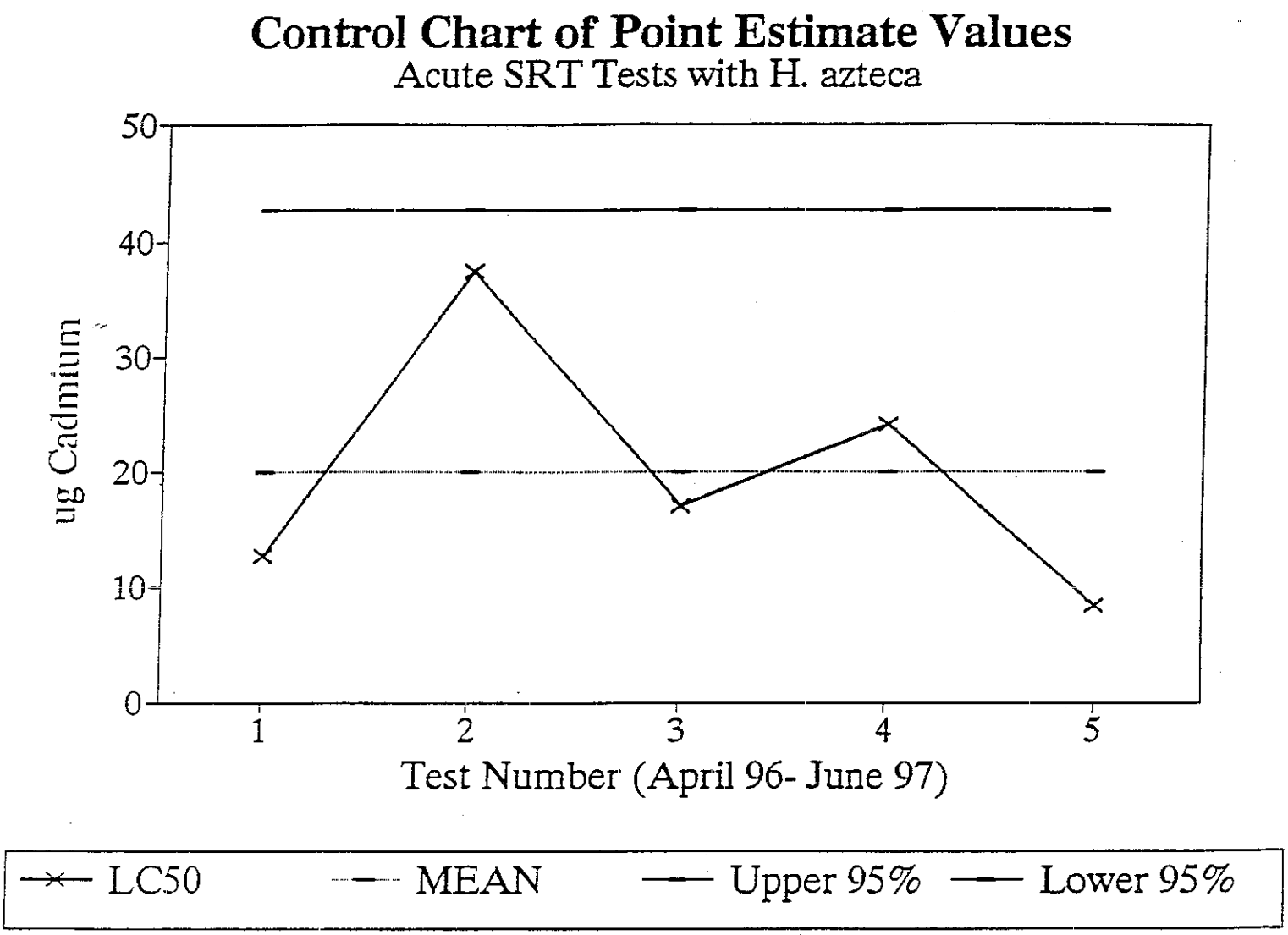
C. TRANSFER CUSTODY & TRANSFER

1. LIVESTOCK RELINQUISHMENT DATE: 6-25-97
TIME: 1430hr
BY: EL

2. LIVESTOCK RECEIVING DATE: 6-25-97
TIME: 1430hr
BY: SH

3. CULTURE SUPERVISOR OR SENIOR TECH. INITIALS: EL

REMARKS:


Control Chart of Point Estimate Values
Acute SRT Tests with H. azteca
ug Cadmium
50
40
30
20
10
0
1
2
3
4
5
Test Number (April 96- June 97)
LC50
MEAN
Upper 95%
Lower 95%

Standard Reference Toxicant
Live Counts

For Job #: 97-2806 Start Date: 6/25/97 End Date: _____

Organism: C. tentans/H. azteca Organism Log #: _____ Starting Time: 5:00p

Dose 0	Initial	1	2	3	4	Dose	Initial	1	2	3	4
A	1	1	1	1	1	A 16.0	1	1	1	0	—
B	1	0	—	—	0	B	1	1	1	1	0
C	1	1	1	1	1	C	1	1	1	1	0
D	1	1	1	1	1	D	1	1	0	—	0
E	1	1	1	1	1	E	1	1	1	1	1
F	1	1	0	—	0	F	1	1	1	1	1
G	1	1	1	1	1	G	1	1	0	—	0
H	1	1	1	1	1	H	1	1	1	0	— 0
I	1	1	1	1	1	I	1	1	1	1	0
J	1	1	1	1	1	J	1	1	1	0	— 0
A 8.0	1	1	1	1	1	A 32.0	1	1	0	—	— 0
B	1	1	1	1	1	B	1	1	0	—	— 0
C	1	1	1	1	1	C	1	1	0	—	— 0
D	1	1	1	0	— 0	D	1	1	0	—	— 0
E	1	1	1	1	0	E	1	1	0	—	— 0
F	1	1	1	1	1	F	1	1	0	—	— 0
G	1	1	1	1	1	G	1	1	0	—	— 0
H	1	1	1	1	1	H	1	1	0	—	— 0
I	1	1	1	1	1	I	1	0	—	—	— 0
J	1	1	1	1	1	J	1	0	—	—	—
A 4.0	1	0	0	—	— 0	A 64.0	1	0	—	—	— 0
B	1	1	1	1	1	B	1	0	—	—	— 0
C	1	1	1	1	1	C	1	0	—	—	— 0
D	1	0	0	—	— 0	D	1	0	—	—	— 0
E	1	1	1	1	1	E	1	0	—	—	— 0
F	1	0	0	—	— 0	F	1	1	0	—	— 0
G	1	1	1	1	1	G	1	1	0	—	— 0
H	1	1	1	1	1	H	1	0	—	—	— 0
I	1	1	1	1	1	I	1	0	—	—	— 0
J	1	1	0	—	— 0	J	1	0	—	—	— 0
Initial	TO	JH	AH	AH	AH		TO	AH	AH	AH	AH
Date	6/25	6/26	6/27	6/28	6/29		6/25	6/26	6/27	6/28	6/29

SAMPLE ID: SRT H. azteca 6/25/97 97-286

CONCENTRATION	NUMBER EXPOSED	NUMBER AFFECTED	PERCENT AFFECTED	BINOMIAL PROBABILITY (%)
64.0000	10	10	100.0000000	0.0976563
32.0000	10	10	100.0000000	0.0976563
16.0000	10	8	80.0000000	5.4687500
8.0000	10	4	40.0000000	37.6953100
4.0000	10	2	20.0000000	5.4687500

RESULTS

METHOD	SPAN	G	EC50	95 PERCENT CONFIDENCE LIMITS
BINOMIAL			9.449324	0.000000 - 32.000000
MOVING AVERAGE	3	0.214882	8.571264	5.130138 - 12.301770
PROBIT		0.252222	8.331825	5.400714 - 11.864480

INTERPRETATION OF STATISTICS

The order of preference of results is:
BEST: Probit Method
BETTER: Moving Average
GOOD: Binomial
GOOD: Graphic Interpolation (Graph drawn by hand)
assuming all are statistically valid.

To Determine if a method has given valid results:
GRAPHICAL: Always valid
BINOMIAL: The program will tell you if this is not valid.
MOVING AVERAGE: The number of spans needs to be no less than one lower than the number of concentrations tested (excluding control).
PROBIT: The program will tell you if this is not valid

C:\PC6000\READINGS\SRTHA0.DAT

YSI 6000 Time Series Report

Date mm/dd/yy	Time hh:mm:ss	Temp C	SpCond uS/cm	Salinity PPT	DO mg/L	pH
6/25/97	15:01:17 0	23.19	532.00	0.3	8.11	8.06
6/25/97	15:01:30 4.0	23.20	532.00	0.3	7.81	8.11
6/25/97	15:01:43 8.0	23.16	524.00	0.2	7.79	8.14
6/25/97	15:01:54 16.0	23.16	514.00	0.2	7.77	8.14
6/25/97	15:02:07 32.0	23.21	493.00	0.2	7.74	8.14
6/25/97	15:02:20 64.0	23.41	430.00	0.2	7.68	8.16

Project No. 97-286, Day of Study 0hr., Date 6/25/97

Species H. azteca Test Type SRT

	Acceptable Range			✓ if OK
Salinity:	N/A	To		✓
Temperature:	22	To	24	✓
[illegible]	7.3	To	8.3	✓
Dissolved Oxygen:		>	5.0	✓

Actions Taken:

See Deviation Summary [illegible] Initials [illegible]

C:\PC6000\READINGS\SRTHA24.DAT

YSI 6000 Time Series Report

Date mm/dd/yy	Time hh:mm:ss	Temp C	SpCond uS/cm	Salinity PPT	DO mg/L	pH
6/26/97	13:18:51 0	22.59	564.00	0.3	7.70	8.11
6/26/97	13:19:04 4.0	22.57	558.00	0.3	7.52	8.08
6/26/97	13:19:13 8.0	22.55	552.00	0.3	7.44	8.08
6/26/97	13:19:23 16.0	22.51	543.00	0.3	6.76	8.07
6/26/97	13:19:31 32.0	22.51	520.00	0.2	6.73	8.06
6/26/97	13:19:39 64.0	22.50	455.00	0.2	6.70	8.04

97-286 24hr. 6/26/97

Species H. azteca Test Type SRT

Acceptable Range

	N/A	To	✓
Temperature:	22	To 24	✓
	7.3	To 8.3	✓
Dissolved Oxygen:		> 5.0	✓
Ions Taken:	none		

CAN

C:\PC6000\READINGS\SRTHA48.DAT

YSI 6000 Time Series Report

Date mm/dd/yy	Time hh:mm:ss	Temperature C	DO mg/L	pH
6/27/97	10:27:14	22.60	7.63	8.21
6/27/97	10:27:35	22.66	7.53	8.21
6/27/97	10:27:52	22.64	7.50	8.21
6/27/97	10:28:15	22.59	7.51	8.20
6/27/97	10:28:28	22.57	7.51	8.18
6/27/97	10:28:42	22.56	7.52	8.16

Project No 286 Day of Study 48 hr, Date 6/27/97

Species Hg Test Type SRT

Acceptable Range, ✓ if C

Salinity:		To		
Temperature:	22	To	24	✓
pH:	7.3	To	8.3	✓
Dissolved Oxygen:		>	5	✓
Actions Taken:				

[illegible] Initials [illegible]

C:\PC6000\READINGS\SRTHA72.DAT

YSI 6000 Time Series Report

Date mm/dd/yy	Time hh:mm:ss	Temperature C	DO mg/L	pH
6/28/97	10:40:12	22.53	7.55	8.24
6/28/97	10:40:35	22.70	7.34	8.25
6/28/97	10:40:53	22.70	7.29	8.25
6/28/97	10:41:03	22.68	7.27	8.23

Project No. 97-286 Day of Study 72h Date 6/29

Species Ha. Test Type SRT

	Acceptable Range		✓ If OK
Salinity	___ To ___		
Temperature:	22 To 24		✓
pH:	7.3 To 8.3		✓
Dissolved Oxygen:	___ > 5		✓

Actions Taken: ___

See Deviation Summary Sheet Initials: MA

C:\PC6000\READINGS\SRTHA96.DAT

YSI 6000 Time Series Report

Date mm/dd/yy	Time hh:mm:ss	Temperature C	DO mg/L	pH
6/29/97	11:12:58	22.57	7.54	8.09
6/29/97	11:13:10	22.62	7.47	8.20
6/29/97	11:13:23	22.64	7.46	8.21
6/29/97	11:13:36	22.62	7.46	8.21

Test #: 97-286 Day of Study: 96 hr Date: 6/29

Species: H. a. Test Type: SRT

	Acceptable Range		
Salinity:	To		
Temperature:	22 To	24	✓
pH:	7.3 To	8.3	✓
Dissolved Oxygen:	>	5	✓
Actions Taken:			

AH

AQUA SURVEY, INC.

CULTURE LAB DISTRIBUTION FORM

DATE: 6-25-97

TEST JOB#: 587 CLIENT: In house

TEST LOCATION: IN-LAB [✓] FIELD [ ]

TEST SPECIES: H. azteca

TOTAL NUMBER ORGANISMS TRANSFERRED: 10c²

AQUA SURVEY, INC. CULTURE LAB INVESTIGATORS: EL

A. ORGANISMS

1. ASI CULTURE/HOLDING UNIT: H system
2. RECEIVING LOG #: 968
3. CULTURE LOG #: 97-0968
4. AGE/SIZE INFORMATION: 2-3mm

B. HOLDING [ ] CULTURE [✓] WATER PARAMETERS

1. TEMPERATURE: 22.0°C
2. SALINITY: N/A
3. WATER SOURCE: well water

C. TRANSFER CUSTODY & TRANSFER

1. LIVESTOCK RELINQUISHMENT DATE: 6-25-97
   TIME: 1430hr
   BY: EL

2. LIVESTOCK RECEIVING DATE: 6-25-97
   TIME: 1430hr
   BY: SP

3. CULTURE SUPERVISOR OR SENIOR TECH. INITIALS: _____

REMARKS: _____

Recorder ID: 7003214 Deployment #: 31 Interval: 1 hour Samples: 361
Start: 06/24/97 15:44:27 Recover: 07/09/97 16:52:05 Min/Max Window: 18/ 22(
Description: Water bath room H. azteca Job # 97-286

State: Deployed

Overall Summary

Data File: 7003214.031

Temperature Extremes:	23.5 C	14:44:27	06/25/97
	21.0 C	16:44:27	06/25/97

^ Over Temperature Window
Time: 5 days 00:00:00
# of Samples: 120

v Under Temperature Window
Time: 0 days 00:00:00
# of Samples: 0

Daily Summary

Date	# Samples	Min Temp C	Max Temp C	# Under Window	# Over Window
06/24/97	8	22.5	23.0	0	8
06/25/97	24	21.0	23.5	0	15
06/26/97	24	21.5	22.5	0	8
06/27/97	24	22.0	22.5	0	9
06/28/97	24	22.0	22.5	0	5
06/29/97	24	22.0	22.5	0	12
06/30/97	24	21.5	22.5	0	10
07/01/97	24	22.0	22.5	0	5
07/02/97	24	21.5	22.5	0	5
07/03/97	24	21.5	22.5	0	4
07/04/97	24	22.0	22.5	0	6
07/05/97	24	22.0	22.5	0	11
07/06/97	24	22.0	22.5	0	13
07/07/97	24	22.0	22.5	0	6
07/08/97	24	21.5	22.5	0	3
07/09/97	17	22.0	22.0	0	0

Instrument Data

Date/Time	Temp C	Date/Time	Temp C	Date/Time	Temp C	Date/Time	Temp C
06/24/97							
16:44:27 ^	22.5	17:44:27 ^	23.0	18:44:27 ^	23.0	19:44:27 ^	23.0
20:44:27 ^	23.0	21:44:27 ^	23.0	22:44:27 ^	23.0	23:44:27 ^	22.5
06/25/97							
00:44:27 ^	22.5	01:44:27 ^	22.5	02:44:27 ^	22.5	03:44:27 ^	22.5
04:44:27 ^	22.5	05:44:27 ^	22.5	06:44:27 ^	22.5	07:44:27 ^	22.5
08:44:27 ^	22.5	09:44:27 ^	22.5	10:44:27 ^	22.5	11:44:27 ^	23.0
12:44:27 ^	23.0	13:44:27 ^	23.0	14:44:27 ^	23.5	15:44:27	22.0
16:44:27	21.0	17:44:27	21.0	18:44:27	22.0	19:44:27	21.5
20:44:27	22.0	21:44:27	22.0	22:44:27	22.0	23:44:27	22.0
06/26/97							
00:44:27 ^	22.5	01:44:27	22.0	02:44:27	22.0	03:44:27 ^	22.5
04:44:27	22.0	05:44:27	22.0	06:44:27	22.0	07:44:27	22.0

Recorder ID: 7003214 Deployment #: 31 Interval: 1 hour Samples: 361
Start: 06/24/97 15:44:27 Recover: 07/09/97 16:52:05 Min/Max Window: 18/ 2
Description: Water bath room H. azteca Job # 97-286

State: Deployed

Date/Time	Temp C	Date/Time	Temp C	Date/Time	Temp C	Date/Time	Temp C
08:44:27	22.0	09:44:27	22.0	10:44:27	22.0	11:44:27	22.0
12:44:27	22.0	13:44:27	21.5	14:44:27	22.0	15:44:27	21.5
16:44:27	22.0	17:44:27 ^	22.5	18:44:27 ^	22.5	19:44:27 ^	22.5
20:44:27 ^	22.5	21:44:27 ^	22.5	22:44:27 ^	22.5	23:44:27	22.0
06/27/97							
00:44:27	22.0	01:44:27 ^	22.5	02:44:27 ^	22.5	03:44:27	22.0
04:44:27 ^	22.5	05:44:27 ^	22.5	06:44:27 ^	22.5	07:44:27 ^	22.5
08:44:27 ^	22.5	09:44:27 ^	22.5	10:44:27 ^	22.5	11:44:27	22.0
12:44:27	22.0	13:44:27	22.0	14:44:27	22.0	15:44:27	22.0
16:44:27	22.0	17:44:27	22.0	18:44:27	22.0	19:44:27	22.0
20:44:27	22.0	21:44:27	22.0	22:44:27	22.0	23:44:27	22.0
06/28/97							
00:44:27	22.0	01:44:27	22.0	02:44:27	22.0	03:44:27	22.0
04:44:27	22.0	05:44:27	22.0	06:44:27	22.0	07:44:27	22.0
08:44:27	22.0	09:44:27	22.0	10:44:27	22.0	11:44:27	22.0
12:44:27	22.0	13:44:27 ^	22.5	14:44:27 ^	22.5	15:44:27	22.0
16:44:27	22.0	17:44:27	22.0	18:44:27	22.0	19:44:27	22.0
20:44:27 ^	22.5	21:44:27 ^	22.5	22:44:27	22.0	23:44:27 ^	22.5
06/29/97							
00:44:27 ^	22.5	01:44:27 ^	22.5	02:44:27 ^	22.5	03:44:27 ^	22.5
04:44:27	22.0	05:44:27	22.0	06:44:27	22.0	07:44:27	22.0
08:44:27 ^	22.5	09:44:27	22.0	10:44:27	22.0	11:44:27 ^	22.5
12:44:27 ^	22.5	13:44:27	22.0	14:44:27	22.0	15:44:27	22.0
16:44:27	22.0	17:44:27	22.0	18:44:27 ^	22.5	19:44:27	22.0
20:44:27 ^	22.5	21:44:27 ^	22.5	22:44:27 ^	22.5	23:44:27 ^	22.5
06/30/97							
00:44:27 ^	22.5	01:44:27 ^	22.5	02:44:27 ^	22.5	03:44:27 ^	22.5
04:44:27 ^	22.5	05:44:27	22.0	06:44:27 ^	22.5	07:44:27 ^	22.5
08:44:27	22.0	09:44:27 ^	22.5	10:44:27 ^	22.5	11:44:27	22.0
12:44:27	22.0	13:44:27 ^	22.5	14:44:27	22.0	15:44:27	22.0
16:44:27	22.0	17:44:27	22.0	18:44:27	22.0	19:44:27	22.0
20:44:27	21.5	21:44:27	22.0	22:44:27	21.5	23:44:27	22.0
07/01/97							
00:44:27	22.0	01:44:27	22.0	02:44:27	22.0	03:44:27	22.0
04:44:27	22.0	05:44:27	22.0	06:44:27	22.0	07:44:27	22.0
08:44:27 ^	22.5	09:44:27 ^	22.5	10:44:27 ^	22.5	11:44:27 ^	22.5
12:44:27 ^	22.5	13:44:27	22.0	14:44:27	22.0	15:44:27	22.0
16:44:27	22.0	17:44:27	22.0	18:44:27	22.0	19:44:27	22.0
20:44:27	22.0	21:44:27	22.0	22:44:27	22.0	23:44:27	22.0
07/02/97							
00:44:27	22.0	01:44:27	22.0	02:44:27	22.0	03:44:27	22.0
04:44:27	22.0	05:44:27	22.0	06:44:27	22.0	07:44:27	22.0
08:44:27	22.0	09:44:27	22.0	10:44:27 ^	22.5	11:44:27 ^	22.5
12:44:27 ^	22.5	13:44:27 ^	22.5	14:44:27	22.0	15:44:27	22.0
16:44:27	22.0	17:44:27 ^	22.5	18:44:27	22.0	19:44:27	22.0
20:44:27	21.5	21:44:27	22.0	22:44:27	21.5	23:44:27	22.0

Recorder ID: 7003214 Deployment #: 31 Interval: 1 hour Samples: 361
Start: 06/24/97 15:44:27 Recover: 07/09/97 16:52:05 Min/Max Window: 18/ 22
Description: Water bath room H. azteca Job # 97-286

State: Deployed

Date/Time	Temp C	Date/Time	Temp C	Date/Time	Temp C	Date/Time	Temp C
07/03/97							
00:44:27	22.0	01:44:27	21.5	02:44:27	22.0	03:44:27	21.5
04:44:27	22.0	05:44:27	22.0	06:44:27	22.0	07:44:27	22.0
08:44:27	22.0	09:44:27 ^	22.5	10:44:27	22.0	11:44:27 ^	22.5
12:44:27 ^	22.5	13:44:27 ^	22.5	14:44:27	22.0	15:44:27	22.0
16:44:27	22.0	17:44:27	22.0	18:44:27	22.0	19:44:27	22.0
20:44:27	22.0	21:44:27	21.5	22:44:27	22.0	23:44:27	21.5
07/04/97							
00:44:27	22.0	01:44:27	22.0	02:44:27	22.0	03:44:27	22.0
04:44:27	22.0	05:44:27	22.0	06:44:27	22.0	07:44:27	22.0
08:44:27 ^	22.5	09:44:27	22.0	10:44:27 ^	22.5	11:44:27	22.0
12:44:27	22.0	13:44:27 ^	22.5	14:44:27	22.0	15:44:27 ^	22.5
16:44:27	22.0	17:44:27 ^	22.5	18:44:27 ^	22.5	19:44:27	22.0
20:44:27	22.0	21:44:27	22.0	22:44:27	22.0	23:44:27	22.0
07/05/97							
00:44:27	22.0	01:44:27 ^	22.5	02:44:27	22.0	03:44:27 ^	22.5
04:44:27 ^	22.5	05:44:27 ^	22.5	06:44:27	22.0	07:44:27 ^	22.5
08:44:27	22.0	09:44:27	22.0	10:44:27	22.0	11:44:27 ^	22.5
12:44:27	22.0	13:44:27	22.0	14:44:27 ^	22.5	15:44:27	22.0
16:44:27 ^	22.5	17:44:27	22.0	18:44:27 ^	22.5	19:44:27	22.0
20:44:27	22.0	21:44:27	22.0	22:44:27 ^	22.5	23:44:27 ^	22.5
07/06/97							
00:44:27	22.0	01:44:27 ^	22.5	02:44:27 ^	22.5	03:44:27 ^	22.5
04:44:27 ^	22.5	05:44:27	22.0	06:44:27	22.0	07:44:27 ^	22.5
08:44:27 ^	22.5	09:44:27	22.0	10:44:27	22.0	11:44:27 ^	22.5
12:44:27	22.0	13:44:27 ^	22.5	14:44:27 ^	22.5	15:44:27 ^	22.5
16:44:27 ^	22.5	17:44:27	22.0	18:44:27 ^	22.5	19:44:27	22.0
20:44:27	22.0	21:44:27 ^	22.5	22:44:27	22.0	23:44:27	22.0
07/07/97							
00:44:27	22.0	01:44:27	22.0	02:44:27 ^	22.5	03:44:27	22.0
04:44:27	22.0	05:44:27	22.0	06:44:27	22.0	07:44:27 ^	22.5
08:44:27	22.0	09:44:27	22.0	10:44:27 ^	22.5	11:44:27 ^	22.5
12:44:27 ^	22.5	13:44:27	22.0	14:44:27	22.0	15:44:27	22.0
16:44:27	22.0	17:44:27	22.0	18:44:27 ^	22.5	19:44:27	22.0
20:44:27	22.0	21:44:27	22.0	22:44:27	22.0	23:44:27	22.0
07/08/97							
00:44:27	22.0	01:44:27	22.0	02:44:27	22.0	03:44:27	22.0
04:44:27 ^	22.5	05:44:27 ^	22.5	06:44:27	22.0	07:44:27 ^	22.5
08:44:27	22.0	09:44:27	21.5	10:44:27	21.5	11:44:27	21.5
12:44:27	22.0	13:44:27	22.0	14:44:27	22.0	15:44:27	22.0
16:44:27	22.0	17:44:27	22.0	18:44:27	22.0	19:44:27	22.0
20:44:27	22.0	21:44:27	22.0	22:44:27	22.0	23:44:27	22.0
07/09/97							
00:44:27	22.0	01:44:27	22.0	02:44:27	22.0	03:44:27	22.0
04:44:27	22.0	05:44:27	22.0	06:44:27	22.0	07:44:27	22.0
08:44:27	22.0	09:44:27	22.0	10:44:27	22.0	11:44:27	22.0

Recorder ID: 7003214 Deployment #: 31 Interval: 1 hour Samples: 361
Start: 06/24/97 15:44:27 Recover: 07/09/97 16:52:05 Min/Max Window: 18/ 22
Description: Water bath room H. azteca Job # 97-286

State: Deployed

Date/Time	Temp C	Date/Time	Temp C	Date/Time	Temp C	Date/Time	Temp C
12:44:27	22.0	13:44:27	22.0	14:44:27	22.0	15:44:27	22.0
16:44:27	22.0						

Pre-test	Chamber #																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	1.2	1.95	1.85	2.70	2.70	3.65	3.3	3.00	2.10	2.90	3.4	4.1	1.2	3.1	2.4	2.8	3.5	4.0	3.4	4.1	2.3	2.8	4.5	2.1	3.1	2.9
2	1.4	2.75	2.20	2.50	3.3	3.10	2.5	3.00	2.25	2.60	2.3	3.7	3.4	2.8	1.8	2.3	2.7	3.2	2.5	2.8	2.2	1.2	3.1	2.0	3.0	2.8
3	1.1	1.65	4.1	2.50	3.55	3.75	2.2	3.10	2.30	2.80	2.4	2.9	3.2	3.5	2.1	2.4	2.8	3.6	2.6	3.6	2.1	2.6	3.2	2.4	3.0	2.1
4	1.0	1.50	.85	3.50	3.10	3.55	2.2	2.95	2.80	2.40	2.6	3.2	3.6	2.8	2.2	2.8	3.2	4.1	3.1	3.5	2.5	2.5	2.6	2.3	1.8	2.9
5	1.3	1.95	3.95	2.05	3.55	3.1	2.4	5.20	2.85	2.90	2.8	2.6	3.3	3.5	2.4	2.2	2.2	3.3	3.4	3.3	2.6	2.1	3.1	2.6	2.2	2.7
6	1.6	2.50	3.85	1.90	2.90	1.7	2.85	3.10	2.70	1.90	2.7	3.1	4.2	2.6	2.1	2.4	2.3	3.1	3.2	2.9	2.2	2.8	2.1	3.1	2.2	2.2
7	1.9	1.65	2.55	3.40	2.50	3.65	3.45	3.55	3.05	2.30	1.9	2.4	2.9	3.5	2.3	2.7	2.6	2.9	3.2	3.2	3.1	2.9	2.2	3.2	2.1	1.8
8	1.2	1.65	2.40	2.80	2.60	2.50	2.10	2.65	2.75	3.00	2.5	1.6	3.0	3.3	2.8	2.3	2.5	2.8	3.4	1.8	2.9	3.3	2.1	2.3	1.8	1.9
9	1.3	2.80	3.60	1.50	2.90	2.15	2.60	3.25	1.90	2.00	3.6	2.4	2.8	2.4	2.3	2.6	2.2	3.1	2.8	2.1	2.8	3.1	2.2	2.2	2.4	2.0
10	1.4	2.35	2.1	3.10	2.85	2.5	2.80	2.45	1.60	2.10	2.2	2.5	2.9	2.6	2.1	3.1	2.4	2.3	2.7	2.3	2.4	2.5	2.3	1.9	1.8	2.1
11	1.3	2.15	2.0	1.90	2.65	2.9	2.30	2.65	1.50	2.60	2.9	2.1	3.0	2.9	2.2	3.6	2.6	2.5	3.3	2.3	2.2	2.6	1.8	2.8	2.2	2.0
12	1.1	2.05	3.50	2.60	2.15	2.5	2.70	2.60	1.75	2.50	3.1	3.4	3.6	2.7	1.9	2.2	2.2	2.0	3.6	2.5	2.3		2.3	2.6	2.0	1.8
13	1.2	2.05	3.65	2.20	2.55	2.4	2.50	2.75	1.50	2.70	2.4	2.0	1.9	2.7	1.8	2.1	2.2	2.2	2.3	2.5	2.3		2.4	2.2	1.8	2.1
14	1.6	2.50	2.30	2.55	3.00	2.2	2.10	2.65	1.45	1.50	3.4	1.4	2.8	2.6	1.9	2.2	2.4	2.4		2.6	2.4		2.2	2.2	1.2	2.2
15	2.1	2.70	2.30	2.10	2.6	1.4	1.85	2.75	2.05	2.40	2.7	2.6	2.2	2.1	1.7	2.1	2.2	2.3		2.9			2.6	2.0	1.2	2.2
16	1.4	2.0	1.90	1.60	3.25	2.35	2.10	2.00	2.70	3.8	3.3	3.2	2.1	1.8	2.3	2.2	2.9			2.6			2.9	2.6	1.9	1.6
17	1.3	2.20	1.95	3.60	2.50	2.1	1.70	2.40	2.00	2.4	2.7	2.8	2.9	1.8	2.2	2.1	2.1			2.1			2.3	2.0	1.8	2.1
18	1.1	2.30		2.65	3.0		1.95	1.85		1.5	2.9	2.7	1.9		2.6		2.6						2.4	2.2	2.4	
19	1.2	2.45			2.95					2.4	2.3	2.1			2.2		2.7								2.3	
20	1.6									2.2	2.0				2.5										2.2	
$\bar{X}$	1.4	2.1	2.6	2.5	2.7	2.7	2.5	2.9	2.2	2.4	2.8	2.6	2.9	2.8	2.1	2.5	2.5	2.8	3.0	2.8	2.5	2.6	2.6	2.4	2.1	2.2

7/20/87

2.8 CC

7/4 7/21 7/4

Initials

11/11 I I I

(11) Chamber #9 only contained 15 organisms. 7/4 I

Is this 3 or a 5? If it's a 3, the mean is not correct.

	Hi-Low	Chamber # 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	1.2	1.8	1.65	2.7	2.2	2.3	3.0	2.10	2.9	3.4	4.1	1.2	3.1	2.4	2.8	2.5	4.0	3.4	4.1	2.3	2.8	4.5	2.1	3.1	2.9	
2	1.4	2.5	2.20	2.30	2.3	2.4	3.20	2.55	2.6	2.3	3.7	3.4	2.8	1.8	2.3	2.7	3.2	2.5	2.8	2.2	1.2	3.1	2.0	3.0	2.8	
3	1.1	1.6	4.1	0.5	2.55	2.7	2.2	3.10	2.30	2.80	2.4	2.9	3.2	3.5	2.1	2.4	2.8	3.6	2.6	3.6	2.1	2.6	3.2	2.4	3.0	2.1
4	1.0	1.5	2.55	3.5	3.1	3.5	2.2	0.95	2.0	2.40	2.6	2.2	3.6	2.8	2.2	2.8	3.2	4.1	3.1	3.5	2.5	2.5	2.6	2.3	1.8	2.9
5	1.3	1.95	2.9	2.0	3.5	3.1	2.4	5.20	2.2	2.10	2.5	2.1	3.3	3.5	2.4	2.2	2.2	3.3	3.4	3.3	2.6	2.1	3.1	2.6	2.2	2.7
6	1.6	2.20	2.05	1.90	2.10	1.7	2.45	2.40	2.20	1.90	2.7	3.1	4.2	2.6	2.1	2.4	2.3	3.1	3.2	2.9	2.2	2.8	2.1	3.1	2.2	2.2
7	1.9	1.6	2.55	3.45	2.50	3.6	3.0	3.55	3.0	2.30	1.9	2.4	2.9	3.5	2.3	2.7	2.6	2.9	3.2	3.2	3.1	2.9	2.2	3.2	2.1	1.8
8	1.2	1.60	2.45	2.80	2.40	2.5	2.30	2.65	2.25	3.00	2.5	1.6	3.0	3.3	2.8	2.3	2.5	2.8	3.4	1.8	2.9	3.3	2.1	2.3	1.8	1.9
9	1.3	2.80	3.60	1.50	2.20	2.15	2.60	2.55	2.40	3.00	3.6	2.4	2.8	2.4	2.3	2.6	2.2	3.1	2.8	2.1	2.8	3.1	2.2	2.2	2.4	2.0
10	1.4	2.30	2.1	3.10	2.35	2.5	2.95	2.45	1.60	1.10	2.2	2.5	2.9	2.6	2.1	3.1	2.4	2.3	2.7	2.3	2.4	2.5	2.3	1.9	1.8	2.1
11	1.3	2.15	2.0	1.70	2.45	2.0	2.20	2.45	1.80	2.60	2.9	2.1	3.0	2.9	2.2	3.6	2.6	2.5	3.3	2.3	2.2	2.6	1.8	2.8	2.2	2.0
12	1.1	2.35	3.30	2.60	2.15	2.3	2.70	2.60	1.25	2.50	3.1	3.4	3.6	2.7	1.9	2.2	2.2	2.0	3.6	2.5	2.3		2.3	2.6	2.0	1.8
13	1.2	2.55	3.40	2.20	2.35	2.4	2.50	2.75	1.50	2.90	2.4	2.0	1.9	2.7	1.8	2.1	2.2	2.2	2.3	2.5	2.3		2.4	2.2	1.8	2.1
14	1.6	2.10	2.30	2.85	3.00	2.2	2.10	2.40	2.25	1.50	3.4	1.4	2.8	2.6	1.9	2.2	2.4	2.4		2.6	2.4		2.2	2.2	1.2	2.2
15	2.1	2.20	2.30	2.10	2.6	1.4	1.95	2.75	2.35	2.40	2.7	2.6	2.2	2.1	1.7	2.1	2.2	2.3		2.9			2.6	2.0	1.2	2.2
16	1.4	2.0	1.90	1.6	3.25	2.35	2.10	2.80	2.70	3.8	3.3	3.2	2.1	1.8	2.3	2.2	2.9			2.6			2.9	2.6	1.9	1.6
17	1.3	2.2	1.95	3.6	2.50	2.1	1.7	2.20	2.00	2.4	2.7	2.8	2.9	1.8	2	2.2	2.1			2.1			2.3	2.0	1.8	2.1
18	1.1	2.30		2.65	3.0		1.95	1.85		2.5	2.9	2.7	1.9		2.6					2.6			2.4	2.2	2.4	
19	1.2	2.45				2.95				2.4	2.3	2.1			2.2					2.2					2.3	
20	1.6										2.2	2.0			2.5										2.2	
$\bar{X}$	1.4	2.1	2.6	2.5	2.7	2.7	2.5	2.9	2.2	2.4	2.8	2.6	2.9	2.8	2.1	2.5	2.5	2.8	3.0	2.8	2.5	2.6	2.6	2.4	2.1	2.2

2.8

7/4 7/4 7/4

I I I

(If chamber #5 is 3.20 - please verify and recalculate if necessary).

① Chamber #9 only sampled 15 seconds. 7/4

I

97-286 M. Ayres

Chamber

# Organisms	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
1	2.5	1.8	1.7	2.8	2.1	2.3	3.3	3.6	2.5	2.6	4.0	3.4	3.0	2.1	2.3	2.8	3.9	2.7	3.1	2.8	2.1	2.8	3.1
2	3.4	2.3	3.0	3.2	2.0	2.1	3.0	1.6	3.8	2.7	3.9	3.5	3.9	2.5	2.7	2.2	3.0	2.6	3.2	2.1	2.8	3.1	2.9
3	2.2	2.8	2.5	3.3	1.8	2.2	2.6	2.2	3.6	3.0	2.9	3.4	3.2	2.4	3.1	2.5	2.3	3.0	4.6	2.9	2.6	2.5	3.4
4	2.3	2.9	2.6	3.4	1.9	2.4	2.6	2.4	3.0	2.2	4.1	3.7	4.0	2.4	3.2	3.1	3.6	2.6	4.1	2.8	3.7	3.4	3.0
5	2.6	2.6	2.1	3.6	3.0	2.2	2.3	2.5	3.2	2.1	3.9	3.1	3.0	2.3	2.4	2.8	3.0	3.4	2.5	2.9	2.8	3.1	2.2
6	3.0	2.1	3.0	3.5	3.5	2.0	2.6	2.0	4.0	2.0	3.7	3.1	2.9	2.8	2.5	3.1	3.5	2.4	3.1	1.9	3.0	3.5	3.0
7	2.1	2.0	2.8	4.2	4.0	2.1	2.1	2.8	3.6	2.3	4.5	2.6	2.7	2.0	2.6	2.8	2.7	2.2	4.1	2.9	1.8	2.9	3.5
8	2.0	2.1	2.3	4.1	3.6	1.7	2.0	3.2	2.7	2.8	3.1	2.0	2.9	1.8	3.0	3.0	3.4	3.2	2.8	3.0	3.5	3.6	2.8
9	2.9	2.1	3.1	3.1	3.1	2.5	2.1	2.8	2.9	2.6	2.6	3.1	3.2	2.1	2.8	3.1	3.5	2.4	3.0	2.0	3.8	3.2	4.3
10	2.3	2.2	3.0	3.0	2.6	2.0	1.8	2.6	2.8	2.5	3.3	3.0	3.3	2.2	2.9	2.0	2.1	3.0	2.7	3.4	2.0	3.6	3.1
11	2.5	2.3	2.3	3.1	2.8	2.9	1.9	2.0	3.0	2.4	3.6	2.3	3.0	2.2	3.5	2.7	3.0	2.2	3.0	3.1	3.2	3.3	2.0
12	2.3	2.2	2.2	2.9	2.5	2.2	2.1	1.8	2.7	2.3	2.9	2.2	2.8	2.3	2.5	2.8	2.7	3.5	2.4	3.1	3.3	2.6	2.8
13	2.5	2.3	2.4	3.4	3.0	2.1	2.3	2.5	2.2	2.6	2.7	2.2	2.4	2.4	1.9	2.6	2.1	2.7	2.1	2.8	3.5	2.8	2.9
14	2.4	2.2	1.8	3.8	2.6	2.2	2.4	2.6	2.1	2.6	3.0	2.4	2.3	2.1	2.1	2.4	2.1	2.4	2.7	2.6	2.8	3.5	2.6
15	2.5	2.4	2.1	3.8	3.1	2.3	2.6		2.3	3.0	2.6	2.0	2.6	2.0	2.3	2.3	2.3	3.0	2.7	3.2	3.1	2.7	2.2
16	2.7	2.1	2.0	2.1	3.0	1.6	2.2		2.2	2.8	2.7	2.3	2.4		2.5	2.6	2.4	3.0	2.6	3.0	2.6	2.8	2.4
17		2.2	2.2	2.3	2.6		2.1		2.4	2.0	2.5	2.8	2.4		3.0		2.1		2.8	2.8	2.5	2.6	2.2
18			2.1	2.5	2.8		2.0				2.4	2.4	2.3		3.0				2.7	2.9	2.6		
19			2.3	2.9			1.6				2.5								2.9	2.9	2.6		
20				3.0			2.1													3.0	2.8		

$\bar{X}$	2.5	2.3	2.4	3.3	2.8	2.2	2.3	2.5	2.9	2.5	3.2	2.6	2.9	2.2	2.7	2.7	2.9	2.8	3.0	2.8	2.9	3.1	2.8

CRN SM 7/23/97

JN 7/23/97

97286sc
File: 97286SC Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro - Wilk's test for normality

D = 0.661

W = 0.989

Critical W (P = 0.05) (n = 48) = 0.947
Critical W (P = 0.01) (n = 48) = 0.929

Data PASS normality test at P=0.01 level. Continue analysis.

97286sc
File: 97286SC Transform: ARC SINE(SQUARE ROOT(Y))

Bartlett's test for homogeneity of variance
Calculated B1 statistic = 8.87

Table Chi-square value = 18.48 (alpha = 0.01, df = 7)
Table Chi-square value = 14.07 (alpha = 0.05, df = 7)

Data PASS B1 homogeneity test at 0.01 level. Continue analysis.

TITLE: 97286sc
FILE: 97286SC
TRANSFORM: ARC SINE(SQUARE ROOT(Y)) NUMBER OF GROUPS: 8

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	CONTROL	1	0.8000	1.1071
1	CONTROL	2	0.8500	1.1731
1	CONTROL	3	0.8500	1.1731
1	CONTROL	4	0.8000	1.1071
1	CONTROL	5	0.8000	1.1071
1	CONTROL	6	0.9000	1.2490
2	A9-1	1	0.9500	1.3453
2	A9-1	2	1.0000	1.4588
2	A9-1	3	0.9500	1.3453
2	A9-1	4	0.8000	1.1071
2	A9-1	5	0.9000	1.2490
2	A9-1	6	0.9000	1.2490
3	A3-1	1	0.8500	1.1731
3	A3-1	2	0.7000	0.9912
3	A3-1	3	0.7000	0.9912
3	A3-1	4	0.8500	1.1731
3	A3-1	5	0.8500	1.1731
3	A3-1	6	0.6500	0.9377
4	A6-2	1	1.0000	1.4588
4	A6-2	2	0.8500	1.1731
4	A6-2	3	0.8500	1.1731
4	A6-2	4	0.8500	1.1731
4	A6-2	5	0.8500	1.1731
4	A6-2	6	0.9000	1.2490
5	A5-2	1	0.8500	1.1731
5	A5-2	2	0.7500	1.0472
5	A5-2	3	0.5500	0.8355
5	A5-2	4	0.9000	1.2490
5	A5-2	5	1.0000	1.4588
5	A5-2	6	0.9000	1.2490
6	A4-1	1	1.0000	1.4588
6	A4-1	2	0.9500	1.3453
6	A4-1	3	0.8500	1.1731
6	A4-1	4	1.0000	1.4588
6	A4-1	5	0.8500	1.1731
6	A4-1	6	0.8000	1.1071
7	A2-2	1	0.9500	1.3453
7	A2-2	2	0.8500	1.1731
7	A2-2	3	1.0000	1.4588
7	A2-2	4	0.9500	1.3453
7	A2-2	5	0.9500	1.3453
7	A2-2	6	0.9500	1.3453
8	A1-1	1	0.8500	1.1731
8	A1-1	2	0.9000	1.2490
8	A1-1	3	0.9000	1.2490
8	A1-1	4	0.8500	1.1731
8	A1-1	5	0.9500	1.3453
8	A1-1	6	1.0000	1.4588

97286sc
File: 97286SC Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	CONTROL	6	1.107	1.249	1.153
2	A9-1	6	1.107	1.459	1.292
3	A3-1	6	0.938	1.173	1.073
4	A6-2	6	1.173	1.459	1.233
5	A5-2	6	0.835	1.459	1.169
6	A4-1	6	1.107	1.459	1.286
7	A2-2	6	1.173	1.459	1.335
8	A1-1	6	1.173	1.459	1.275

97286sc
File: 97286SC Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	CONTROL	0.003	0.057	0.023	4.96
2	A9-1	0.014	0.119	0.049	9.24
3	A3-1	0.012	0.111	0.045	10.35
4	A6-2	0.013	0.115	0.047	9.29
5	A5-2	0.045	0.211	0.086	18.06
6	A4-1	0.024	0.155	0.063	12.08
7	A2-2	0.008	0.092	0.037	6.86
8	A1-1	0.012	0.110	0.045	8.65

97286sc
File: 97286SC Transform: ARC SINE(SQUARE ROOT(Y))

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	7	0.326	0.047	2.820
Within (Error)	40	0.661	0.017	
Total	47	0.988		

Critical F value = 2.25 (0.05,7,40)
Since F > Critical F REJECT Ho: All equal

97286sc
File: 97286SC Transform: ARC SINE(SQUARE ROOT(Y))

DUNNETT'S TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	CONTROL	1.153	0.833		
2	A9-1	1.292	0.917	-1.881	
3	A3-1	1.073	0.767	1.072	
4	A6-2	1.233	0.883	-1.086	
5	A5-2	1.169	0.825	-0.215	
6	A4-1	1.286	0.908	-1.795	
7	A2-2	1.335	0.942	-2.461	
8	A1-1	1.275	0.908	-1.643	

Dunnett table value = 2.42 (1 Tailed Value, P=0.05, df=40,7)

97286sc
File: 97286SC Transform: ARC SINE(SQUARE ROOT(Y))

DUNNETT'S TEST - TABLE 2 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	CONTROL	6			
2	A9-1	6	0.152	18.2	-0.083
3	A3-1	6	0.152	18.2	0.067
4	A6-2	6	0.152	18.2	-0.050
5	A5-2	6	0.152	18.2	0.008
6	A4-1	6	0.152	18.2	-0.075
7	A2-2	6	0.152	18.2	-0.108
8	A1-1	6	0.152	18.2	-0.075

97286SR
File: 97286SR Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro - Wilk's test for normality

D = 0.645

W = 0.989

Critical W (P = 0.05) (n = 42) = 0.942
Critical W (P = 0.01) (n = 42) = 0.922

Data PASS normality test at P=0.01 level. Continue analysis.

JN 7/2

97286SR
File: 97286SR Transform: ARC SINE(SQUARE ROOT(Y))

Bartlett's test for homogeneity of variance
Calculated B1 statistic = 4.86

Table Chi-square value = 16.81 (alpha = 0.01, df = 6)
Table Chi-square value = 12.59 (alpha = 0.05, df = 6)

Data PASS B1 homogeneity test at 0.01 level. Continue analysis.

JN
7/22

TITLE: 97286SR
FILE: 97286SR
TRANSFORM: ARC SINE(SQUARE ROOT(Y)) NUMBER OF GROUPS: 7

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	A9-1	1	0.9500	1.3453
1	A9-1	2	1.0000	1.4588
1	A9-1	3	0.9500	1.3453
1	A9-1	4	0.8000	1.1071
1	A9-1	5	0.9000	1.2490
1	A9-1	6	0.9000	1.2490
2	A3-1	1	0.8500	1.1731
2	A3-1	2	0.7000	0.9912
2	A3-1	3	0.7000	0.9912
2	A3-1	4	0.8500	1.1731
2	A3-1	5	0.8500	1.1731
2	A3-1	6	0.6500	0.9377
3	A6-2	1	1.0000	1.4588
3	A6-2	2	0.8500	1.1731
3	A6-2	3	0.8500	1.1731
3	A6-2	4	0.8500	1.1731
3	A6-2	5	0.8500	1.1731
3	A6-2	6	0.9000	1.2490
4	A5-2	1	0.8500	1.1731
4	A5-2	2	0.7500	1.0472
4	A5-2	3	0.5500	0.8355
4	A5-2	4	0.9000	1.2490
4	A5-2	5	1.0000	1.4588
4	A5-2	6	0.9000	1.2490
5	A4-1	1	1.0000	1.4588
5	A4-1	2	0.9500	1.3453
5	A4-1	3	0.8500	1.1731
5	A4-1	4	1.0000	1.4588
5	A4-1	5	0.8500	1.1731
5	A4-1	6	0.8000	1.1071
6	A2-2	1	0.9500	1.3453
6	A2-2	2	0.8500	1.1731
6	A2-2	3	1.0000	1.4588
6	A2-2	4	0.9500	1.3453
6	A2-2	5	0.9500	1.3453
6	A2-2	6	0.9500	1.3453
7	A1-1	1	0.8500	1.1731
7	A1-1	2	0.9000	1.2490
7	A1-1	3	0.9000	1.2490
7	A1-1	4	0.8500	1.1731
7	A1-1	5	0.9500	1.3453
7	A1-1	6	1.0000	1.4588

JN 7/24

97286SR
File: 97286SR Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	A9-1	6	1.107	1.459	1.292
2	A3-1	6	0.938	1.173	1.073
3	A6-2	6	1.173	1.459	1.233
4	A5-2	6	0.835	1.459	1.169
5	A4-1	6	1.107	1.459	1.286
6	A2-2	6	1.173	1.459	1.335
7	A1-1	6	1.173	1.459	1.275

97286SR
File: 97286SR Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	A9-1	0.014	0.119	0.049	9.24
2	A3-1	0.012	0.111	0.045	10.35
3	A6-2	0.013	0.115	0.047	9.29
4	A5-2	0.045	0.211	0.086	18.06
5	A4-1	0.024	0.155	0.063	12.08
6	A2-2	0.008	0.092	0.037	6.86
7	A1-1	0.012	0.110	0.045	8.65

JTN 7/24

97286SR
File: 97286SR Transform: ARC SINE(SQUARE ROOT(Y))

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	6	0.289	0.048	2.609
Within (Error)	35	0.645	0.018	
Total	41	0.934		

Critical F value = 2.42 (0.05,6,30)
Since F > Critical F REJECT Ho: All equal

JN 7/25

97286SR
File: 97286SR Transform: ARC SINE(SQUARE ROOT(Y))

DUNNETT'S TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	A9-1	1.292	0.917		
2	A3-1	1.073	0.767	2.797	*
3	A6-2	1.233	0.883	0.754	
4	A5-2	1.169	0.825	1.578	
5	A4-1	1.286	0.908	0.082	
6	A2-2	1.335	0.942	-0.550	
7	A1-1	1.275	0.908	0.226	

Dunnett table value = 2.40 (1 Tailed Value, P=0.05, df=30,6)

97286SR
File: 97286SR Transform: ARC SINE(SQUARE ROOT(Y))

DUNNETT'S TEST - TABLE 2 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	A9-1	6			
2	A3-1	6	0.127	13.8	0.150
3	A6-2	6	0.127	13.8	0.033
4	A5-2	6	0.127	13.8	0.092
5	A4-1	6	0.127	13.8	0.008
6	A2-2	6	0.127	13.8	-0.025
7	A1-1	6	0.127	13.8	0.008

JN 7/24

97-286
File: 97286c Transform: NO TRANSFORMATION

Shapiro - Wilk's test for normality

D = 2.700

W = 0.963

Critical W (P = 0.05) (n = 48) = 0.947
Critical W (P = 0.01) (n = 48) = 0.929

Data PASS normality test at P=0.01 level. Continue analysis.

97-286
File: 97286c Transform: NO TRANSFORMATION

Bartlett's test for homogeneity of variance
Calculated B1 statistic = 2.29

Table Chi-square value = 18.48 (alpha = 0.01, df = 7)
Table Chi-square value = 14.07 (alpha = 0.05, df = 7)

Data PASS B1 homogeneity test at 0.01 level. Continue analysis.

JN
7/24

TITLE: 97-286
FILE: 97286c
TRANSFORM: NO TRANSFORMATION NUMBER OF GROUPS: 8

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	control	1	2.8000	2.8000
1	control	2	2.8000	2.8000
1	control	3	2.3000	2.3000
1	control	4	2.7000	2.7000
1	control	5	2.5000	2.5000
1	control	6	2.8000	2.8000
2	A9-1	1	3.0000	3.0000
2	A9-1	2	2.2000	2.2000
2	A9-1	3	2.1000	2.1000
2	A9-1	4	2.4000	2.4000
2	A9-1	5	2.4000	2.4000
2	A9-1	6	2.1000	2.1000
3	A3-1	1	2.8000	2.8000
3	A3-1	2	2.5000	2.5000
3	A3-1	3	2.8000	2.8000
3	A3-1	4	2.6000	2.6000
3	A3-1	5	2.6000	2.6000
3	A3-1	6	3.0000	3.0000
4	A6-2	1	2.9000	2.9000
4	A6-2	2	2.5000	2.5000
4	A6-2	3	3.1000	3.1000
4	A6-2	4	2.5000	2.5000
4	A6-2	5	2.5000	2.5000
4	A6-2	6	2.9000	2.9000
5	A5-2	1	2.2000	2.2000
5	A5-2	2	2.2000	2.2000
5	A5-2	3	2.6000	2.6000
5	A5-2	4	2.7000	2.7000
5	A5-2	5	2.8000	2.8000
5	A5-2	6	2.6000	2.6000
6	A4-1	1	2.3000	2.3000
6	A4-1	2	2.5000	2.5000
6	A4-1	3	2.8000	2.8000
6	A4-1	4	2.1000	2.1000
6	A4-1	5	2.5000	2.5000
6	A4-1	6	2.2000	2.2000
7	A2-2	1	2.9000	2.9000
7	A2-2	2	2.7000	2.7000
7	A2-2	3	3.3000	3.3000
7	A2-2	4	2.4000	2.4000
7	A2-2	5	2.8000	2.8000
7	A2-2	6	2.9000	2.9000
8	A1-1	1	2.5000	2.5000
8	A1-1	2	2.6000	2.6000
8	A1-1	3	2.7000	2.7000
8	A1-1	4	2.9000	2.9000
8	A1-1	5	3.2000	3.2000
8	A1-1	6	2.8000	2.8000

JN 7/24

97-286
File: 97286c Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	control	6	2.300	2.800	2.650
2	A9-1	6	2.100	3.000	2.367
3	A3-1	6	2.500	3.000	2.717
4	A6-2	6	2.500	3.100	2.733
5	A5-2	6	2.200	2.800	2.517
6	A4-1	6	2.100	2.800	2.400
7	A2-2	6	2.400	3.300	2.833
8	A1-1	6	2.500	3.200	2.783

97-286
File: 97286c Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	control	0.043	0.207	0.085	7.83
2	A9-1	0.115	0.339	0.138	14.31
3	A3-1	0.034	0.183	0.075	6.75
4	A6-2	0.071	0.266	0.109	9.73
5	A5-2	0.066	0.256	0.105	10.18
6	A4-1	0.064	0.253	0.103	10.54
7	A2-2	0.087	0.294	0.120	10.39
8	A1-1	0.062	0.248	0.101	8.92

JN 7/24

97-286
File: 97286c Transform: NO TRANSFORMATION

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	7	1.310	0.187	2.772
Within (Error)	40	2.700	0.067	
Total	47	4.010		

Critical F value = 2.25 (0.05,7,40)
Since F > Critical F REJECT Ho: All equal

JN 7/24

97-286
File: 97286c Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	control	2.650	2.650		
2	A9-1	2.367	2.367	1.889	
3	A3-1	2.717	2.717	-0.444	
4	A6-2	2.733	2.733	-0.556	
5	A5-2	2.517	2.517	0.889	
6	A4-1	2.400	2.400	1.667	
7	A2-2	2.833	2.833	-1.222	
8	A1-1	2.783	2.783	-0.889	

Dunnett table value = 2.42 (1 Tailed Value, P=0.05, df=40,7)

97-286
File: 97286c Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 2 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	control	6			
2	A9-1	6	0.363	13.7	0.283
3	A3-1	6	0.363	13.7	-0.067
4	A6-2	6	0.363	13.7	-0.083
5	A5-2	6	0.363	13.7	0.133
6	A4-1	6	0.363	13.7	0.250
7	A2-2	6	0.363	13.7	-0.183
8	A1-1	6	0.363	13.7	-0.133

97-286
File: 97286r Transform: NO TRANSFORMATION

Shapiro - Wilk's test for normality

D = 2.317

W = 0.955

Critical W (P = 0.05) (n = 36) = 0.935
Critical W (P = 0.01) (n = 36) = 0.912

Data PASS normality test at P=0.01 level. Continue analysis.

97-286
File: 97286r Transform: NO TRANSFORMATION

Bartlett's test for homogeneity of variance
Calculated B1 statistic = 0.71

Table Chi-square value = 15.09 (alpha = 0.01, df = 5)
Table Chi-square value = 11.07 (alpha = 0.05, df = 5)

Data PASS B1 homogeneity test at 0.01 level. Continue analysis.

TITLE: 97-286
FILE: 97286r
TRANSFORM: NO TRANSFORMATION NUMBER OF GROUPS: 6

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	Reference A9-1	1	3.0000	3.0000
1	Reference A9-1	2	2.2000	2.2000
1	Reference A9-1	3	2.1000	2.1000
1	Reference A9-1	4	2.4000	2.4000
1	Reference A9-1	5	2.4000	2.4000
1	Reference A9-1	6	2.1000	2.1000
2	A6-2	1	2.9000	2.9000
2	A6-2	2	2.5000	2.5000
2	A6-2	3	3.1000	3.1000
2	A6-2	4	2.5000	2.5000
2	A6-2	5	2.5000	2.5000
2	A6-2	6	2.9000	2.9000
3	A5-2	1	2.2000	2.2000
3	A5-2	2	2.2000	2.2000
3	A5-2	3	2.6000	2.6000
3	A5-2	4	2.7000	2.7000
3	A5-2	5	2.8000	2.8000
3	A5-2	6	2.6000	2.6000
4	A4-1	1	2.3000	2.3000
4	A4-1	2	2.5000	2.5000
4	A4-1	3	2.8000	2.8000
4	A4-1	4	2.1000	2.1000
4	A4-1	5	2.5000	2.5000
4	A4-1	6	2.2000	2.2000
5	A2-2	1	2.9000	2.9000
5	A2-2	2	2.7000	2.7000
5	A2-2	3	3.3000	3.3000
5	A2-2	4	2.4000	2.4000
5	A2-2	5	2.8000	2.8000
5	A2-2	6	2.9000	2.9000
6	A1-1	1	2.5000	2.5000
6	A1-1	2	2.6000	2.6000
6	A1-1	3	2.7000	2.7000
6	A1-1	4	2.9000	2.9000
6	A1-1	5	3.2000	3.2000
6	A1-1	6	2.8000	2.8000

97-286
File: 97286r Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	Reference A9-1	6	2.100	3.000	2.367
2	A6-2	6	2.500	3.100	2.733
3	A5-2	6	2.200	2.800	2.517
4	A4-1	6	2.100	2.800	2.400
5	A2-2	6	2.400	3.300	2.833
6	A1-1	6	2.500	3.200	2.783

97-286
File: 97286r Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	Reference A9-1	0.115	0.339	0.138	14.31
2	A6-2	0.071	0.266	0.109	9.73
3	A5-2	0.066	0.256	0.105	10.18
4	A4-1	0.064	0.253	0.103	10.54
5	A2-2	0.087	0.294	0.120	10.39
6	A1-1	0.062	0.248	0.101	8.92

97-286
File: 97286r Transform: NO TRANSFORMATION

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	5	1.242	0.248	3.217
Within (Error)	30	2.317	0.077	
Total	35	3.559		

Critical F value = 2.53 (0.05,5,30)
Since F > Critical F REJECT Ho: All equal

97-286
File: 97286r Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	Reference A9-1	2.367	2.367		
2	A6-2	2.733	2.733	-2.285	
3	A5-2	2.517	2.517	-0.935	
4	A4-1	2.400	2.400	-0.208	
5	A2-2	2.833	2.833	-2.909	
6	A1-1	2.783	2.783	-2.597	

Dunnett table value = 2.33 (1 Tailed Value, P=0.05, df=30,5)

97-286
File: 97286r Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 2 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	Reference A9-1	6			
2	A6-2	6	0.374	15.8	-0.367
3	A5-2	6	0.374	15.8	-0.150
4	A4-1	6	0.374	15.8	-0.033
5	A2-2	6	0.374	15.8	-0.467
6	A1-1	6	0.374	15.8	-0.417

APPENDIX E

Hazard Characterization
Cornell-Dubilier Site
South Plainfield, NJ
April 1998

APPENDIX E

HAZARD CHARACTERIZATION

E.1 VOAs

E.1.1 Trans-1,2-Dichloroethene

Trans-1,2-Dichloroethenes are commonly found in landfills, aquifers, and sediment as breakdown products from the reductive halogenation of common industrial solvents trichloroethylene, tetrachloroethylene, and 1,1,2,2-tetrachloroethane. The isomer cis-1,2,-dichloroethylene is more common than the trans-isomer and is often mistakenly reported as the trans-isomer Releases of trans-1,2-Dichloroethene to soil should result in evaporation and leaching into ground water whereupon it may slowly biodegrade. If released into the water, it will be lost mainly through volatilization. Biodegradation and adsorption to sediments is not considered significant. Trans-1,2-Dichloroethene is not considered to bioconcentrate significantly in aquatic organisms. A bioconcentration factor of 22 has been estimated for this compound using a recommended octanol/water partition coefficient of 2.06 (Howard 1990).

E.1.2 1,1,2,2-Tetrachloroethane

1,1,2,2-Tetrachloroethane in the environment is extremely stable Volatilization over the course of days to weeks removes most of this compound in surface water It does not partition itself to the organic constituent in sediment nor to suspended solids It is predicted to be highly mobile in soil, and thus, to leach into the ground water. There is some evidence that this compound slowly biodegrades, and under alkaline conditions, to hydrolyze. 1,1,2,2-Tetrachloroethane does not bioconcentrate An experimental log bioconcentration factor of 0.9 for the bluegill sunfish was reported after a 14-day exposure to an ambient concentration of 9.62 μg/L (Howard 1990) If ingested, this compound is readily absorbed by the gastrointestinal tract (Clayton and Clayton 1981-1982) Approximately half of the 1,1,2,2-tetrachlorethane administered to mice was expired as CO_2 Dichloroacetic acid, oxalic acid, and glyoxylic acid was formed and excreted in the urine The remainder was metabolized as glycine (The Chemical Society 1972)

E.1.3 1,1,1-Trichloroethane

1,1,1-Trichloroethane enters the environment through air emissions, in wastewater and from its production, or from use in vapor degreasing and metal cleaning. Releases of this compound to water will result in almost complete removal through evaporation. Biodegradation and adsorption to sediment are considered insignificant. In soil, 1,1,1-trichloroethane volatilizes into the atmosphere and percolates into the ground water This compound has little tendency to bioconcentrate in aquatic organisms One experimental study reported a bioconcentration factor of 8.9 for bluegill sunfish in a 28-day test (Howard 1990) Trichloroethane is rapidly absorbed through the lungs and gastrointestinal tract, but cutaneous absorption is too slow to produce significant toxicity (Ellenhorn and Barceloux 1988)

In the mammalian body, a small percentage of 1,1,1-trichloroethane is metabolized to carbon dioxide, while the remainder appears in urine as glucoronide of 2,2,2-trichloroethanol (ILO 1983)

E.1.4 1,1,2-Trichloroethane

1,1,2-Trichloroethane enters the environment through the manufacture of vinylidene chloride (cis-

1,2-dichlorothene) and its use as a solvent. Evaporation removes most of the 1,1,2-trichloroethane from surface water. This compound has a low soil partition coefficient and therefore will not partition into sediment and will readily pass through soil into the ground water. Biodegradation in ground water and bioconcentration in aquatic organisms is not likely to be significant (Howard 1990)

E 1.5 Trichlorofluoromethane

Trichlorofluoromethane, also referred to as Freon 11, was primarily released to the environment during its use as an aerosol propellant. Although this use was banned in 1978, it is currently used as a refrigerant, foaming agent for polyurethane foams, solvent and degreaser, and fire extinguishing agent. Because of its high vapor pressure and environmental stability, trichlorofluoromethane volatilizes rapidly from water and soil, and may leach into the ground water where it may persist for a long time. Biodegradation and adsorption of this compound to sediment is considered to be insignificant (Howard 1990). This compound does not readily accumulate and if absorbed, is usually rapidly eliminated from the body (ACGIH 1986). The theoretical metabolites of trichlorofluoromethane are dichlorofluoromethane and tetrachlorofluoromethane (NRC 1980).

E 1.6 Acetone

Acetone is one of the least hazardous industrial solvents, but it is highly volatile. It is also released naturally from volcanoes and forest fires, is a natural product of plant and animal metabolism. Acetone on soil will volatilize and leache into the ground water, whereupon it may biodegrade. Biodegradation and volatilization occurs to acetone in water. Bioconcentration in aquatic organisms and adsorption to sediment is not considered to be significant. One experimental study reported a bioconcentration factor of 0.69 for adult haddock at 7 to 9°C in a static system.

E 1.7 Carbon Disulfide

Carbon disulfide is a natural product of anaerobic biodegradation and also arises from geothermal sources. It may be released as emissions and in wastewater during its production and use, from the production of viscose rayon, cellophane, and carbon tetrachloride. Carbon disulfide volatilizes readily from soil and may also readily leach into the ground water, whereupon it may biodegrade. Volatilization is also the primary means of removal from water; bioconcentration by aquatic organisms and adsorption to sediment is not considered to be significant (Howard 1990)

In the organism, carbon disulfide reacts with a variety of nucleophilic functional groups to form dithiocarbamic acids, trithiocarbamic acids, xanthogenic acids, and heterocycles. A small amount of carbon disulfide is converted to hydrogen sulfide, which is rapidly oxidized to sulfate and excreted in the urine. Carbon disulfide is recognized as an inhibitor of brain monoamine oxidase through two possible mechanisms (Gosselin et al. 1984)

E 1.8 Chloromethane

Chloromethane, also commonly referred to as methyl chloride, occurs naturally in oceans, from forest and brush fires, and from volcanoes. Anthropogenic sources of this compound are significant, and arise from its production and use in the manufacture of silicones and other chemicals, and as a solvent and propellant. Chloromethane volatilizes rapidly from water and soil, although in soil there is the potential for leaching into ground water. Once in the ground water, this compound biodegrades and hydrolyzes very slowly. Chloromethane has a very low log octanol/water partition coefficient, suggesting that it does not bioconcentrate to any appreciable degree in aquatic organisms (Howard 1989). In the mammalian body, chloromethane is broken down into methanol and hydrochloric acid

The speed and extent of this breakdown is not known The methanol resulting from this reaction is subsequently oxidized to formaldehyde (U.S. EPA 1978).

The primary effect of chloromethane is cytotoxicity through disruption of cell metabolism and altered electron transport processes of the respiratory chain (Mamedov and Aliev 1986).

E.1 9 1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene Chloride

1,1-Dichloroethene, commonly referred to as 1,1-Dichloroethene or vinylidene chloride, enters the environment from its production and use in the manufacture of plastics such as kitchen plastic wrap This compound in water will primarily be lost through evaporation. Little of it will adsorb to sediment. Once in the atmosphere, it degrades rapidly by photooxidation 1,1-Dichloroethene on soil surfaces are lost through evaporation and partially by percolation into the ground water In the ground water, very slow hydrolysis and biodegradation occurs No experimental data has currently been found suggesting the potential for 1,1-Dichloroethene to bioconcentrate The low octanol/water partition coefficient suggests that bioconcentration would not occur to any significant degree (Howard 1989)

E 1 10 Methylene Chloride (Dichloromethane)

Methylene chloride, commonly referred to as dichloromethane or DCM, is used widely and in large amounts in aerosols, paint removers, and in chemical processing Most of this methylene chloride is released to the atmosphere where it degrades by reaction with photochemically produced hydroxyl radicals. Direct photolysis does not occur with this compound Releases to water are primarily removed by evaporation Hydrolysis in water is not considered to be an important removal process. Biodegradation may occur but would probably be very slow compared to evaporation It is not expected to significantly adsorb to sediment or to bioconcentration in aquatic organisms. Due to its high vapor pressure, methylene chloride that is released to soil evaporates rapidly from near the soil surface It is probable that a portion of a release will leach into the ground water The mechanism of degradation in ground water is unknown for this compound. Hydrolysis in soil or ground water is probably not an important process under normal environmental conditions Although experimental data is lacking, methylene chloride is not expected to bioconcentrate due to its low octanol/water partition coefficient from which a bioconcentration factor of 5 has been calculated (Howard 1990)

E 1 11 Toluene

Toluene enters the environment principally from the volatilization of petroleum fuels, toluene-based solvents and thinners, and motor vehicle exhaust. Toluene in soil near the soil surface will be lost through evaporation with some leaching into the ground water Biodegradation occurs slowly in soil and ground water, especially at high concentrations, at which toluene may be toxic to microorganisms However, acclimated microorganisms may biodegrade toluene rapidly It does not hydrolyze significantly in soil or water Toluene in water is lost by volatilization and biodegradation, the rate of which depends strongly on temperature, mixing conditions, and the existence of acclimated microorganisms The half-life ranges from days to several weeks. Toluene does not significantly hydrolyze, directly photolyze, adsorb to sediment, or bioconcentrate in aquatic organisms Some bioconcentration factors in aquatic organisms are as follows: eel (*Anguilla japonica*), 13.2; Manila clam (*Tapes semidecussata*), 1 67; blue mussel (*Mytilus edulis*), 4 2; green algae (*Chlorella fusca*), 380; golden ide fish (*Leuciscus idus melanotus*), 90 (Howard 1990)

Toluene in solution is readily absorbed by the gastrointestinal tract but is poorly absorbed through the skin (Browning 1965). Low levels of toluene (less than 100 parts per million) may produce disturbances in dopaminergic mechanisms of the basal ganglia, probably leading to functional

changes in sensory-motor integration (Fuxe et al. 1982). Exposure to toluene causes both reversible and irreversible changes to the central nervous system (Bjornaes and Naalsund 1988)

E 1.12 Other VOAs

Information on the fate, transport, general chemistry and toxicology of the remaining VOAs evaluated in this risk assessment could not be located at the time of this report

E 2 BNAs

E 2 1 Phthalates

E:2.1.1 Bis(2-ethylhexyl) phthalate

Bis(2-ethylhexyl) phthalate is used in plasticizing, as an organic pump fluid, as a compouent of dielectric fluids, and as a solvent in insect repellant formulations, cosmetics, rubbing alcohol, liquid soap, detergents, decorative inks, lacquers, munitions, industrial and lubricating oils, defoaming agents during paper and paperboard manufacture, and as a pesticide carrier (HSDB 1997)

If released to soil, bis(2-ethylhexyl) phthalate will neither evaporate nor leach into groundwater, as it adsorbs strongly to soil. Limited data is available to suggest that it might biodegrade in soil under aerobic conditions following acclimation. In aquatic environments, bis(2-ethylhexyl) phthalate will biodegrade rapidly under aerobic conditions, with a half-life of two to three weeks. It will strongly adsorb to sediment, and evaporation and hydrolysis are not significant removal processes (HSDB 1997)

The four primary metabolic processes that bis(2-ethylhexyl) phthalate undergoes include hydrolysis of the ester, cleavage of the benzene ring, oxidation of the liberated alcohol, and oxidation of the alkyl side-chain while bound to the phthalate ester. In rats, metabolites include 5-keto-2-ethylhexyl phthalate, 5-carboxyl-2-ethylpentyl phthalate, 5-hydroxy-2-ethylhexyl phthalate, and 2-carboxymethylbutyl phthalate after initial hydrolysis to mono(2-ethylhexyl) phthalate. In green monkeys and ferrets, metabolites include the glucuronide derivatives of mono-(2-ethylhexyl) phthalate. In fish, liver homogenates metabolized the parent compound to monoethylhexyl phthalate. Fathead minnows and rainbow trout were also found to produce this compound as well as its glucuse conjugate. It has been shown in mammals that the mono-(2-ethylhexyl) phthalate is the intermediate that is responsible for producing degenerated spermatocytes. The observed teratogencity of bis(2-ethylhexyl) phthalate is believed to be due to the hydrolysis of the parent compound to 2-ethylhexanol, which in turn is metabolized to 2-ethylhexanoic acid, the proximate teratogen (HSDB 1997)

Mammals exhibit extremely low acute toxicity as a result of oral exposure to bis(2-ethylhexyl) phthalate. The oral LD50s in rats, mice, rabbits, and Guinea pigs have been calculated to be 30,000 mg/kg, 1500 mg/kg, 34,000 mg/kg, and 26,000 mg/kg, respectively. A variety of chronic effects have also been observed as a result of oral exposure to this contaminant. In dogs, effects on the liver were observed, including fatty vacuolization and congested areas of the liver, and liver function tests were negative. Lipid metabolism also appears to be inhibited by this contaminant, and this effect is transmitted across the palcental barrier to the developing fetus. Other development effects of bis(2-ethylhexyl) phthalateinclude suppression of maternal weight gain, increased fetal resorptions, neural tube defects, intrauterine growth retardation and delayed ossification. Seminiferous tubular degeneration, testicular degeneration, hypertrophy of cells in the anterior pituitary, as well as

hepatocellular carcinomas are some other effects which have been observed in mammals as a result of oral exposure to bis(2-ethylhexyl) phthalate (HSDB 1997).

In the aquatic environment, *Daphnia magna* have exhibited decreased reproduction at concentrations of 3, 10, and 30 ug/L, while the 48-hour LC50 for this organism has been reported to be between 1000 and 5000 ug/L. The LC50s of two other invertebrate species, *Chironomus plumosus* (midge) and *Gammarus pseudolimnaeus* (scud), are reported to be > 18 mg/L and > 32 mg/L, respectively. In fish, LC50s are reported to be greater than 100 mg/L for five species tested. The experimental BCFs for bis(2-ethylhexyl) phthalate range from a log of 1 to 4 in fish and invertebrates (HSDB 1997).

No significant toxic effects have been observed in birds as a result of oral exposure to bis(2-ethylhexyl) phthalate. However, this is probably due to the fact that this contaminant has not been studied extensively in birds (HSDB 1997)

E.2.1.2 Butylbenzyl phthalate

Butylbenzyl phthalate is used as an organic intermediate, a plasticizer, and in coatings. When released to soil, it is expected to adsorb strongly and thus not to migrate significantly into the groundwater, although it has been detected in some groundwater samples. It is readily biodegraded in a variety of media under both aerobic and anaerobic conditions When released into the aquatic environment, butylbenzyl phthalate will adsorb strongly to sediments. It is not expected to undergo abiotic degradation processes, such as photodegradation and hydrolysis, to a significant degree (HSDB 1997).

Butylbenzyl phthalate undergoes metabolic reactions similar to bis(2-ethylhexyl) phthalate, described previously, with the monophthalate metabolic products being the most abundant. It is believed that the mode of acute toxicity for butylbenzyl phthalate may be through its effects on the catecholamines of the central adrenergic nervous system (HSDB 1997)

In mammals, butylbenzyl phthalate has been shown to produce a variety of adverse toxicological effects, including central and peripheral neuropathies, increased incidence of myelomonocytic leukemia, thymic atrophy, splenitis, and atrophy of the testes, prostate, and epididymis. The oral LD50 in rats was calculated to be 13,500 mg/kg (HSDB 1997)

In the aquatic environment, butylbenzyl phthalate is acutely toxic to a variety of algae, invertebrates, and fish in the 0.5 to 5.0 mg/L range and chronically toxic to *Daphnia* and fathead minnows in the 0.1 to 0.8 mg/L range. For example, the 48-hour EC50 value for *Daphnia magna* was found to be 1.0 mg/L. In fish, butylbenzyl phthalate decreased the heart rate of goldfish at 200 mg/L, although this effect may have been due to dibutyl phthalate contamination. The 96-hour LC50 value for English sole is between 0.55 and 0.66 mg/L, and for bluegill is 43 mg/L. The bioconcentration factor (BCF) for a bluegill sunfish was calculated to be 663, and another source states that butylbenzyl phthalate is not an accumulative or persistent chemical in fish (HSDB 1997)

In birds, limited studies have been performed to assess the toxicity of butylbenzyl phthalate. In one study, no malformations were observed when butylbenzyl phthalate was injected into fertilized hens' eggs. In another study, it was found that butylbenzyl phthalate had an ED50 for embryotoxicity of approximately 27 umol/egg (HSDB 1997).

E.2.1.3 Diethyl phthalate

Diethyl phthalate is used as a solvent, fixative, wetting agent, plasticizer, camphor substitute, and in insecticidal sprays and mosquito repellents. If released to soil, diethyl phthalate is expected to undergo aerobic biodegradation. Anaerobic biodegradation may be slow or non-existent. Oxidation, chemical hydrolysis, and volatilization from wet soil surfaces are expected to be minimal, but evidence suggests that volatilization from dry surfaces may occur. If released into the aquatic environment, aerobic biodegradation is expected to occur, resulting in an approximate half-life of two days to greater than two weeks. As in soil, anaerobic biodegradation, chemical hydrolysis, oxidation, and volatilization are not expected to occur to a significant degree, expect that volatilization may occur in shallow water bodies. Photolysis should also not be significant. Diethyl phthalate will adsorb to suspended solids, thus providing a transport mechanism in the aquatic environment. However, it was observed that diethyl phthalate did not adsorb significantly to sediments during a study using this chemical in an aqueous environment (HSDB 1997).

The metabolic pathway of diethyl phthalate is similar to that of the other phthalates, discussed previously. In mammals, its metabolism includes transformation to its half-esters, which have been found to be four times more toxic than the parent compound. A potential mechanism of toxicity has been elucidated in that diethyl phthalate and dimethoxyethyl phthalate inhibited UDP-glucuronyltransferase activity of rat liver in vitro (HSDB 1997).

The LD50 for diethyl phthalate in rats is 9,000 mg/kg. Diethyl phthalate has been shown to produce a reduction in food intake and in the rate of body weight gain. It has also been shown to decrease testosterone concentrations in the testes. Tests in rats for teratogenicity have been negative (HSDB 1997).

In the aquatic environment, diethyl phthalate is slightly toxic to a variety of organisms. The 96-hour LC50 for the copepod *Nitocra spinipes* was found to be 74 mg/L. In fish, the 96-hour LC50s for sheepshead minnow and bluegill sunfish were 30 mg/L and 110 mg/L, respectively. It has been shown that diethyl phthalate will bioaccumulate in some aquatic organisms, but will not tend to biomagnify because they are metabolized relatively rapidly by fish and other animals. The bioconcentration factor (BCF) has been measured in bluegill sunfish and Mullet, and was calculated to be 117 and 15-16, respectively (HSDB 1997).

No information could be found at the time of this report on the effects of diethyl phthalate in birds.

E.2.1.4 Dimethyl phthalate

Dimethyl phthalate is used as a solvent and a plasticizer, and is used in insect repellants, varnishes, clear films, solid rocket propellants, lacquers, perfumes, and cosmetics. If released onto soil, dimethyl phthalate will likely migrate into the groundwater because it does not adsorb strongly to soil. It is readily biodegraded, especially after a short period of acclimation. In freshwater systems, dimethyl phthalate also biodegrades rapidly, with a half-life of less than eleven days in river water. Biodegradation is much slower in salt water systems. Volatilization may be significant in shallow water and photolysis may be a significant removal mechanism in clear water. Dimethyl phthalate only weakly adsorbs to sediment, and thus will tend to partition to the aqueous phase. Chemical hydrolysis may also occur under alkaline conditions (HSDB 1997).

Dimethyl phthalate is metabolized similarly to the other phthalates, discussed previously In rats, it is primarily biotransformed iont monomethyl phthalate. Its mechanism of toxicity involves inhibition of mitochondrial respiration in the presence of succinate and adenosine diphosphate (ADP). It has also been shown to weakly inhibit lecithin/cholesterol acyltransferase (HSDB 1997)

In mammals, dimethyl phthalate exhibits a very low degree of acute toxicity. Acute LD50s have been reported to be 2400 to 6800 mg/kg for the rat, 6800 to 7200 mg/kg for the mouse, 2400 mg/kg for the Guinea pig, and greater than 1400 mg/kg for the dog. The results of most subchronic and chronic tests indicate that dimethyl phthalate is relatively nontoxic. Some of the toxic effects that have been observed as a result of oral exposure to dimethyl phthalate are slight nephritic changes, increase in respiratory rate, a decrease in testosterone on the testes and serum, and a decrease in total liver cholesterol and total liver lipids (HSDB 1997)

Very limited information is available on the toxicity of dimehtyl phthalate to fish and aquatic invertebrates. However, 96-hour EC50s have been reported for a variety of algal species, and they range from 26.1 mg/L for *Skeletonema costatum* to 125 mg/L for *Gymnodinium breve*. Dimethyl phthalate is not expected to bioconcentrate in fish The mean measure BCFs for brown shrimp and sheepshead minnow ranged from 4.7 to 5 4 after 24 hours. A slightly higher BCF of 57 was measured for the bluegill sunfish, which may be explained by the fact that only carbon-14 was measured in the experiment, and thus metabolites might have been included in the measurements for the parent compound (HSDB 1997). A biomagnification factor of 130 was also calculated for edible fish (OHM/TADS 1997)

In birds, an oral LD50 of 10,115 mg/kg has been reported for the chicken. In addition, when chick embryos were exposed to chick ringers solution saturated with dimethyl phthalate, growth retardation and CNS malformations were observed (HSDB 1997)

E 2.1.5 Di-n-butyl phthalate

Di-n-butyl phthalate is used as an insect repellant, solvent, plasticizer, and a reaction media for chemical reactions It is also used in explosives, nail polish, perfumes, printing inks, paper coatings, adhesives, medications and rocket propellants. If released into soil, di-n-butyl phthalate will adsorb moderately to soil and is able to migrate into groundwater under rapid infiltration conditions It has been suggested that its tendency to form complexes with water-soluble fulvic acids, a component of soils, may aid its transport into groundwater Di-n-butyl phthalate will also slowly biodegrade, and volatilization from soil is not expected to be a significant loss process If released to water, di-n-butyl phthalate will adsorb moderately to sediments, and will biodegrade rapidly A small amount of volatilization will occur, and photooxidation and hydrolysis is not expected to be significant (HSDB 1997)

Di-n-butyl phthalate is metabolized in a very similar fashion to the phthalates described previously, with the monobutyl phthalate being the primary metabolite Additional metabolites which have been detected are phthalic acid, the omega and omega-1 oxidation products of monobutyl phthalate, and other unidentified polar metabolites, probably conjugates. The toxic mechanism of di-n-butyl phthalate is said to be via mitochondrial uncoupling, which is probably due to an increase in membrane permeability to hydrogen ions and other small ions It has also been suggested that the monoester of a metabolite of dibutyl phthalate may act as a chelating agent by removing zinc from the testes, and that the resulting testicular zinc deficiency may lead to the observed testicular atrophy in many toxicity studies (HSDB 1997).

A variety of aquatic invertebrates have been tested for di-n-butyl phthalate toxicity. In the scud, *Gammarus fasciatus*, the 1500-hour LC50 was reported to be 0.21 mg/L. The 24-hour LC50 for brine shrimp (*Artemia*) was 8 mg/L, and the 48-hour LC50 for midge larvae, *Chironomus plumosus*, was 0.76 mg/L. Di-n-butyl phthalate was also shown to reduce the number of young produced by *Daphnia magna* at a concentration of 1.8 mg/L. This concentration was also found to decrease the survival of fathead minnow embryos and larvae. An increased incidence of skeletal anomalies were observed in offspring of cyprinodontiform fish, *Rivulus marmoratus*, exposed to 1 mg/L of di-n-butyl phthalate. Di-n-butyl phthalate is not expected to bioaccumulate in fish because it is rapidly metabolized. The log BCF in American oyster, Brown shrimp and sheepshead minnow were 1.5, 1.22, and 1.07, respectively. In fish, log BCFs were also determined to be 3.15 and 3.83 using C-14 labeling. However, these BCFs are not believed to be accurate because di-n-butyl phthalate is rapidly metabolized in fish within four hours, and thus the metabolites would have been included in the measurement of the parent compound for the BCF calculation. In a study using clams, *Neanthes virens*, the measured bioconcentration factors from sediment at two different sites in Portland harbor were 0.59 - 1.1 and 0.14 - 0.25 (HSDB 1997).

The acute oral LD50 for di-n-butyl phthalate is 8,000 - 10,000 mg/kg in rats and 9,000 mg/kg in mice. Other chronic effects that have been observed as a result of oral exposure to di-n-butyl phthalate are reduced weight gain and food consumption, decreased serum cholesterol, lung edema, and increased liver weights. Di-n-butyl phthalate has caused testicular and seminiferous tubular atrophy in males. It has also been shown to result in fetal loss as well as a variety of developmental effects, including neural tube defects, growth retardation, delayed ossification, absence of tail, anophthalmia, twisted legs, hematomas, elongated and fused ribs, absence of tail bones, abnormal or incomplete skull bones, incomplete or missing leg bones and reduced weight of fetuses (HSDB 1997).

Little or no toxicity information was available for birds, but it was shown in one study using Mallard ducks that five months of continuous dietary exposure to di-n-butyl phthalate in food did not result in significant bioaccumulation (HSDB 1997)

E.2.1.6 Di-n-octyl phthalate

Di-n-octyl phthalate is used as a plasticizer, a dye carrier, and for film, wire, cables, and adhesives. If released into soil, di-n-octyl phthalate will sorb strongly to soil and thus is not expected to migrate rapidly into groundwater. However, it has been found in drinking water for which the source was groundwater. If released into surface water, di-n-octyl phthalate will adsorb to seimdent particles, thus providing a transport mechanism for this chemical. Di-n-octyl phthalate will biodegrade slowly after acclimation. No experimental data is available on its ability to photodegrade, but one study estimated its photolysis half-life to be 144 days. Chemical hydrolysis and volatilization are not expected to be significant loss processes for this chemical (HSDB 1997).

Some reports indicate that di-n-octyl phthalate is metabolized to its corresponding monoester derivative, which is then partly excreted unchanged and partly hydroxylated, similar to a variety of other phthalates, described above. However, another source indicates that very little mono-octyl phthalate is produced. Instead, it is reported that the metabolites are mainly a mixture of dicarboxylic acids formed by oxidative scission of the n-octyl side-chain of the mono-octyl phthalate, which are possibly formed by alpha and beta oxidation of the inital omega and (omega-1)-hydroxylation products (HSDB 1997)

Very little information is available on the toxicity of di-n-octyl phthalate in aquatic invertebrates. In one study, a concentration of 1.0 mg/L of di-n-octyl phthalate caused a significant decrease in reproduction of *Daphnia magna*, while 0.32 mg/L had no significant effect. The acute toxicity of di-n-octyl phthalate to fish varies greatly with species. The 7-8 day LC50s for redear sunfish, channel catfish, and largemouth bass were 0.006 mg/L, 0.69 mg/L, and 32.9 mg/L, respectively. Hatching of fathead minnow embryos was decreased at a concentration of 10 mg/L, but was not affected at a concentration of 3.2 mg/L. In an ecosystem model containing phytoplankton, zooplankton, green filamentous algae, snails, mosquito larvae, and mosquito fish, ecological magnification values obtained after three days were 660 for algae, 9,426 for *Daphnia*, 1.16 for fish, 5,300 for mosquitos and 438 for snails, and after 33 days, these values were 28,500 for algae, 2,600 for *Dapnia*, 9,400 for fish and mosquitos, and 13,600 for snails. The higher magnification values after 33 days versus three days might be in part explained by the fact that a final water concentration in the 33 day study was used in determining the bioconcentration values, and this water concentration was low due to the biodegradation of the compound. Nonetheless, this data suggests that di-n-octyl phthalate bioconcentrates in algae and other aquatic organisms (HSDB 1997)

In mammals, di-n-octyl phthalate exhibits very low acute toxicity. The acute oral LD50 for the mouse is 13,000 mg/kg, and for the rat is 30,000 mg/kg. The 12-week LD50 was 3.09 ml/kg in the mouse. Di-n-octyl phthalate has been shown to produce deleterious effects on the developing embryo and/or fetus of the rat. It has also resulted in increased liver weights, and decreased zinc concentrations in the testes of rats. In addition, diets containing di-n-octyl phthalate have resulted in the accumulation of large droplets of fat around the central veins, leading to mild centrilobular necrosis and slight induction of 1 peroxisomal enzyme. Di-n-octyl phthalate has also been found to affect the immune system of the rat. At dose levels that have been shown to cause increased liver weights in mice, no effect on reproduction was observed in a continuous breeding study (HSDB 1997)

Very little information is available on the toxicity of di-n-octyl phthalate to birds. In one study, di-n-octyl phthalate had no adverse effects on 3-day old embryos of the white leghorn chicken (HSDB 1997)

E.2.2 Benzene Derivatives

E.2.2.1 Acetophenone

Acetophenone is released to the environment from a variety of combustion processes and may be released during its manufacture and the manufacture of propylene oxide, kraft bleaching and its use in certain perfumes. In soils, microbial degradation is likely to be the major degradation pathway. It is expected to be moderately to highly mobile in soil and it therefore has the potential to migrate into the groundwater. Evaporation from dry soil surfaces is another important terrestrial fate process. In aquatic systems biodegradation and volatilization are expected to be the major loss processes. Acetophenone is very soluble in water (6,130 mg/L). The estimated biodegradation half-lives in groundwater, river water and lake water samples were 32 days, 8 days and 4.5 days, respectively. Hydrolysis, oxidation, bioconcentration, and adsorption to sediments and suspended particles are not likely to be important fate processes. Oxidation by hydroxyl radicals in air has an estimated half-life of 2.2 days. Other oxidants (eg, ozone) and photolysis do not appear to be important loss mechanism of this compound in air (HSDB 1997).

No field or laboratory bioconcentration/bioaccumulation was available for acetophenone in the literature. A log octanol/water partition coefficient (Kow) of 1.58 and a water solubility of 6,130 mg/L at 25° C was reported for this compound. Based on modeling using these values, the bioconcentration factor is in the range of 5 to 9. Based on these predicted bioconcentration factors, bioconcentration is not expected to be significant in aquatic organisms (HSDB 1997).

No compound-specific toxic mechanisms were available in the literature for this compound. Acetophenone is biodegraded into ethylphenylcarbinol and 1-phenylethanol in rabbits. In rats acetophenone appears to be precursor of mandelic acid, benzoylformic acid, and benzoic acid (HSDB 1997).

The effects on growth, hematological values or macroscopic tissue changes were monitored in groups of 10 male and 10 female rats exposed to 0, 1,000, 2,500 and 10,000 mg/kg acetophenone in the diet for 17 weeks. No effects were observed at any exposure concentration. Some loss of the compound from the feed due to volatilization was reported; therefore, the dietary concentration of 10,000 mg/kg was multiplied by a factor of 0.845 (based on data provided by the investigators) yielding a NOAEL of 423 mg/kg BW/day assuming that a rat consumes a daily amount of food equivalent to 5% of its body weight/day as food (IRIS 1997). The oral LD50 for rats ranged between 900 and 3,200 mg/kg (RTECS 1997).

For aquatic systems, data was only available for the fathead minnow (*Pimephales promelas*) in a flow-through bioassay. A 96-hour LC50 of 162 mg/L and a 96-hour EC50 (loss of equilibrium) of 162 mg/L was reported (HSDB 1997).

No compound-specific information could be found on the toxic effects of acetophenone on birds.

E.2.2.2 Benzidine

Historically benzidine was released into the environment during its production through fugitive emissions and wastewater. Currently benzidine is only produced in the United States for captive consumption with strict regulations that it be maintained in isolated or closed systems which would limit its release to the environment. Benzidine is also used in the manufacture of azo dyes or may be formed during the degradation of benzidine-based dyes. In terrestrial systems, benzidine tends to adsorb to soils (especially acidic soils), form complexes with clay particles, and may be oxidized by metal cations. Degradation rates in soils of 79 percent in 4 weeks have been reported in the literature. In the water column, benzidine will adsorb to suspended clay particles, will be oxidized by naturally occurring metal cations such as Fe(III), and will be lost by reaction with radicals and photolysis. Volatilization from water is not a significant transport process. Its half-life in water is approximately 1 day. This compound will only moderately adsorb to sediments (HSDB 1997).

Benzidine has been reported to bioconcentrate to moderate levels in aquatic systems. In a 42-day flow-through test, bluegills (*Lepomis macrochirus*) were exposed to 14C-benzidine. A bioconcentration factor of 40 was calculated for the edible portions of the fish. Using model ecosystems after a 3-day exposure, bioconcentration factors for fish, mosquitos, snail, and algae were 55, 460, 650, and 2,500, respectively (HSDB 1997).

Radiolabeled benzidine administered intravenously to rats, dogs, and monkeys was rapidly transferred to the excretory organs (liver, gastrointestinal tract, kidney, and bladder). Significant amounts were also transferred to the lungs. Major routes of excretion in experimental animals given intravenous benzidine are urine and feces. Rhesus monkeys fed azo-dyes, a derivative of benzidine, metabolized a substantial portion of the dyes to free benzidine. Benzidine is rapidly oxidized by a peroxidase/hydrogen peroxide system to products which bind irreversibly to deoxyribonucleic acid (DNA), thereby inhibiting DNA synthesis. Benzidine also induces unscheduled DNA synthesis in Hela cells (HSDB 1997).

Dietary exposure to benzidine at levels of 300 mg/kg for 56 weeks resulted in hepatotoxicity. Necrosis, fatty dystrophy, and hyperplasia were also noted. Exposure of sheepshead minnow (*Cyprinidon variegatus*) to 50 mg/kg of benzidine resulted in tubed heart syndrome with distended pericardia, poor circulation, sparse distribution of melanophores, inability to hatch, abnormal head morphology, scoliosis, and faint red blood cell pigmentation. A 96-hour LC50 OF >20 mg/L was reported for the aquatic macroinvertebrate, scub (*Gammarus pseudolimnaeus*), although the specific conditions of this test were not specified. The 96-hour LC50s for fish range from 4.35 mg/L in lake trout (*Salvelinus namaycush*) to >20 mg/L in fathead minnows (*Pimephales promelas*) (HSDB 1997).

In rats benzidine administered orally at a concentration of 200 mg inhibited testicular DNA synthesis. Covalent binding of benzidine and some of its congeners to hemoglobin was also reported to occur in rats after oral administration (HSDB 1997).

Male and female mice were exposed to benzidine dihydrochloride in the drinking water at 0 to 160 ppm (0 to 27.2 mg/kg/day) for 33 months. Dose-related decreases in body weight gain and survival at all levels were reported; most deaths were caused by tumors. Treatment-related effects included increased incidences of liver cell alterations in females at greater than or equal to 3.8 mg/kg/day, bile duct hyperplasia in females at greater than or equal to 8.2 mg/kg/day and in males at 30.4 mg/kg/day, megakaryocytosis of bone marrow in females at greater than or equal to 11.5 mg/kg/day and in males at greater than or equal to 22.8 mg/kg/day, bladder epithelial hyperplasia in males at 30.4 mg/kg/day, atrophy of the ovary in females at greater than or equal to 15.2 mg/kg/day, brain vacuolization in females at greater than or equal to 3.8 mg/kg/day and males at greater than or equal to 5.7 mg/kg/day, and hemosiderosis of the spleen at greater than or equal to 22.8 mg/kg/day (IRIS 1997).

Benzidine has been reported to be teratogenic to chicks when injected into eggs. No additional compound-specific information could be found on the toxic effects of benzidine to birds.

E.2.2.3 Benzoic Acid

Benzoic acid is typically released into the environment in wastewater or emissions during its production and use as a chemical intermediate and additive. Benzoic acid may also formed by combustion processes and is typically detected in automobile exhaust, refuse combustion, and tobacco smoke. Benzoic acid is commonly added to food products as preservatives and as antimicrobial agents. Benzoic acid is also naturally occurring in the environment (e.g., berries, cranberries, prunes, cloves, bark of wild black cherry tree, scent glands of beavers, and oil of anise seeds). In terrestrial systems, benzoic acid will readily leach into the groundwater due to its low soil adsorption. It biodegrades readily in soil, with a half-life of less than one week. Releases to water also result in rapid biodegradation. Adsorption to sediment and volatilization is not considered significant. Biodegradation is reported to occur

under both aerobic and anaerobic conditions (HSDB 1997)

Bioconcentration factors were highly variable, ranging from 21 in mosquito fish to 2,800 in snails. Bioconcentration in some invertebrate species such as *Daphnia* and snails may be considerable; with BCFs of 1,800 and 2,800, respectively. Bioconcentration in mosquito fish, algae, and mosquito larvae were considerably lower; with BCFs of 21, 100, and 138, respectively (HSDB 1997).

Benzoic acid is rapidly absorbed from the gastrointestinal tract when taken by mouth. It is conjugated with glycine in the liver to form hippuric acid which is rapidly excreted in the urine. With the exception of fowl, virtually all vertebrates excrete benzoic acid as hippuric acid (HSDB 1997).

Very limited toxicity data was available in the literature for biota. Benzoic acid (2%) as found in some preserved pet foods was toxic to cats (HSDB 1997). An LD50 of 1,700 and 1,940 mg/kg was reported in rats and mice, respectively. Toxic effects in mice included somnolence (general depressed activity) and respiratory depression (RTECS 1997)

Benzoic acid at a concentration of 0.5 mg/l did not affect growth of blue-green alga, (*Anabaena* sp.) (RTECS 1997).

No compound-specific information could be found on the toxic effects of benzidine to birds.

E.2.2.4 1,2,4-Trichlorobenzene

1,2,4-trichlorobenzene enters the environment through its manufacture and its major use as a dye carrier. Intermediate uses for this compound involve the manufacture of herbicides and higher chlorinated benzenes, dielectric fluid, solvent, heat-transfer medium, septic tank and drain cleaners, wood preservatives, and abrasive formulations. 1,2,4-trichlorobenzene is often used as a replacement for polychlorinated biphenyls in the electrical industry. It is also formed during the combustion of chlorine-containing polymers and through the dechlorination of hexachlorobenzene by anaerobic sewage sludge. It is a synthetic organic chemical and is not known to occur as a natural compound. It adsorbs readily to soil and, therefore, is not expected to leach to an appreciable degree into the groundwater. Experimental data has reported biodegradation to occur in soil. In surface water, it may adsorb to sediment and evaporate. It does not readily hydrolyze in surface water, but may undergo slow biodegradation (HSDB 1997).

The bioconcentration factor for 1,2,4-trichlorobenzene by rainbow trout (*Salmo Gairdneri*) exposed over 119 days was studied in a flow-through system. Fish exposed to water containing 3.2 ng/L had a BCF of 1,300 while fish exposed to a concentration of 52 ng/L had a BCF of 3,200. Certain developmental stages of rainbow trout (*Salmo gairdneri*) accumulated more 1,2,4-trichlorobenzene than other stages. The bioconcentration factor was approximately 10 times as great at hatching as in alevins. These differences can be reduced, but not eliminated, by expressing the data on the basis of lipid weight. Daphnids (*Daphnia* sp.) continuously exposed to a mean measured aqueous concentration of 3.1 ug/L of 1,2,4-trichlorobenzene had an equilibrium BCF of 142 (HSDB 1997)

Contaminated food was prepared by exposing pink shrimp (*Penaeus duorarum*) to 10 ug/L 1,2,4-trichlorobenzene-UL-(14)C for 12 days; the mean whole body concentration of trichlorobenzene in the exposed shrimp was 0.59 mg/kg. Juvenile spot (*Leiostomus xanthurus*) were fed the trichlorobenzene contaminated shrimp at a daily ration of 10

percent body weight for 28 days; they accumulated less than 0.05 mg/kg trichlorobenzene (detection limits). Spot which were exposed to 10 ug/L trichlorobenzene in water for 28 days and fed uncontaminated food exhibited a BCF of approximately 100. Spot, exposed simultaneously to contaminated food and the same water concentration also exhibited a BCF of 100. Results were compared with data from a trichlorobenzene bioaccumulation study with freshwater species; both studies indicated that trichlorobenzene was accumulated moderately from contaminated water and accumulation from contaminated food was negligible (HSDB 1997).

Specific toxic mechanisms for this compound were not available in the literature. In general, the halogenated benzenes appear to increase the activity of microsomal reduced nicotinamide adenine dinucleotide cytochrome p450 dependent enzyme systems. 1,2,4-Trichlorobenzene is absorbed from the GI tract, intact skin, and lung. In rats 1,2,4-trichlorobenzene was dehalogenated by hepatic micosomes. Seven days after treatment, the excretion of radioactivity into the urine and feces was about 66 and 17 percent of the given dose, respectively. 1,2,4-Trichlorobenzene and its dehalogenated derivatives in the breath represented about 2.1% of the dose; the excretion of radioactivity reached a plateau in 3 days. Biliary and fecal excretion amounted to 45.3 and 20% of the dose, respectively. High initial levels were recorded in body fat 12 and 24 hr after treatment; on days 3 and 7 the body fat levels were still slightly higher than those in other organs (HSDB 1997).

A multigenerational reproductive study was used to determine the chronic toxicity values of 1,2,4-trichlorobenzene in rats. At birth the F0 generation litters (17-23 litters/dose group) were randomly reduced to 4 males and 4 females. Male and female progeny were dosed with 0, 25, 100 or 400 mg/kg of 1,2,4-trichlorobenzene in the drinking water. During the study maternal weights, litter size, neonate sex and weight, and 24-hour food and water intake were recorded. Blood samples and organs were collected on days 27 and 95 of age from selected rats from each group for chemistry determinations (i.e., glucose, BUN, creatinine, Na, K, Cl, uric acid, Ca, P, cholesterol, triglyceride, bilirubin, alkaline phosphatase, SGOT, SGPT, LDH, CPK, protein, globulin and albumin), and organ weights (i.e., liver, kidney, uterus, adrenals, lungs, heart and gonads). Similar procedures were performed with the F1 generation. The study ended when the F2 generation was 32 days old. Fertility (as indexed by conception rate of dams) of the F0 and F1 generation rats was not affected by treatment. A LOAEL was derived from a significant increase (11percent in males, 13percent in females) in adrenal gland weights observed in the 400-mg/kg groups of males and females of the F0 and F1 generations. The NOAEL was determined to be 100 mg/kg from the mid-dose group. The LOAEL was determined to be 400 mg/kg on the basis of increased adrenal gland weight (IRIS 1997).

Five rats/group were dosed with 53 mg/kg/day of 1,2,4-trichlorobenzene in corn oil by gavage. Microscopic examination of the 1,2,4-trichlorobenzene-treated rats showed moderate vacuolization of the zona fasciculata; the control group showed only slight vacuolization. Twenty-four hour urine and serum specimens were collected prior to post mortem examination. A 14 percent increase in absolute adrenal gland weight was observed and a 13 percent adrenal gland/body weight ratio was observed. In addition, the treated rats had decreased serum corticosterone levels when compared with controls (IRIS 1997).

The maternal reproductive and hepatic effects of 1,2,4-trichlorobenzene on rats that were dosed with 0, 36, 120, 360 or 1,200 mg/kg/day of 1,2,4-trichlorobenzene on days 9 through 13 of gestation. Among the treatment groups of 9 dams/group, alteration of embryonic parameters was noted only in the 360 mg/kg/day group (all of the dams in the 1200

mg/kg/day group died). The observed changes included significant retardation of all four growth criteria (i e., head length, crown-rump length, somite number, and protein content). 1,2,4-trichlorobenzene did not cause increased resorptions, embryolethality or teratogenicity. This study also demonstrated significantly increased xenobiotic hepatic enzyme activity at 120 and 360 mg/kg/day (IRIS 1997)

Oral doses of 1,2,4-trichlorobenzene (173.6 mg/kg) to Rhesus monkeys resulted in severe weight loss and tremors followed by death. Clinical and biochemical changes were reversible if the doses were discontinued. Oral doses to rats indicate that this compound may be an enzyme inducer of the phenobarbitol type. Generally, halogenated benzenes appear to increase the activity of systems that enhance the metabolism of a wide variety of xenobiotics. It is readily absorbed by the gastrointestinal tract, skin, and lung (HSDB 1997).

Oral LD50s for rats and mice were 756 mg/kg and 300 mg/kg, respectively. The toxic effects observed in rats included somnolence (general depressed activity) and convulsions or effect on seizure threshold. The toxic effects observed in mice included, altered sleep time (including change in righting reflex), convulsions or effect on seizure threshold, and ataxia (RIECS 1997).

Macrobenthic animal communities that colonized sand-filled aquaria were exposed to 1,2,4-trichlorobenzene. In one test, communities established by planktonic larvae entrained in continuously supplied unfiltered seawater for 50 days were exposed to waterborne 1,2,4-trichlorobenzene for 6 days; in the second test, the toxicant was added to the sediment before 8 weeks of colonization. The concentration that affected community structure were usually two orders of magnitude lower for waterborne 1,2,4-trichlorobenzene than for sediment-bound 1,2,4-trichlorobenzene, but the same types of organisms were affected by each route of exposure. The lowest 1,2,4-trichlorobenzene concentration (measured) that affected average numbers of individuals exposed via the water were 0 04 mg/l for mollusks, 0 4 mg/L for arthropods, and 4 mg/L for annelids. Average number of species was significantly lower than the control at 4 mg/L. For 1,2,4-trichlorobenzene exposures via the sediment, the lowest concentration that affected average numbers of individuals were 100 mg/kg for mollusks and echinoderms, and 1,000 mg/kg for arthropods and annelids. The average number of species in experimental aquaria was significantly lower than the control at greater than or equal to 100 mg/kg. 1,2,4-Trichlorobenzene persisted in sediments, but some leached into water throughout the 8 week exposure via sediment (HSDB 1997)

The 96-hour LC50 for fathead minnows (*Pimephales promelas*), bluegill (*Lepomis macrochirus*) and sheepshead minnows (*Cyprinodon variegatus*) were 2.9, 3.4, and 21 4 mg/L, respectively (HSDB 1997)

The porphyrinogenic action of 1,2,4-trichlorobenzene was examined in 17 day old embryos, one-day old chicks, 18 day old chickens and adult Japanese quail. The quail was the most sensitive species towards 1,2,4-trichlorobenzene induced porphyria. The chick embryo was non-responsive to this compound. The liver porphyrins of Japanese quail were increased in a dose-dependent manner 1 day after 1,2,4-trichlorobenzene treatment. Elevation in porphyrin levels in quail was associated with a comparable increase in delta-aminolevulinic acid synthetase (ALA-S) activity 1 day after 1,2,4-trichlorobenzene treatment. Multiple administration of 1,2,4-trichlorobenzene produced only a slight increase in liver porphyrin levels and delta-aminolevulinic acid synthetase activity in quail. There was a marked induction in ferrochelatase activity suggesting increased porphyrin turnover. Liver glutathione and glutathione S-tranferase activity were significantly increased (HSDB 1997)

White Leghorn chick embryos and day old chicks were used to study the effects of monochlorobenzene, para-dichlorobenzene, and 1,2,4-trichlorobenzene on liver porphyrin levels and the effects of 1,2,4-trichlorobenzene on hepatic drug metabolism. The chlorobenzenes were administered to fertilized eggs at doses of 10 and 40 mg/egg, and the embryos were sacrificed at 24 hours post-treatment. The chlorobenzenes were administered orally to day old chicks at doses of 200 and 800 mg/kg body weight. The chlorobenzenes at the 40 mg level had no effect on the porphyrin contents of chick embryo liver, but increased hepatic prophyrin levels in day old chicks at a dose of 800 mg/kg were observed. The order of effectiveness from greatest to least was 1,2,4-trichlorobenzene, para-dichlorobenzene, and monochlorobenzene. Treatment of day old chicks with 800 mg/kg chlorobenzenes also increased the porphyrin content of the bile with a similar order of effectiveness. Treatment with any of the chlorobenzenes had no significant effect on cytochrome p450, cytochrome-b5, glutathione-S-transferase, 7-ethoxyresorufin-O-dethylase, or 7-ethoxycoumarin-O-deethylase in chick embryos or biliary excretion of porphyrin. The data indicated that the porphyrinogenic actions of monochlorobenzene, para-dichlorobenzene and 1,2,4-trichlorobenzene and their capacity to induce microsomal monooxygenases depend on the stage of development of chicks as well as the degree of chlorination of the chemical (HSDB 1997)

E.2.2.5 Bis (2-Chloroisopropyl) Ether

Bis (2-chloroisopropyl) ether is no longer commercially produced in the United States. It was previously used as a solvent and as an extractant. Bis(2-chloroisopropyl) ether may form as a by-product of propylene oxide production. It has also been found in industrial waste water and in natural water (HSDB 1997).

Bis (2-chloroisopropyl) ether hydrolyzes rapidly in water (half-life of <38 4 seconds) or moist soil, therefore, biodegradation, and adsorption to soil and sediment are not expected to be significant fate processes (HSDB 1997)

No data was available in the literature regarding BCFs for this compound, although due to its rapid hydrolysis rates, bioconcentration is not considered to be an important rate process (HSDB 1997)

No information about toxic mechanisms of bis(2-chloroisopropyl) ether were available in the literature. Male rats were given single oral doses of (14)carbon labeled bis(2-chloroisopropyl) ether at 90 mg/kg. Metabolites identified in urine were 2-(2-chloro-1-methylethoxy)propanoic acid at approximately 36 percent and N-acetyl-s-(2-hydroxypropyl)-l-cysteine at approximately 19 percent (HSDB 1997).

Bis-(2-chloroisopropyl) ether (98 5 percent pure) was incorporated into the diets of 102 male and female mice at levels of 0, 80, 400, 2,000, or 10,000 mg/kg for up to 104 weeks. Comprehensive hematological, blood biochemical, and urinalysis determinations were performed on 7 mice per sex per group at 13, 26, and 52 weeks; on 6 mice per sex per group at 78 weeks; and on the remaining mice at 104 weeks. Hemosiderin deposition in the spleen was seen in the males on the 10,000 mg/kg diet and in females receiving both the 2,000 and 10,000 mg/kg diet. Decreases in hemoglobin concentration and red blood cell counts were also observed. These findings indicate a treatment-related increase in erythrocyte destruction. A NOAEL of 2,000 mg/kg for males and 400 mg/kg for females was indicated. These doses were determined by the investigators to be equivalent to 198 and 35.8 mg/kg/day for males and females, respectively (IRIS 1997).

No compound-specific information could be found on the toxic effects of bis-(2-chloroisopropyl) ether to aquatic organisms or birds.

E.2.2.6 2,6-Dinitrotoluene

No specific use information is available for 2,6-dinitrotuolene, however, dinitrotoluenes in general are used in organic synthesis, dyes, and explosives. It is expected to biodegrade if released to the soil. Experiments with 2,6-dinitrotoluene in sandy loam and sandy silt loam indicates that this compound is mobile. It is also expected to biodegrade in water. Photooxidation is anticipated to occur in surface water and is not expected to adsorb to sediments or suspended solids, or volatilize. A bioconcentration factor of 5,225 was measured for an algal biomass in a model waste stabilization pond, however, an estimated bioconcentration factor of 12 is recommended based on an estimated partition coefficient and regression equations (HSDB 1997)

The primary subacute toxic effects are seen in red blood cells, the nervous system, and the testes. Male mammals fed 2,6-dinitrotoluene exhibited decreased spermatogenesis, aspermatogenesis, or testicular atrophy. Non-functioning ovaries were found in female mammals. Higher dietary doses result in death. There is no evidence for preferential uptake or retention of 2,6-dinitrotoluene among body tissues. Urine is the major route of elimination for this compound. 2,6-Dinitrotoluene was found to form covalent bonds with DNA in liver cells with lesser binding to the lung and intestine (HSDB 1997).

E.2.2.7 3,3-Dichlorobenzidine

3,3-Dichlorobenzidine enters the environment as emissions or in wastewater during its production or use as an intermediate in the manufacture of pigments and dyes or as an ingredient in rubber and plastic compounding. In surface water, it adsorbs rapidly to sediment and particulate matter where it becomes tightly bound or, possibly chemically bound. It undergoes rapid photooxidation forming 3-chlorobenzidine and benzidine. When released on land, it binds tightly to soil components. Mineralization in the soil does occur but at a very slow rate. Experimental BCFs have been determined for this compound to be as follows: 495-507 for bluegill sunfish, 610 in Golden ide, and 940 in algae. Therefore, 3,3-dichlorobenzidine is expected to bioconcentrate in aquatic organisms (HSDB 1997)

The acute toxicity of 3,3-dichlorobenzidine is relatively low, with 7-day oral LD50s ranging from 352-488 mg/kg/day for mice. An oral LD50 for the rat was determined to be 3820 mg/kg. However, oral intake of 3,3-dichlorobenzidine has resulted in gastrointestinal congestion and hemorrhaging in rats. Covalent binding of this compound to hepatic lipids has also been reported following oral doses. It has also been classified as a carcinogen in laboratory animals (HSDB 1997).

Information on the toxic effects of 3,3'-dichlorobenzidine to birds was not available at the time of this report.

E.2.2.8 Hexachlorobenzene

Hexachlorobenzene (HCB) is formed as a waste product in the production of several chlorinated hydrocarbons and is a contaminant in some pesticides. Hexachlorobenzene is very persistent in the environment due to its chemical stability and resistance to biodegradation. In water, significant amounts will partition from the water column to the sediment and suspended matter. Volatilization from water is rapid, however, its strong

adsorption to sediment precludes its rapid disappearance from aquatic systems. Hexachlorobenzene strongly adsorbs to soil and will generally not leach into the ground water. This compound will bioconcentrate in fish and transfer through trophic levels. Some log bioconcentration factors are as follows: trout (3.7-4.3); sunfish (3.1-4.3); and fathead minnow (4.2-4.5) (Howard 1989).

Dietary hexachlorobenzene induced experimental porphyria and partial uncoupling of oxidative phosphorylation of liver mitochondria in rats. This uncoupling is due to the action of pentachlorophenol, which was formed by metabolism of the hexachlorobenzene (Masini et al. 1985).

E.2.2.9 4-Methylphenol

4-Methylphenol, also commonly referred to as p-cresol, is released in auto and diesel exhaust, during coal tar refining, wood pulping, and during its use in manufacturing and metal refining. It is also used as a gelatinizing and waterproofing agent in explosives and in the synthesis of TNT, urethane polymers, flexible and rigid foams, surface coatings, and dyes (HSDB 1997).

When released into water, biodegradation is the dominant loss mechanism. Volatilization and adsorption to sediment are not considered important fate processes. Photolysis is expected only in the surface waters of oligotrophic lakes. Its fate in soil has not been extensively studied. However, it is anticipated to biodegrade in soil. Given an estimated BCF of 12, 4-methylphenol is not expected to bioconcentrate appreciably (HSDB 1997).

In an outdoor experimental stream, this compound's primary effect on the flora and fauna community was the interference with the photosynthetic and respiration processes (HSDB 1997).

In mammals, signs of acute 4-methylphenol poisoning include muscular convulsions, coma, and death from respiratory paralysis. The acute oral LD50 for 4- methylphenol in dogs is 4 mg/kg. 4-Methylphenol is a general protoplasmic poison and is toxic to all cells. It is also a potent hepatocarcinogen (HSDB 1997).

No information on the toxic effects of 4-methylphenol in birds was available at the time of this report.

E.2.2.10 4-Nitroaniline

4-Nitroaniline may be released to the environment from process and waste emissions involved in its production or use as a chemical intermediate and through stack emissions from hazardous waste incineration. It is also used as a veterinary pharmacological agent and as a chemical intermediate for the production of antioxidants, dyes, pigments, and gasoline gum inhibitors (HSDB 1997).

In soil, this compound undergoes covalent chemical bonding with humic materials which can result in its chemical alteration to a latent form and prevent leaching. However, experimental data has shown 4-nitroaniline to have high to very high mobility in soil. Photodegradation may occur on soil surfaces that are exposed to sunlight. It is not expected to volatilize from moist or dry soils. In water, it will covalently bond to humic materials in the water column and sediment. Photodegradation in water may be possible. Aquatic

hydrolysis, volatilization, and bioconcentration are not considered significant, and this compound is generally resistant to biodegradation. In a 6-week bioconcentration test, experimental BCFs ranged from 2.9-3.6 at a concentration of 0.5 mg/L and ≤ 10 at a concentration of 0.05 mg/L. It was also found to have no or low bioaccumulation potential in carp, and a BCF of 4 4 in zebrafish at a concentration of 0.21 umol/L. Therefore, bioconcentration is not expected to be an important fate process for 4-nitroaniline (HSDB 1997).

4-nitroaniline has been shown to be hematoxic, causing methemoglobinemia, Heinz body formation and a physiological, compensatory reaction to maintain erythrocyte mass. In addition, histopathological changes in the spleen, liver, and bone have been observed in mice which had been administered 4-nitroaniline in corn oil via gavage. Oral doses of 4-nitroaniline to pregnant mice and rats have resulted in decreased numbers of viable litters and reduced pup viability, but only at doses which caused maternal toxicity (HSDB 1997).

No information on the toxicity of 4-nitroaniline to birds was available at the time of this report.

E 2.2.11 Dibenzofuran

Dibenzofuran is a component of coal tar and is released to the environment through its manufacture and use. It is also released during coal, biomass, refuse, diesel fuel, residual oil, and tobacco combustion. It is also a component of heat-transfer oils, a carrier for dyeing and printing textiles, an intermediate for production of dyes, antioxidants, and plastics (HSDB 1997).

With a log octanol-water coefficient (log Kow) of 4 12, dibenzofuran is expected to have very low to no mobility in soil. In water, it is expected to adsorb strongly to sediment and particulate matter in the water column. Based on its vapor pressure and water solubility, it is expected that dibenzofuran may volatilize from water. Biodegradation occurs in soil and water if sufficient microbial populations are present, otherwise, microbial degradation is slow. Biodegradation is also slow when oxygen is limited (HSDB 1997).

Experimental BCFs were determined for dibenzofuran in a 33-day model ecosytem study. The following BCFs were calculated: 82 for algae, 2858 for snail, 2094 for mosquito, and 947 for fish. In a 28-day flow-through study using fathead minnow, BCFs ranged from 1100 to 1700. However, over 97% of the dibenzofuran was eliminated in 2 days during depuration tests. Experimental BCFs of 850-2200 were also obtained from an 8-week test using guppies. Given these experimental BCFs, dibenzofuran would be expected to bioconcentrate in aquatic organisms. However, its rapid elimination from the body would reduce this potential (HSDB 1997).

Information on the toxicity of dibenzofuran could not be located at the time of this report.

E 2.3 Polycyclic Aromatic Hydrocarbons (PAHs)

Polycyclic aromatic hydrocarbons (PAHs) consist of hydrogen and carbon in the form of two or more fused benzene rings. There are numerous PAH compounds, each differing in the number and arrangement of benzene rings. The low molecular weight PAHs (2 -3 rings) tend to be more acutely toxic, while higher molecular weight compounds (4 - 7 rings) tend to be carcinogenic, teratogenic, or mutagenic (See Table E.2.3 A) (Eisler 1987b).

Table E.2.3.A
Chemical Properties of PAHs Identified as COPCs for the Ecological Risk Assessment

Compound	Benzene Rings	Chemical Formula	Molecular Weight	Octanol/Water Partition Coefficient (Log Kow)	Solubility in Water at 20 to 25° C (mg/L)
2-methylnaphthalene	2	$C_{11}H_{10}$	142.20	3.86	NA
acenaphthene	3	$C_{12}H_{10}$	154.21	3.92	Insoluble
acenaphthylene	3	$C_{12}H_{8}$	152.20	4.07	16.1
anthracene	3	$C_{14}H_{10}$	178.22	4.45	1.29
fluorene	3	$C_{13}H_{10}$	166.21	NA	Insoluble
naphthalene	2	$C_{10}H_{8}$	128.16	3.30	30
phenanthrene	3	$C_{14}H_{10}$	178.22	4.57	0.6
benzo(a)anthracene	4	$C_{18}H_{12}$	228.28	5.61	0.014
benzo(a)pyrene	5	$C_{20}H_{12}$	252.30	6.04	0.0038
benzo(b)fluoranthrene	5	$C_{20}H_{12}$	252.30	6.12	0.0012
benzo(g,h,i)perylene	6	$C_{22}H_{12}$	276.34	6.58	0.00026
benzo(k)fluoranthene	5	$C_{20}H_{12}$	252.32	6.84	0.00076
chrysene	4	$C_{18}H_{12}$	228.28	5.61 to 5.91	0.0020
dibenz(a,h)anthracene	5	$C_{22}H_{14}$	278.33	6.50	0.0005
fluoranthene	4	$C_{16}H_{10}$	202.26	4.9	Insoluble
indeno(1,2,3-c,d)pyrene	6	$C_{22}H_{12}$	276.34	6.584	0.062
pyrene	4	$C_{16}H_{10}$	202.24	4.88	0.135

In general, it appears that toxicity associated with PAHs is due not to the initial compound, but with metabolized intermediates. The majority of the enzymatic activity associated with the metabolism of PAH compounds takes place in the liver (Fourman 1989). The first step in the metabolic process is the oxidation of PAHs by cytochrome P450 and P448 enzyme systems. The metabolic by-products go through a series of reactions, ultimately forming diol-epoxides and phenol-oxides, which are believed to be the carcinogenic intermediates of PAHs (Stein et al. 1990). These compounds have the ability to form DNA adducts by covalently bonding with genetic material (Varnasi et al. 1989). Metabolic activation of PAHs can also involve the formation of free radicals and carbonium ions as metabolized intermediates; these are potential carcinogens and will affect metabolic pathways (HSDB 1997).

PAHs are also potent immunotoxic compounds, suppressing the humoral and cell-mediated immune response. Many PAHs have been shown to adversely affect host tumoricidal activities, resulting in tumor formation (Peakall 1993). Application of carcinogenic PAHs to skin leads to destruction of

sebaceous glands, hyperplasia, hyperkeratosis, ulceration, and potential tumor induction (Eisler 1987b)

Target organs for PAH toxic effects are diverse because these compounds are extensively distributed in the body and they each tend to selectively attack proliferating cells. Damage to the hematopoietic and lymphoid system in experimental animals is common. Target organs can also be species specific. In rats, the target organs for 7,12-dimethylbenz(a)anthracene are skin, small intestine, kidney and mammary gland, whereas in fish the primary target organ is the liver (Eisler 1987b)

When PAHs are taken up by organisms, there is a wide range of metabolism rates between PAH compounds. For example, benzo(a)pyrene accumulations in bluegill (*Lepomis macrochirus*) were 10 times greater than naphthalene, but benzo(a)pyrene was extensively metabolized, whereas naphthalene was not (Eisler 1987b). Because the more hydrophobic PAHs (e.g., benzo(a)pyrene), show a high affinity for binding to dissolved humic materials and have comparatively rapid biotransformation rates, these interactions may lessen or negate bioaccumulation and food chain transfer of hydrophobic PAHs (Eisler 1987b).

In addition to a wide range of metabolism rates between PAH compounds, there is also a very wide range of metabolism rates of PAH compounds between species. Mammals, fish, and most crustaceans possess microsomal oxidase enzymes necessary for PAH metabolism. Some organisms (e.g., algae, zooplankton, plants, mussels, scallops, and snails) lack these enzymes and are unable to efficiently metabolize PAHs (Eisler 1987b). These species may tend to bioconcentrate PAHs to many times above the ambient concentrations.

Within a single species, bioconcentration rates tend to vary between PAH compound. In general, bioconcentration factors tend to increase as the molecular weight of the PAH increases, as the octanol/water partition coefficient value increases, as the dissolved organic matter increases, and as lipid content of the organism increases (See Table E.2.3.A). Bioconcentration/bioaccumulation in organisms that are able to metabolize PAHs is considered to be short-term, and is not considered an important fate process (HSDB 1997). Laboratory studies may overestimate accumulation rates compared to the environment. In the environment PAHs tend to strongly and rapidly adsorb to sediments limiting their bioavailability, whereas in laboratory bioconcentration studies the PAHs are in the water column and available to the test organisms. For example, PAHs were analyzed in surficial sediments & benthic organisms collected from southeastern Lake Erie, near a large coal-fired power plant. Sediment concentrations (530-770 micrograms per kilogram [µg/kg] total PAHs) were relatively homogenous throughout most of the 150 square kilometer area, although river and near-shore concentrations reached 4,000 µg/kg. Oligochaete worms did not bioconcentrate any of the PAHs. Midges (Chironomide) collected 1 km offshore exhibited bioconcentration of 5 PAH compounds. Further offshore, midges did not appear to be bioconcentrating PAHs and the concentration in the midges were at near equilibrium with the surrounding sediments (HSDB 1997)

Many studies evaluating the toxicity of PAH compounds were performed using mixtures of PAHs rather than individual PAHs. Below are several relevant studies that evaluated the toxic effects of mixtures of PAHs on aquatic organisms and birds.

The toxic effect of PAHs, (benzene, toluene, naphthalene, 1-methylnaphthalene, anthracene, 9-methylanthracene, phenanthrene) on the productivity of various marine planktonic algae (*Dunaliela biocula*, *Phaeodactylum tricornutum*, and *Isochysis galbana*), increased with increasing number of aromatic rings (see Table E.2.3.A). The methylated compounds were most toxic. Taxonomic differences in sensitivity between the species of algae evaluated was not demonstrated (HSDB 1997).

Combined field and lab studies were conducted to assess the possible role of contaminated bottom sediments to neoplastic disease in fish from eastern Lake Erie and upper Niagara River. Correlations were observed between PAH levels in the sediment and neoplasms in feral fish, and the induction of neoplasms in bullheads (*Ictalurus nebulosus*) (HSDB 1997)

Buffalo river sediment extracts contained PAH compounds which caused skin darkening, hyperplasia, skin papillomas, mild coarsening and local pigmentations in the brown bullhead (*Ictalurus nebulosus*). Sixteen PAH compounds were identified in the sediment extract: fluorene, phenanthrene, anthracene, fluoranthene, 2-methylphenanthrene, pyrene, 2-methylanthracene, benzanthracene, chrysene, perylene, benzo(f)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene, benzo(g,h,i)perylene, and indeno(1,2,3-c,d)pyrene (HSDB 1997).

Two studies were available in the literature evaluating the toxic effects of PAHs to birds. No mortality was observed in mallards fed diets containing 4,000 mg/kg of PAHs (consisting primarily of naphthalenes, naphthenes, and phenanthrene) for a period of 7 months. Compared to controls, livers from exposed mallards were 25 percent heavier and had a 30 percent increase in blood flow to the liver (Eisler 1987b).

Embryo toxicity was also evaluated in mallards. Researchers applied various PAH compounds (in a comparatively innocuous synthetic petroleum mixture) externally to the surface of mallard eggs. 7,12-dimethylbenz(a)anthracene was the most embryotoxic compound evaluated. A concentration of 0.002 µg/egg (equivalent to about 0.036 µg/kg fresh weight, based on an average egg weight of 55 grams) caused 26 percent mortality and a number of toxic responses in the surviving birds in the 18 day study. Similar effects were also observed when eggs were exposed to chrysene concentrations at 0.015 µg/egg. Benzo(a)pyrene at a concentration of 0.01 µg/egg caused 60 percent mortality in 18 days (Eisler 1987b).

Below are compound specific toxicity profiles for 2-methylnaphthalene (E.2.4.1), acenaphthene (E.2.4.2), acenapthylene (E.2.4.3), anthracene (E.2.4.4), fluorene (E.2.4.5), naphthalene (E.2.4.6), phenanthrene (E.2.4.7), benzo(a)anthracene (E.2.4.8), benzo(a)pyrene (E.2.4.9), benzo(b)fluoranthrene (E.2.4.10), benzo(g,h,i)perylene (E.2.4.11), benzo(k)fluoranthene (E.2.4.12), chrysene (E.2.4.13), dibenz(a,h)anthracene (E.2.4.14), fluoranthene (E.2.4.15), indeno(1,2,3-cd)pyrene (E.2.4.16), pyrene (E.2.4.17), acetophenone (E.2.4.18).

E.2.3.1 2-methylnaphthalene

2-Methylnaphthalene is a component of crude oil and a product of combustion which is released to the environment during natural fires. Emissions from petroleum refining, coal tar distillation, and gasoline and diesel fueled engines are major contributors of 2-methylnaphthalene to the environment. 2-methylnaphthalene may also be released to the environment via manufacturing effluents and the disposal of waste byproducts. Because of the widespread use of 2-methylnaphthalene in a variety products, 2-methylnaphthalene is also released to the environment through landfills, municipal waste water treatment facilities and waste incinerators (HSDB 1997).

2-methylnaphthalene should biodegrade rapidly in the environment where microorganisms have acclimated to PAHs and at a moderate rate in unacclimated soils and aquatic systems. Based on chemical properties, hydrolysis and bioconcentration of 2-methylnaphthalene should not be important fate processes in the environment; photolysis, adsorption, and volatilization are. The direct photolysis half-life for 2-methylnaphthalene in sunlit waters at midday, midsummer and 40 deg N latitude was predicted to be 54 hours. Photolysis is also likely to occur in air and on sunlit soil surfaces. A measured Koc of 8,500 indicates

2-methylnaphthalene will be immobile in soil In aquatic systems, 2-methylnaphthalene may partition from the water column to organic matter contained in sediments and suspended solids. A Henry's Law constant of 5 18 X 10-4 atm-cu m/mole at 25 deg C suggests volatilization of 2-methylnaphthalene from environmental waters may be important The volatilization half-lives from a model river and model pond (the latter considers the effect of adsorption) have been estimated to be 5 5 hours to 77 7 days, respectively. 2-methylnaphthalene is expected to exist entirely in the vapor phase in ambient air (HSDB 1997).

As stated previously, most mammals, fish and crustaceans will not tend to biomagnify PAHs in the food chain due to their ability to rapidly metabolize PAHs. Below is a list of bioaccumulation/bioconcentration rates reported by Eisler (1987b) and HSDB (1997) for this compound:

Taxonomic Group	BCF/BAF	Exposure Period
Clams	8 1	4 hour

No toxic mechanisms other than those described above for PAHs were located in the literature for this compound

Only one study was located that evaluated the toxicity of 2-methylnaphthalene to mammals 2-methylnaphthalene administered orally at a concentration of 5 mg/kg was lethal to rats (HSDB 1997).

In the aquatic environment, 2-methylnaphthalene was acutely toxic to invertebrates and fish at concentrations ranging from 1 1 to 5 0 milligrams per liter (mg/L) The 96-hour Median Lethal Concentration (LC50) for grass shrimp was 1 1 mg/L (Neff 1985) The 48-hour and 96-hour LC50 for larval Dungeness crab (*Cancer magister*) was 5 0 and 1 3 mg/L, respectively (HSDB 1997) The 24-hour LC50 for sheepshead minnow was 2 0 mg/L (Neff 1979). No chronic toxicity data for 2-methylnaphthalene was available in the literature

No compound-specific information could be found on the toxic effects of 2-methylnaphthalene to birds

E 2.3 2 Acenaphthene

Acenaphthene is a component of crude oil and a product of combustion which is released to the environment during natural fires Emissions from petroleum refining, coal tar distillation, coal combustion, and diesel fueled engines are major contributors of acenaphthene to the environment Acenaphthene is also used as a chemical intermediate and may be released to the environment via manufacturing effluents and the disposal of waste byproducts of petrochemical, pesticide, and wood preservative industries Because of the widespread use of acenaphthene a variety products, acenaphthene is also released to the environment through landfills, municipal waste water treatment facilities, and waste incinerators (HSDB 1997).

Acenaphthene should biodegrade rapidly in the environment The reported biodegradation half-lives for acenaphthene in aerobic soil and surface waters range from 10 to 60 days and 1 to 25 days, respectively Acenaphthene is more persistent in the environment in anaerobic conditions or at high concentrations due to toxicity to micro-organisms. The calculated Koc range of 2,065 to 3,230 indicates that acenaphthene will be slightly mobile in soils. In aquatic systems, acenaphthene can partition from the water column to organic matter

contained in sediments and suspended solids A Henry's Law constant of 1 55 X 10-4 atm-cu m/mole at 25 degrees Celsius (° C) suggests volatilization of 2-methylnaphthalene from environmental waters may be important. The volatilization half-lives from a model river and model pond, the latter considers the effect of adsorption, have been estimated to be 11 hours to 39 days, respectively Acenaphthene is expected to exist entirely in the vapor phase in ambient air (HSDB 1997)

As stated previously, most mammals, fish and crustaceans will not tend to biomagnify PAHs in the food chain due to their ability to rapidly metabolize PAHs. Below is a list of bioaccumulation/bioconcentration rates reported by Eisler (1987b) and HSDB (1997) for this compound:

Taxonomic Group	BCF/BAF	Exposure Period (Exposure Conc.)
Bluegill Sunfish (*L. macrochirus*)	387	28 day
Bluegill Sunfish (*L. macrochirus*)	2.6	28 day (8.94 µg/L)

No toxic mechanisms other than those described above for PAHs were located in the literature for this compound.

Only one study was available evaluating the effects of acenaphthene on mammals. Acenaphthene was orally administered to seven young rats at a concentration of 2,000 mg/kg BW for a period of 32 days. Effects observed at the end of the study included loss of body weight, changes in peripheral blood, increased aminotransferase levels in blood serum, and mild morphological damage to both the liver and kidney The rats also showed mild bronchitis and localized inflammation of peribronchial tissue (HSDB 1997)

In the aquatic environment, acenaphthene has been shown to be toxic to a variety of organisms In fish the 96-hour LC50s for brown trout (*Salmo trutta*), fathead minnows (*Pimephales promelas*), bluegills (*Lepomis macrochirus*), channel catfish (*Ictalurus punctatus*), and sheepshead minnows (*Cyprinodon variegatus*) were 0 58, 1.6, 1 7, 1 7, and 2 2 mg/L, respectively The 96-hour LC50s for invertebrates ranged from 0.97 mg/L in mysid shrimp (*Mysidopsis bahia*) to 2.0 mg/L for snails (*Aplexa hynorum*) (HSDB 1997). No chronic toxicity data for acenaphthene was available in the literature

No compound-specific information could be found on the toxic effects of acenaphthene on birds.

E 2 3 3 Acenapthylene

Acenaphthylene is a component of crude oil, coal tar and a product of combustion which may also be released to the environment in emissions from petroleum refining and coal tar distillation. Acenaphthylene is contained in a variety of coal tar products and may be released to the environment via manufacturing effluents and the disposal of manufacturing waste byproducts Because of the widespread use of materials containing acenaphthylene, releases to the environment also may occur through municipal waste water treatment facilities and municipal waste incinerators.

Acenaphthylene should biodegrade in the environment. The reported biodegradation half-lives for acenaphthylene in anaerobic soil range from 12 to 121 days. Acenaphthylene is not expected to hydrolyze or bioconcentrate in the environment but it will undergo direct photolysis in sunlit environmental media A calculated Koc range of 950 to 3315 indicates acenaphthylene will have a low to slight mobility in soil In aquatic systems, acenaphthylene

may partition from the water column to organic sediments and suspended solids. A Henry's Law constant of 1.13X10-5 atm-cu m/mole at 25° C suggests volatilization of acenaphthylene from surface waters may be significant fate process. The volatilization half-lives from a model river and a model pond (the latter considers the effect of adsorption) have been estimated to be 4 and 184 days, respectively. Acenaphthylene is expected to exist entirely in the vapor-phase in ambient air. In the atmosphere, reactions with photochemically produced hydroxyl radicals and ozone (respective estimated half-lives of 5 and 1 hours) are likely to be important fate processes (HSDB 1997)

As stated previously, most mammals, fish and crustaceans will not tend to biomagnify PAHs in the food chain due to their ability to rapidly metabolize PAHs. No bioconcentration/bioaccumulation data was available for this compound.

No toxic mechanisms other than those described above for PAHs were available in the literature for this compound

No compound-specific information could be found on the toxic effects of acenapthylene on mammals or aquatic organisms, or birds.

E.2.3 4 Anthracene

Anthracene is a ubiquitous product of incomplete combustion; sources include exhaust from gasoline and diesel engines, cigarette smoke, emissions from coal, oil, and wood burning stoves, furnaces and power plants. In the environment anthracene tends to biodegrade rapidly but does not hydrolyze. The reported half-lives for soils ranged from 3.3 to 139 days. Anthracene will adsorb very strongly to soil and thus will not migrate significantly into the groundwater. When anthracene is present near the soil surface it may also evaporate. Adsorption to soil will be expected to retard both evaporation and biodegradation processes. In aquatic systems anthracene tends to bind to sediments and particulate matter. As in the soils, in aquatic environments anthracene will biodegrade but will not hydrolyze. It will also be subject to direct photolysis near the water surface. In moving water the half-live of anthracene was predicted to range between 4 3 to 5 9 days. Adsorption of anthracene to sediments, and particulates may retard the evaporation, biodegradation, bioconcentration, and photolysis processes. In the atmosphere, anthracene will be subject to direct photolysis and the estimated vapor phase half-life in the atmosphere is 1 67 days as a result of reaction with photochemically produced hydroxyl radicals (HSDB 1997).

As stated previously, most mammals, fish and crustaceans will not tend to biomagnify this compound in the food chain due to their ability to rapidly metabolize PAHs. In addition, bioconcentration factors for anthracene tended to decrease with Aldrich humic acids (HSDB 1997). However, certain organisms which lack the PAH-metabolizing enzymes may bioaccumulate this compound to some extenet. Below is a list of bioaccumulation/bioconcentration rates reported by Eisler (1987b) and HSDB (1997) for this compound:

Taxonomic Group	BCF/BAF	Exposure Period
Cladoceran (*D. magna*)	200	60 months
Fathead Minnow (P. *promelas*)	485	2 to 3 days
Cladoceran (*D. magna*	760 to 1,200	1 day
Mayfly (*Hexagenia* sp.)	3,500	28 hours
Rainbow trout (*Salmo Gairdneri*)	4,400 to 9,200	72 hours
Benthic invertebrate (*P. hoyi*)	16,800	48 hours
Bluegills (*L. macrochirus*)	900	NA

No toxic mechanisms other than those described above for PAHs were located in the literature for this compound.

Very limited data was available evaluating the toxic effects of anthracene to mammals. A chronic oral dose of 3,300 mg/kg BW was carcinogenic to rodents (Eisler 1987b). A lethal dose of anthracene to mice was 17,000 mg/kg. Mice exposed to anthracene in this study also showed fatty liver degeneration (RTECS 1997). Anthracene was administered to groups of 20 male and female mice by oral gavage at doses of 0, 250, 500, and 1000 mg/kg/day for at least 90 days. Mortality, clinical signs, body weights, food consumption, opthalmology findings, hematology and clinical chemistry results, organ weights, organ-to-body weight ratios, gross pathology, and histopathology findings were evaluated. No treatment-related effects were noted at any concentration evaluated. (IRIS 1997)

Several studies evaluating the toxic effect to aquatic organisms were obtained for anthracene. Most studies were focused on photo toxic effects of anthracene. Acute mortality of bluegill sunfish (*Lepomis macrochirus*) dosed with anthracene at 12.7 micrograms (µg/L) and exposed to natural sunlight conditions was observed during a study of anthracene fate in outdoor channel microcosms. No mortality was observed under control conditions (natural sunlight and no anthracene). Fish survived when held in the shade downstream of sunlit contaminated water, arguing against mortality due to toxic anthracene photo-products in the water. Fish held 48 hours in anthracene contaminated water (12 µg/L) in a shaded channel died when placed in clean water and exposed to sunlight. After a similar exposure period, followed directly by 144 hours depuration in darkness, fish anthracene concentrations had decreased to preexposure concentrations, and no mortality was observed when fish were subsequently exposed to sunlight (HSDB 1997).

Protozoans (*Paramecium caudatum*) exposed to 0.1 µg/L of anthracene for 60 minutes, exhibited a 90% lethal photodynamic response. Photoinduced anthracene toxicity to Daphnia (*Daphnia pulex*) was investigated using organisms that were exposed to 3 concentrations of anthracene (3.0, 9.6, and 30 µg/L) in static bioassays on clear, partly cloudy, and cloudy days. Photoinduced anthracene toxicity was not observed under laboratory lighting conditions; it occurred only in the presence of solar radiation. A dose response relation was observed for both anthracene concentration and solar radiation intensity (HSDB 1997).

Acute toxicity concentrations from phototoxicity studies were also available in the literature for several additional species. The 24-hour LC50 Culicid mosquito larvae was 26.8 µg/L, the 96-hour LC50 juvenile bluegills (*Lepomis macrochirus*) was 11.9 µg/L, and the 5-hour LC50 for leopard frogs (*Rana pipiens*) was 0.065 ppm (HSDB 1997).

No compound-specific information could be found on the toxic effects of anthracene on birds.

E.2.3.5 Fluorene

Fluorene occurs in fossil fuels. Its release to the environment is wide spread since it is a common product of incomplete combustion. It is released to the atmosphere in emissions from the combustion of oil, gasoline, coal, wood, and refuse. If released to the atmosphere, fluorene will exist primarily in the vapor phase where it will degrade readily by photochemically produced hydroxyl radicals (estimated half-life of 29 hours). In soil or water, fluorene will biodegrade readily (aerobically) in the presence of acclimated microbes; microbial adaptation is an important fate process. Biodegradation can be slow in pristine soils or waters or under conditions of limited oxygen. Strong adsorption to soil and water

sediment is an important transport process. The half-life of fluorene in soil has been reported to range from 2 to 64 days (HSDB 1997). Volatilization of non-adsorbed fluorene from water may be important process with estimated half-lives of 15 and 167 hours from a model river and model pond respectively (HSDB 1997).

As stated previously, most mammals, fish and crustaceans will not tend to biomagnify PAHs in the food chain due to their ability to rapidly metabolize PAHs. Below is a list of bioaccumulation/bioconcentration rates reported by Eisler (1987b) and HSDB (1997) for this compound:

Taxonomic Group	BCF/BAF	Exposure Period
Fathead minnow (*P. promelas*)	1,480	28 days
Guppy Fish (*Poecilia reticulata*)	1,050 to 2,240	2 to 4 days
Mosquitofish (*Gambusia affinis*)	1,410	33 days

No toxic mechanisms other than those described above for PAHs were available in the literature for this compound.

Mice (25/sex/group) were exposed by gavage to 0, 125, 250, or 500 mg/kg/day fluorene suspended in corn oil for 13 weeks Parameters used to assess toxicity included food intake, body weight, clinical observations; hematology and serum chemistry and gross and histopathological examinations. Increased salivation, hypoactivity, and urine-wet abdomens in males were observed in all treated animals. The percentage of mice exhibiting hypoactivity was dose-related In mice exposed at 500 mg/kg/day, labored respiration, ptosis (drooping eyelids), and unkempt appearance were also observed A significant decrease in red blood cell count and packed cell volume were observed in females treated with 250 mg/kg/day fluorene and in males and females treated with 500 mg/kg/day Decreased hemoglobin concentration and increased total serum bilirubin levels were also observed in the 500 mg/kg/day group Decreases in erythrocyte count, packed cell volume, and hemoglobin concentration were all observed at 125 mg/kg; however, these effects, although apparently dose-dependent, were not statistically significant A significant decreasing trend in BUN and a significant increasing trend in total serum bilirubin were observed in both high-dose males and females. A dose-related increase in relative liver weight was observed in treated mice; a significant increase in absolute liver weight was also observed in the mice treated with 250 and 500 mg/kg/day fluorene A significant increase in absolute and relative spleen and kidney weight was observed in males and females exposed to 500 mg/kg/day and males at 250 mg/kg/day. Increases in the absolute and relative liver and spleen weights in the high-dose males and females were accompanied by histopathological increases in the amounts of hemosiderin in the spleen and in the Kupffer cells of the liver. No other histopathological lesions were observed (IRIS 1997)

Static aquatic toxicity tests were conducted on daphnids (*Daphnia magna*), larval midges (*Chironomus riparius*), amphipods (*Gammarus pseudolimnaeus*), snails (*Mudalia potosensis*), mayflies (*Hexagenia bilineata*), bluegill (*Lepomis macrochirus*), rainbow trout (*Salmo gairdneri*), fathead minnows (*Pimephales promelas*), aquatic macrophytes (*Chara sp*), and green algae (*Selanastrum capricornutum*). *Daphnia magna* was the most sensitive organism tested with a 48 hours median effective concentration of 0.43 mg/l Fathead minnows were the least sensitive species, with no mortality at fluorene concentrations as high as 100 mg/l. In a 14 day test, fluorene exposure inhibited algal production at a threshold level of approximately 3 0 mg/l Complete life cycle chronic toxicity tests were conducted with fluorene on daphnids and larval midges. Daphnid reproduction was significantly reduced at fluorene levels of 0 125 mg/l after 14 days. Emergence of larval midges was delayed at a concentration of 0 6 mg/l In a 30 day partial life cycle study conducted to

determine the impact of fluorene on growth, survival, and behavior of fingerling bluegill (*Lepomis macrochirus*), survival was reduced at exposures of 0.5 and 1.0 mg/l, and growth was inhibited at exposures of 0.25, 0.5, and 1.0 mg/l. Measurements of several behavioral characteristics indicated impairment of swimming and feeding activities at fluorene concentrations as low as 0.12 mg/l (HSDB 1997)

No compound-specific information could be found on the effects of fluorene on birds.

E.2.3.6 Naphthalene

Naphthalene enters the atmosphere primarily from fugitive emissions and exhaust connected with its presence in fuel oil and gasoline. In addition, there are discharges on land and into water from spills during the storage, transport and disposal of fuel oil, coal tar, and other petroleum products. Naphthalene is the most abundant single constituent of coal tar (Budavari et al. 1989). Once in the atmosphere, naphthalene rapidly photodegrades (half-life 3-8 hours). Naphthalene released into the water column is lost due to volatilization, photolysis, adsorption to sediment and particulate matter, and biodegradation. The principal loss processes will depend on local conditions, but half-lives can be expected to range from a couple of days to a few months. When adsorbed to sediment, biodegradation occurs much more rapidly than in the overlying water column. Naphthalene is adsorbed moderately to soil and undergoes biodegradation. Evaporation of naphthalene from the top soil layer will be important but the importance of the process will gradually decrease as the soil depth increases. However, in some cases it will appear in the groundwater where biodegradation still may occur if conditions are aerobic (HSDB 1997).

As stated previously, most mammals, fish and crustaceans will not tend to biomagnify PAHs in the food chain due to their ability to rapidly metabolize PAHs. Below is a list of bioaccumulation/bioconcentration rates reported by Eisler (1987b) and HSDB (1997) for this compound:

Taxonomic Group	BCF/BAF	Exposure Period
Sandworm (*Neanthes arenaceodenta*)	40	1 day
Sandworm (*Neanthes arenaceodenta*)	Not detectable	1 day exposure and 300 days post-exposure
Clam (*Rangia cuneata*)	6	1 day
Cladoceran (*Daphnia magna*)	131	1 day
Crustaceans (Average of 3 species)	195 to 404	72 hour
Bluegill (*Lepomis macrochirus*)	310	1 day

No toxic mechanisms other than those described above for PAHs were available in the literature for this compound.

Several studies were available in the literature documenting the toxic effects of naphthalene to mammalian species. Pregnant rabbits were gavaged with 16 mg/kg of metabolite of naphthalene on days 20, 22, and 24 of gestation. Cataracts and retinal damage were found in the offspring. Dogs administered 420 and 1,530 mg/kg naphthalene (in a solid form) in a single oral dose showed decreases of 29 and 33%, respectively, in blood hemoglobin concentrations. Male and female mice were dosed with 267 mg/kg/day of naphthalene for 14 days. Effects observed included increased mortality, decreased terminal body weights, a decrease in absolute thymus weight (30 percent) in males, and an increase bilirubin levels and a decrease in absolute and relative spleen and lung weights compared to controls in females. No carcinogenic response was observed in rats given oral doses of 10 to 20 mg/day naphthalene, 6 days/week from day 100 to day 800 of age. The median lethal dose (LD50s)

were available for several species of rats and mice The LD50s ranged from 533 mg/kg in male CD-1 mice (gavage) to 2,600 mg/kg in Sprague Dawley rats (oral) (HSDB 1997)

For aquatic species, LC50s ranged from 2,000 mg/L in dungeness crab (*Cancer magister*) to 150,000 mg/L in mosquitofish (*Gambusia affinis*). Other species evaluated [including grass shrimp, amphipods (*Elasmopus pectenicrus*), coho salmon (*Oncorhyncus kisutch*), and sandworms] all had LC50s between 2,400 and 3,800 mg/L (Eisler 1987b). The 96-hour Median Threshold Limits (TLms) for pink salmon (*Onchorynchus gorbuscha*) and shrimp (*Pandalus goniurus*) were 1.2 mg/L and 0.97 mg/L at 12° C, respectively (HSDB 1997)

Larval mud crabs were exposed continuously from hatching through 1st stage to sublethal concentrations of naphthalene (0, 75, 150 or 300 mg/L). During the study, salinity and temperature levels varied but at optimal salinity levels no consistent effect of naphthalene on growth was observed (HSDB 1997)

No compound-specific information could be found on the toxic effects of naphthalene on birds.

E.2.3.7 Phenanthrene

Phenanthrene is a component of the incomplete combustion of a variety of organic compounds including wood and fossil fuels. Phenanthrene was detected in used motor oil (158 mg/kg), crude oils (129 mg/kg), and lubricating fuels (7.1 mg/kg). In soils phenanthrene will likely biodegrade, and volatilization is not expected to be significant Phenanthrene strongly binds to soil and should not leach extensively to groundwater When released to water, adsorption of phenanthrene to suspended sediments is expected to remove most of the compound from solution. Photolysis is expected to occur near the water surface, and biodegradation of phenanthrene in the water column is expected Oxidation and volatilization are not expected to be significant Phenanthrene released to the atmosphere is expected to rapidly adsorb to particulate matter (HSDB 1997)

As stated previously, most mammals, fish and crustaceans will not tend to biomagnify PAHs in the food chain due to their ability to rapidly metabolize PAHs Below is a list of bioaccumulation/bioconcentration rates reported by Eisler (1987b) and HSDB (1997) for this compound:

Taxonomic Group	BCF/BAF	Exposure Period
Clam (*Rangia cuneata*)	32	1 day
Cladoceran (*Daphnia pulex*)	325	1 day

No toxic mechanisms other than those described above for PAHs were available in the literature for this compound

Limited data on the effects of phenanthrene on mammals was available in the literature Phenanthrene rarely caused tumors or papillomas when ingested or applied directly to the skin of rats and mice. The oral LD50 in mice was calculated to be 700 mg/kg (Eisler 1987b). Rats injected with a single intraperitoneal injection of phenanthrene at a concentration of 150 mg/kg BW had altered blood serum chemistry and nephrotoxicity (Eisler 1987b)

No information on chronic toxicity was obtained from the literature for any aquatic organisms The marine snail, (*Littorina littorea*), was exposed to phenanthrene. Phenanthrene was added each day for 3 days at a concentration of 40 mg/L. Digestive cell

lysosomal labilization as measured by beta-glucuronidase and arylsulfatase was used as a measure of toxicity. Snails exposed to the phenanthrene exhibited a pronounced lysosome labilization compared to the control group (HSDB 1997). A 24-hour LC50 of 370 µg/L was reported for grass shrimp and a 96-hour LC50 of 600 µg/kg was reported for sandworms (Eisler 1987b)

No compound-specific information could be found on the toxic effects of phenanthrene on birds.

E.2.3.8 Benzo(a)anthracene

Benzo(a)anthracene is a universal product of combustion of organic matter. Typical sources of benzo(a)anthracene are engine exhaust, cigarette smoke, coal-tar pitch, coke oven emissions, and soot and smoke of industrial and domestic origin. Benzo(a)anthracene is a produced by the combustion of organic matter. Its production is favored by oxygen-deficient flames with temperatures in the range of 650-900° C and by fuels which are not highly oxidized. In both air and water benzo(a)anthracene is typically largely associated with particulate matter. In the water column benzo(a)anthracene will rapidly become adsorbed to sediment or particulate matter in the water column. In the unadsorbed state it will degrade by photolysis in a matter of hours to days, while adsorbed there is little evidence of photodegradation. Benzo(a)anthracene typically will not leach into the groundwater and will remain in the upper few centimeters of soil since it is strongly adsorbs to soil particles. Benzo(a)anthracene will very slowly biodegrade when colonies of microorganisms are acclimated but this is a slow process (half-life about 1-year). Benzo(a)anthracene in the atmosphere will be transported long distances and will probably be subject to photolysis and photooxidation although there is little documentation about the rate of these processes in the literature (HSDB 1997).

As stated previously, most mammals, fish and crustaceans will not tend to biomagnify PAHs in the food chain due to their ability to rapidly metabolize PAHs. Below is a list of bioaccumulation/bioconcentration rates reported by Eisler (1987b) and HSDB (1997) for this compound:

Taxonomic Group	BCF/BAF	Exposure Period
Cladoceran (*Daphnia pulex*)	10,109	1 day

No toxic mechanisms other than those described above for PAHs were available in the literature for this compound.

Limited data on the effects of benzo(a)anthracene on mammals was available in the literature. A chronic oral dose of 2.0 mg/kg BW per day was carcinogenic to rodents (Eisler 1987b)

A 6-month LC87 value for bluegill (*Lepomis macrochirus*) is 1,000 µg/L (Eisler 1987b).

No compound-specific information could be found on the toxic effects of benzo(a)anthracene on birds.

E.2.3.9 Benzo(a)pyrene

The release of Benzo(a)pyrene to the environment is widespread since it is an ubiquitous product of incomplete combustion. It is largely associated with particulate matter, soils, and sediments. Although environmental concentrations are highest near sources, its presence in

places distant from primary sources indicates that it is reasonably stable in the atmosphere and capable of long distance transport. When released to air it may be subject to direct photolysis, although adsorption to particulates apparently can retard this process. In the water, benzo(a)pyrene will adsorb very strongly to sediments and particulate matter; bioconcentrate in aquatic organisms which can not metabolize it, but will not hydrolyze. It may be subject to significant biodegradation, and direct photolysis may be important near the surface of waters; adsorption, however, may significantly retard these two processes Evaporation may be important but again adsorption to sediments and particulates will limit evaporative rates If released to soil it will be expected to adsorb very strongly to the soil; it will not be expected to appreciably leach to groundwater, hydrolyze, or evaporate It may be subject to appreciable biodegradation in soils, especially in preexposed soils

As stated previously, most mammals, fish and crustaceans will not tend to biomagnify PAHs in the food chain due to their ability to rapidly metabolize PAHs. Below is a list of bioaccumulation/bioconcentration rates reported by Eisler (1987b) and HSDB (1997) for this compound:

Taxonomic Group	BCF/BAF	Exposure Period
Algae (*Oedogonium cardiacum*)	5,258	3 day
Clam (*Rangia cuneata*)	9 to 236	1 day
Oyster (*Crassostrea virginica*)	242	14 day
Snail (*Physa* sp.)	82,231	3 day
Cladoceran (*Daphnia magna*)	2,837	6 hour
Cladoceran (*Daphnia magna*)	134,248	3 day
Midge (*Chironomus riparius*), larvae	166	8 hour
Bluegill (*Lepomis macrochirus*)	12	4 hour
Mosquitofish (*Gambusia affinis*)	930	3 day

In certain species dietary ingestion of PAHs has been shown to be an important route of exposure In a laboratory aquatic ecosystem study, Lu et al (1977) determined that almost all of the benzo(a)pyrene accumulated by mosquitofish (*Gambusia affinis*) was through dietary ingestion with negligible accumulations from the medium (i e , water)

No toxic mechanisms other than those described above for PAHs were available in the literature for this compound

Benzo(a)pyrene has been shown to cause a variety of adverse reproductive and carcinogenic effects in mammals Oral administration of 10 mg/kg BW/day of benzo(a)pyrene to CD-1 mice during pregnancy resulted in a reduction of gonadal weight in the offspring but had no significant effect on body weight of offspring These exposure levels also resulted in a reduction of fertility and reproductive capacity At a dose of 40 mg/kg BW/day during pregnancy almost complete sterility was observed in offspring of both sexes In another study, rats fed 1 mg of benzo(a)pyrene per gram of diet during pregnancy resulted in many resorptions and dead fetuses in the offspring, although only one malformed fetus was observed in 7 litters (HSDB 1997). Sims and Overcash (1978) evaluated acute toxicity of benzo(a)pyrene in mice and rats Of the four PAH compounds evaluated benzo(a)pyrene had the lowest reported LD50, 50 mg/kg BW/day. The LD50s for the other PAH compounds (phenanthrene, naphthalene, and fluoranthene) were between 700 and 2,000 mg/kg BW/day. A chronic oral dose of 0 002 mg/kg BW/day was determined to be carcinogenic to rodents (Eisler 1987b).

Rainbow trout alevins were reared in a range of aqueous benzo(a)pyrene concentrations (0 00, 0 08, 0 21, 0 39, 1 48, 2 40, or 2 99 ng/mL) At the conclusion of the study

histological and skeletal examinations were performed Nuclear pycnosis and karyorrhexis were most common in neuroectodermal and mesodermal derivatives and in liver of benzo(a)pyrene-treated alevins Microphthalmia was noted in 17% of the test fish and was frequently associated with a patent optic fissure Depressed mitotic rates in the retina and brain, but not liver, were seen in alevins reared in 0.21 to 1.48 ng/ml aqueous benzo(a)pyrene Test alevins had a significantly higher incidence of skeletal malformations in the skull and vertebral column and abnormalities of vertebral arcualia often corresponded to areas of kyphoscoliotic flexures The ecological significance of such morphological abnormalities would be decreased feeding and growth and inability to escape predation, leading to reduced survival A 96-hour LC50 value for sandworms (*Neanthes arènceodentata*) exceed the highest test dose of 1,000 µg/L (Eisler 1987b).

No compound-specific information could be found on the toxic effects of benzo(a)pyrene on birds

E 2 3 10 Benzo(b)fluoranthrene

Benzo(b)fluoranthene is typically formed as a result of the incomplete combustion of a variety of fuels including wood and fossil fuels When released to water, adsorption to suspended particles and sediments is expected to remove most of the benzo(b)fluoranthene from solution Photolysis and photooxidation of the benzo(b)fluoranthene which remains in solution is expected to occur, but adsorbed benzo(b)fluoranthene is expected to resist these processes Volatilization and biodegradation of dissolved benzo(b)fluoranthene may also occur in aquatic systems When released to the soil some biodegradation and volatilization may also occur Due to the anticipated strong adsorption to the soil, these processes occur at very slow rates and are considered to be relatively insignificant processes Benzo(b)fluoranthene in the atmosphere is likely to be adsorbed to particulate matter, and will be subject to wet and dry deposition Benzo(b)fluoranthene in the vapor phase will react with photochemically generated, atmospheric hydroxyl radicals with an estimated half-life of 1 day Photolysis of vapor phase benzo(b)fluoranthene will be rapid, but the adsorbed compound may not photolyze significantly

As stated previously, most mammals, fish and crustaceans will not tend to biomagnify PAHs in the food chain due to their ability to rapidly metabolize PAHs No bioconcentration/bioaccumulation data was available for this compound

No toxic mechanisms other than those described above for PAHs were available in the literature for this compound

No compound-specific information could be found on the toxic effects of benzo(a)fluoranthrene on mammals, aquatic organisms, or birds

E 2 3 11 Benzo(g,h,i)perylene

Benzo(g,h,i)perylene is a component of crude oil and a product of the incomplete combustion of a variety of organic compounds including wood and fossil fuels Emissions from petroleum refining, coal tar distillation, and the combustion of wood, coal, oil, propane, gasoline and diesel fuels are major contributors of benzo(g,h,i)perylene to the environment Benzo(g,h,i)perylene is not commercially produced in the USA; however, benzo(g,h,i)perylene may be released to the environment through industrial effluents, municipal waste water treatment facilities and waste incinerators Benzo(g,h,i)perylene biodegrades slowly in the environment The reported biodegradation half-lives for benzo(g,h,i)perylene in aerobic soil range from 600 to 650 days Benzo(g,h,i)perylene is not

expected to hydrolyze in the environment. A calculated Koc range of 90,000 to 400,000 indicates benzo(g,h,i)perylene will be highly immobile in soil, limiting its leaching into groundwater. In aquatic systems, benzo(g,h,i)perylene partitions from the water column to organic matter contained in sediments and suspended solids. The volatilization half-lives from a model river and a model pond (the latter considers the effect of adsorption) have been estimated to be 38 days and over 1,500 years, respectively. In the atmosphere, the vapor phase reaction with photochemically produced hydroxyl radicals (half-life of 2 hours) may be an important fate process. Benzo(g,h,i)perylene may also undergo direct photolysis in the atmosphere. However, benzo(g,h,i)perylene is expected to exist almost entirely in the particulate phase in ambient air. In the atmosphere, adsorption to stabilizing substrates will allow benzo(g,h,i)perylene to be transported over long distances in the atmospheric aerosol. Its presence in lake sediments in the Adirondack Forest, NY, has been attributed to physical deposition. Removal of adsorbed benzo(g,h,i)perylene from the atmosphere may occur by wet and dry deposition (HSDB 1997)

As stated previously, most mammals, fish and crustaceans will not tend to biomagnify PAHs in the food chain due to their ability to rapidly metabolize PAHs. No bioconcentration/bioaccumulation data was available for this compound.

No toxic mechanisms other than those described above for PAHs were available in the literature for this compound.

The physiological effects of a single ingested dose of Prudhoe bay crude oil, its aromatic fractions, and Prudhoe bay crude corexit 9527 emulsion were studied in nestling herring gulls (*Larus argentatus*). The high molecular weight aromatic compounds, including benzo(g,h,i)perylene, were responsible for retardation of growth and increases in adrenal and nasal gland weight (HSDB 1997)

No compound-specific information could be found on the toxic effects of benzo(g,h,i)perylene on mammals or aquatic organisms, or birds.

E.2.3.12 Benzo(k)fluoranthene

Benzo(k)fluoranthene is a component of crude oil and a product of the incomplete combustion of a variety of organic compounds including wood and fossil fuels. Emissions from petroleum refining, coal tar distillation, and the combustion of wood, coal, oil, propane, gasoline and diesel fuels are major contributors of benzo(k)fluoranthene to the environment. Benzo(k)fluoranthene is also released to the environment through industrial effluents, municipal waste water treatment facilities and waste incinerators. Benzo(k)fluoranthene biodegrades slowly in the environment. In soils benzo(k)fluoranthene adsorbs strongly to the soil particles and remains in the upper layers and with little to no leaching into groundwater. Biodegradation may also occur but will be very slow (half-life about 2 years in soils with acclimated microorganisms). Benzo(k)fluoranthene is not expected to hydrolyze in the environment. In aquatic systems, benzo(k)fluoranthene partitions from the water column to organic matter contained in sediments and suspended solids. In the atmosphere, the vapor phase reaction with photochemically produced hydroxyl radicals (half-life of 2 hours) may be an important fate process. Benzo(k)fluoranthene may also undergo direct photolysis in the atmosphere. However, benzo(k)fluoranthene is expected to exist primarily in the particulate phase in ambient air. Removal of adsorbed benzo(k)fluoranthene from the atmosphere may occur by wet and dry deposition.

As stated previously, most mammals, fish and crustaceans will not tend to biomagnify PAHs in the food chain due to their ability to rapidly metabolize PAHs. No

will not typically leach to the groundwater, hydrolyze or evaporate In soils it will be subject to biodegradation with reported half-lives ranging between 18 and 21 days. In aquatic systems, dibenz(a,h)anthracene will adsorb very strongly to sediments and particulate matter. Based on limited data from laboratory screening tests using settled domestic wastewater and activated sludge, dibenz(a,h)anthracene may be subject to biodegradation in natural waters. Since dibenz(a,h)anthracene adsorbs solar radiation strongly, it may also be subject to direct photolysis in natural waters. Adsorption to sediments may significantly retard these degradation processes Hydrolyzation and evaporation are not considered to be significant fate processes. In the atmosphere it will likely be associated with particulate matter and may be subject to moderately long range transport, depending mainly on the particle size distribution and climatic conditions which will determine the rates of wet and dry deposition Dibenz(a,h)anthracene may be subject to direct photolysis in the atmosphere; however, adsorption may significantly retard the rate of photolysis. The estimated vapor phase half-life in the atmosphere is 1 day as a result of reaction with photochemically produced hydroxyl radicals (HSDB 1997)

As stated previously, most mammals, fish and crustaceans will not tend to biomagnify PAHs in the food chain due to their ability to rapidly metabolize PAHs. Below is a list of bioaccumulation/bioconcentration rates reported by Eisler (1987b) and HSDB (1997) for this compound:

Taxonomic Group	BCF/BAF	Exposure Period (Exposure Conc.)
Cladoceran (*Daphnia magna*)	652	Unknown (0.2 mg/kg Aldrich humic acids added)
Cladoceran (*Daphnia magna*)	773	Unknown (2 0 mg/kg Aldrich humic acids added)

No toxic mechanisms other than those described above for PAHs were available in the literature for this compound.

Forty-two mice receiving 0 2 mg/mL of olive oil emulsion in place of drinking water at a average dose of 0.76 to 0.85 mg/day showed a high incidence of pulmonary adenomatosis, alveologenic carcinoma of the lung, hemangio-endothliomas, and mammary carcinomas compared to the controls (HSDB 1997) No additional chronic or acute toxicity data was available in the literature for mammals.

A median threshold limit (TLm) of 1 mg/L was calculated for *Neanthes arenceodentata* in a 96-hour static bioassay (HSDB 1997) The LD50 for sandworms exceeded the highest test concentration, 1,000 µg/L, in a 96-hour bioassay (Eisler 1987b)

No compound-specific information could be found on the toxic effects of dibenz(a,h)anthracene on birds.

E 2 3.15 Fluoranthene

Fluoranthene is a component of crude oil and a product of the incomplete combustion of a variety of organic compounds including wood and fossil fuels. Its release is greatest in areas of high anthropogenic activity. In the environment fluoranthene is associated with particulate matter, including soils, sediments and, suspended solids. In aquatic system, fluoranthene will rapidly become adsorbed to sediment and particulate matter in the water column. In the unadsorbed state it will degrade by photolysis (half-life days to week). It appears to be stable in sediment for decades or more In terrestrial systems, it will strongly adsorb to soils and remain in the upper few centimeters of the soil limiting its leaching to

groundwater Fluoranthene will typically biodegrade in a soils, with the most rapid rates occurring when in the soil contains acclimated microorganisms. The fluoranthene released in the atmosphere will photodegrade in the free state (half-life 4-5 days) Aerosols and particulate matter containing sorbed fluoranthene is sufficiently stable to be transported long distances while being subject to wet and dry deposition (HSDB 1997).

As stated previously, most mammals, fish and crustaceans will not tend to biomagnify PAHs in the food chain due to their ability to rapidly metabolize PAHs. Below is a list of bioaccumulation/bioconcentration rates reported by Eisler (1987b) and HSDB (1997) for this compound:

Taxonomic Group	BCF/BAF	Exposure Period
Fathead minnow (*Pimephales promelas*)	3,980	7 days
Rainbow trout (*Salmo Gairdneri*)	380	21 days
Oysters	12,300	2 days

No toxic mechanisms other than those described above for PAHs were available in the literature for this compound

Male and female mice (20/sex/group) were exposed by gavage for 13 weeks with 0, 125, 250, or 500 mg/kg/day fluoranthene A fifth group of mice (30/sex) was established in the study for baseline blood evaluations. Body weight, food consumption, and hematological and serum parameter values were recorded at regular intervals during the experiment. At the end of 13 weeks, the animals were sacrificed, organ weights were measured, and a histopathological evaluation was performed. All treated mice exhibited nephropathy, increased salivation, and increased liver enzyme levels in a dose-dependent manner. However, these effects were either not significant, not dose-related, or not considered adverse at 125 mg/kg/day. Mice exposed to 500 mg/kg/day had increased food consumption and increased body weight. Mice exposed to 250 and 500 mg/kg/day had statistically increased serum glucose phosphate transferase (SGPT) values and increased absolute and relative liver weights. Compound-related microscopic liver lesions (indicated by pigmentation) were observed in 65 and 87.5% of the mid- and high-dose mice, respectively (IRIS 1997). The oral LD50 in rats was calculated to be 2,000 mg/kg (RTECS 1997)

In aquatic systems, LC50 concentrations for 96-hour toxicity tests were available for mysid shrimp (*Mysidopsis bahia*), bluegills (*Lepomis macrochirus*), polycheates, and sheepshead minnows (*Cyprinodon variegatus*). The sensitivities of three organisms to fluoranthene varied considerably Mysid shrimp had the lowest LC50 (0 04 mg/L) followed by bluegills (4 0 mg/L), polycheates (500 mg/L), and sheepshead minnows (560 mg/L) The Median Ecological Effects (EC50s) for alga (*Selenastrum capricornutum*) for 96-hour bioassays were 55 and 46 mg/L for effects on chlorophyll and effects on cell numbers, respectively

No compound-specific information could be found on the toxic effects of fluoranthene on birds

E 2.3 16 Indeno(1,2,3-cd)pyrene

Indeno(1,2,3-cd)pyrene is formed during most combustion or elevated temperature processes that involve compounds containing carbon and hydrogen (e.g., coal, wood, and gasoline combustion, municipal waste incineration, coke ovens, and cigarette smoke) Indeno(1,2,3-cd)pyrene has also been found in gasoline, fresh and used motor oil, and road runoff. Indeno(1,2,3-cd)pyrene released to soil will sorb strongly (estimated Koc = 20,146) and hence is not expected to leach into the groundwater No information was located

regarding volatilization, hydrolysis, or biodegradation of indeno(1,2,3-cd)pyrene terrestrial or aquatic systems. In aquatic systems, indeno(1,2,3-cd)pyrene will sorb strongly to suspended particulate matter and sediments. Almost all indeno(1,2,3-cd)pyrene released to the atmosphere will be sorbed to particulate matter; thus its atmospheric fate will primarily depend on physical processes such as dry and wet deposition (HSDB 1997).

As stated previously, most mammals, fish and crustaceans will not tend to biomagnify PAHs in the food chain due to their ability to rapidly metabolize PAHs. No bioconcentration/bioaccumulation data was available for this compound.

No toxic mechanisms other than those described above for PAHs were available in the literature for this compound

No compound-specific information could be found on the toxic effects of indeno(1,2,3-cd)pyrene on mammals, aquatic species, or birds

E 2 3 17 Pyrene

Pyrene is a common product of incomplete combustion, largely associated with particulate matter, soil, and sediment. It is reasonably stable when adsorbed by particulate matter in the atmosphere and capable of long distance transport In water, it adsorbs readily to sediment and particulate matter, but does not hydrolyze It may be subject to significant biodegradation; direct photolysis may be important near the water surface It is expected to adsorb very strongly to soil and not appreciably leach to the ground water. It is not expected to significantly evaporate from or hydrolyze in soil (HSDB 1997)

As stated previously, most mammals, fish and crustaceans will not tend to biomagnify PAHs in the food chain due to their ability to rapidly metabolize PAHs. Below is a list of bioaccumulation/bioconcentration rates reported by Eisler (1987b) and HSDB (1997) for this compound:

Taxonomic Group	BCF/BAF	Exposure Period
Cladoceran (*Daphnia pulex*)	2702	1 day
Rainbow trout (*Salmo Gairdneri*)	72	Not known
Fathead minnow (*P. promelas*)	600 to 970	Not known

No toxic mechanisms other than those described above for PAHs were available in the literature for this compound.

Male and female mice (20/sex/group) were exposed by gavage to 0, 75, 125, or 250 mg/kg/day pyrene in corn oil for 13 weeks The toxicological parameters examined in this study included body weight changes, food consumption, mortality, clinical pathological evaluations of major organs and tissues, and hematology and serum chemistry. Nephropathy, characterized by the presence of multiple foci of renal tubular regeneration, often accompanied by interstitial lymphocytic infiltrates and/or foci of interstitial fibrosis, was present in 4, 1, 1, and 9 male mice in the control, low-, medium-, and high-dose groups, respectively Similar lesions were seen in 2, 3, 7, and 10 female mice in the 0, 75, 125, and 250 mg/kg treatment groups. The kidney lesions were described as minimal or mild in all dose groups (IRIS 1997) The oral LD50 in rats and mice were calculated to be 2,700 and 800 mg/kg, respectively. Toxic effects observed in both mice and rats include conjunctive irritation, excitement, and muscle contraction or spasticity (RTECS 1997).

A median threshold limit (TLm) of 0.0026 mg/L/96 hours at 24 to 27° C in a static bioassay was reported for the mosquito fish (HSDB 1997)

No compound-specific information could be found on the toxic effects of pyrene on birds.

E.3 Pesticides

E.3.1 DDT

DDT and its metabolites (referred to collectively in this section as DDTr) are hydrophobic, and thus would not be expected to be present in surface waters at high concentrations. The majority of DDTr entering aquatic systems is expected to accumulate in sediments and biological tissues. DDT and its metabolites are known to accumulate in biological tissues, particularly lipids, where they may be stored for extended periods of time and be passed on to higher trophic level organisms. Several studies have indicated that DDTr biomagnifies, or is found in biological tissues at increasing concentrations at higher trophic levels. Biologically accumulated DDT (or its metabolites) may be metabolized to another form (i.e., DDT may be transformed to DDE). When fat reserves are metabolized, the DDT or transformed metabolite is released into the system, where it may result in a toxic response. DDTr may act as a direct toxin to some receptors; however, because of its tendency to concentrate in biological tissues, higher trophic level receptors may be at increased risk through ingestion of contaminated food sources

DDT and its metabolites appear to affect the reproductive success of many receptors. One well documented response is eggshell thinning in birds exposed to *p,p'*-DDE, which affects the activity of Ca^{2+} ATP-ase systems in the shell gland, thereby interfering with the deposition of calcium in the shell (Lundholm 1987; Lundholm 1988; Miller *et al.* 1976). Eggshell thinning of greater than 20 percent has been associated with decreased nesting success due to eggshell breakage (Anderson and Hickey 1972; Dilworth *et al.* 1972) Because of tendency of DDTr to magnify in food chains, higher trophic level birds (i.e., piscivorous, raptors) appear to be at greater risk for egg loss due to shell thinning.

Another well defined effect of DDTr exposure is inhibition of acetylcholinesterase (AChE) activity. Inhibition of this enzyme results in the accumulation of acetylcholine in the nerve synapses, resulting in disrupted nerve function. Chronic inhibition of 50 percent of brain AChE has been associated with mortality in birds (Ludke *et al.* 1975; Hill and Fleming 1982).

The effects of DDTr on other receptor groups are not as clearly defined as in birds. Recent studies indicate that DDTr (especially *o,p'* isomers) may mimic estrogen, resulting in adverse reproductive effects. Observed effects include feminization and increased female:male population ratios for some receptors. Other responses include histopathological changes, alterations in thyroid function, and changes in the activity of various enzyme groups (Peakall 1993).

E.3.2 Dieldrin

Dieldrin is a non-systemic and persistent cyclodiene insecticide. It was broadly used in the United States until 1974, when the EPA restricted its use to termite control via direct soil injection and for non-food seed and plant treatment. Dieldrin is no longer produced commercially in the U.S. (HSDB 1997)

Dieldrin is extremely persistent in the environment due to its extremely low volatility and low solubility in water. The time required to degrade 95% of dieldrin in soil has been estimated to vary from 5 to 25 years. It is highly lipophilic and is therefore prone to bioaccumulate and biomagnify (HSDB 1997). A variety of bioconcentration factors have been calculated for dieldrin, ranging from

128 for an alga to 68,286 for whole body yearling lake trout (U.S. EPA 1980).

In the aquatic environment, dieldrin is extremely toxic, with 96-hour acute LC50's ranging from 5.0 ug/L for the isopod *Asellus brevicaudus* to 740 ug/L for a crayfish. For fish, the most sensitive species is the rainbow trout, with a 96-hour LC50 of between 1.1 and 9.9 ug/L. The most resistant fish species is the goldfish, with a 96-hour LC50 of 41 ug/L. In a chronic study using *Daphnia magna*, a chronic value of 57 ug/L was obtained. Two chronic studies have been conducted using fish. One was an early-life stage exposure using rainbow trout in which a chronic value of 0.22 ug/L was obtained. The other study was a three-generation study using the guppy, in which a chronic value of 0.45 ug/L was obtained (U.S. EPA 1980).

In mammals, dieldrin is rapidly absorbed from the GI tract upon ingestion. It is then transported from the liver to various tissues in the body, including the brain, blood, liver, and adipose tissue. Dieldrin is metabolized by the mixed function oxidase (MFO) enzyme system. For most species (rat, mouse, dog, monkey, and sheep), the acute oral toxicity is between 20 and 70 mg/kg. The toxicity appears to be related to the central nervous system, with stimulation, hyperexcitability, hyperactivity, incoordination, and exaggerated body movement, ultimately leading to confusion, depression, and death (EPA 1980).

Dieldrin has been shown to cross the placental barrier, and for that reason has been studied for its teratogenic properties and reproductive effects. When mice were fed 25 mg/kg of dieldrin in the diet for six generations, parameters such as fertility, gestation, viability, lactation, and survival of the young were adversely affected. When hamsters were fed one dose equivalent to one-half the LD50 of dieldrin, increased fetal death, decreased fetal growth, open eye, webbed feet, cleft palate, and other effects were observed. Two later studies were performed in which lower dosages of dieldrin were administered, and equivocal results were obtained (U.S. EPA 1980).

In birds, the oral LD50 of dieldrin was determined to be 6.9 mg/kg BW using the sharp-tailed grouse. A variety of reproductive effects have also been observed in birds, including decreased egg production and fertility. Studies have shown that organochlorine insecticides induce liver enzymes that lower estrogen levels and result in late breeding and other related reproductive manifestations. A correlation has also been established between egg concentrations of dieldrin, eggshell thickness, and hatching success. In addition, studies in male chickens, pheasants and quail have indicated that dieldrin causes a reduction in testicular size and alters homone metabolism (U.S. EPA 1976).

E.3.3 Heptachlor

Heptachlor is used in the United States primarily for termite and other wood-destroying insect control (in 1983, the use of heptachlor as an insecticide was restricted to termite control). The application of this pesticide thus results in the contamination of soil surrounding wooden structures and buried cable closures (U.S. EPA 1988). The release of heptachlor to soil surfaces results in the volatilization of this compound, usually occurring more rapidly in moist soil than in dry soil. Hydrolysis is expected to be a significant mechanism of heptachlor removal if the compound is incorporated into the soil. The half-life of heptachlor in soil was calculated to range from 0.4 to 0.8 years. In soil, heptachlor will degrade to 1-hydroxychlordene, heptachlor epoxide, and an unidentified metabolite that is hydrophilic than heptachlor epoxide. Biodegradation may be important, especially under anaerobic conditions. Heptachlor is expected to adsorb strongly to soils and, therefore, to resist leaching into ground water. The release of heptachlor to water will result in hydrolysis to 1-hydroxychlordene (half-life of about 1 day) and volatilization. Bioconcentration by aquatic organisms may contribute to heptachlor removal from water. Bioconcentration factors for aquatic organisms and heptachlor are high; 3,800 in mosquito fish; 21,379 in sheepshead minnows; and 19,952 in fathead minnows. Bioconcentration may be limited, however, by the rapidity of heptachlor hydrolysis to 1-hydroxychlordene and the adsorption of heptachlor to sediments. The adsorption to sediments is expected to be slow compared

to hydrolysis (Howard 1991; U S EPA 1988).

Heptachlor exhibits moderate acute toxicity to terrestrial organisms but is extremely toxic to aquatic organisms and birds. It is persistent in the environment, virtually insoluble in water, stable in daylight and air, and bioaccumulates. In biological systems, heptachlor is rapidly epoxidized to heptachlor epoxide. The precise mode of action in biological systems is not known (U S. EPA 1988). The toxic effects of heptachlor are not specific for any one organ system. The liver and central nervous system are most significantly affected by heptachlor. Effects have also been observed in the reproductive, hematopoietic, immune, and renal systems.

E.3.4 Methoxychlor

Methoxychlor is an insecticide that is structurally related to DDT in that the two chlorine atoms in the *para* position of the DDT molecule are replaced by a methoxy moiety in methoxychlor. Methoxychlor is less stable than DDT and thus has less residual effect than DDT (Matsumura 1975). It has been used on many agricultural crops and farm animals, and for spraying of barns, grain bins, mushroom houses, and other agricultural premises for the control of flies (HSDB 1997).

If released to soil, methoxychlor is expected to remain immobilized in the upper layer, although a small portion may migrate to lower depths, as suggested by detection of methoxychlor in some groundwater samples. Methoxychlor is relatively persistent in soil, and has been demonstrated to remain in soil for up to 14 months. In the aquatic environment, methoxychlor may be transported by adsorbing to suspended sediment particles. In sediments, it was found to have a half-life of > 100 days under aereobic conditions and < 28 days under anaerobic conditions. This, as well as other studies, indicate that methoxychlor will biodegrade rapidly under anaerobic conditions, but is not expected to biodegrade significantly under aerobic conditions. It may also undergo sensitized (indirect) photolysis, as well as limited chemical hydrolysis under moist conditions, and volatilization may also be an important removal pathway (HSDB 1997).

The major metabolic pathway for methoxychlor has been shown to be o-demethylation and subsequent conjugation, indicating that methoxychlor is metabolized by the mixed function oxidase (MFO) enzyme system. It has been estimated in rats that methoxychlor is stored in fat at only 0.01 to 0.1 times its chronic intake (HSDB 1997). Since methoxychlor is rapidly metabolized in the mammalian body and is not accumulated in fat or excreted in milk, it was preferred to DDT for use on animals, in animal feed, and in barns (Matsumura 1975). Bioconcentration Factor (BCF) values have been obtained for a variety of aquatic organisms, indicating that methoxychlor will bioaccumulate in aquatic organisms which do not metabolize methoxychlor at a significant rate, and that fish generally metabolize this compound very rapidly and thus will not tend to bioaccumulate it in their tissues (HSDB 1997).

In the aquatic environment, the isopod *Aselus communis* was found to be the most sensitive organism, with a 28-day LC50 of 0.42 ng/L. In seven species of aquatic invertebrates, the 96-hour LC50s ranged from 0.42 - 12 ug/L. Similar to DDT, the toxicity of methoxychlor to fish has been shown to vary with temperature in some species, with its toxicity increasing as temperature decreases. For example, at 12.7 °C, the 96-hour LC50s for rainbow trout and bluegill have been shown to be 62 and 75 ug/L, respectively, whereas at 1.6 °C, the LC50s were 30 and 42 ug/L, respectively. Overall, the acute toxicity of methoxychlor in fish is highly variable, with 96-hour LC50s for twenty-one species of fish ranging from 1.7 ug/L for the Atlantic salmon to 150 ug/L for the northern puffer (HSDB 1997).

In mammals, methoxychlor is only 1/25 to 1/50 as toxic as DDT. It has an oral LD50 of 6000 mg/kg in rats, reflecting its extremely low acute mammalian toxicity (Matsumura 1975). Methoxychlor affects the central nervous system and has also been shown to be estrogenic in vivo in the female. Its metabolite, the di-demethylated derivative of methoxychlor, has been shown to inhibit the binding of

17-β-estradiol to rat uterine cytosolic estrogen receptor in vitro. Developmental and reproductive effects which have been observed as a result of exposure to methoxychlor include testicular atrophy, arrested spermatogenesis and folliculogenesis, reduced fertility, and wavy ribs (HSDB 1997).

Mallard ducks, sharp-tailed grouse, and California quail ingesting a median lethal dose of methoxychlor exhibited leg weakness (in mallards), jitterinesss, low stance, and wing spread, which disappeared within a few days. The oral LD50 has been calculated to be > 2000 mg/kg in the mallard duck, the sharp-tailed grouse, and the Califorina quail (HSDB 1997).

E 3.5 Endrin/Endrin Aldehyde/Endrin Ketone

Endrin was used as an insecticide, avicide, and rodenticide. Its general toxic effects include ataxia, slowness, drowsiness, tremors, trachael congestion, prostration, convulsions, wing-beat convulsions, and opisthotonos. Formulations of endrin generally contain impurities of related compounds, including endrin aldehyde and endrin ketone. These two chemicals are also known to be metabolites of the parent endrin compound. Since these two chemicals were detected in some of the samples collected at the Cornell Dubilier site, all three chemicals were evaluated together for the purposes of this risk assessment. Much of the information contained in this section, however, relates to endrin itself because most of the information in the literature revolves around the parent compound (HSDB 1997).

When endrin is released into the soil, it is not expected to migrate into the groundwater due to its expected strong adherence to soil particles. However, the detection of small amounts of endrin in some samples of groundwater indicate that some migration is possible. Endrin will persist in soil for long periods of time (up to 14 years or more). Small amounts of endrin may volatilize, and it has been shown to photodegrade to endrin ketone. However, biodegradation and hydrolysis are not important removal mechanisms. When endrin enters aquatic systems, it is expected to adsorb strongly to sediments, thus providing a potential aquatic transport mechanism, and evaporation from water is not expected to be significant. Endrin aldehyde and endrin ketone are expected to have a very similar fate in the environment as endrin (HSDB 1997).

The toxic mechanism of endrin is believed to include inhibition of the brain-specific (35)S-t-butylbicyclophosphorothionate binding site. It has also been shown that endrin produces specific alterations in unmyelinated fiber bundles of peripheral nerves but does not affect myelinated fibers. A variety of metabolites of endrin have been identified, including endrin ketone (12-ketoendrin) and endrin aldehyde, as mentioned previously. Additional metabolites that are believed to be significant include 9-ketoendrin, 9-hydroxyendrin, 3-hydroxyendrin, and trans-4,5-dihydroisodirn-4,5-diol. A variety of bioconcentration factors (BCFs) have been calculated, ranging from 140 in algae after seven days to 49,000 in a species of snail (Physa). In fish, the BCF has been calculated for a variety of species and ranged from 1335-10,000 (HSDB 1997).

Endrin has been shown to be extremely toxic to aquatic organisms. The toxicity of endrin has been tested in two species of *Daphnia*, resulting in 48-hour EC50s of 4.2 and 20 ug/L for *Daphnia magna* and *Daphnia pulex*, respectively. In addition, 96-hour LC50s for twelve species of benthic macroinvertebrates ranged from 0.08 to 62 ug/L. In eleven species of fish, the 96-hour LC50s ranged from 0.033 ug/L in *Ophiocephalus punctatus* to 1.8 ug/L in the fathead minnow (HSDB 997).

In mammals, the acute toxicity of endrin has been tested in a variety of species, and the oral LD50s ranged from 1.3 mg/kg in mice to 36 mg/kg in male Guinea pigs. No-effect levels have also been established, and are reported to be 0.05 mg/kg/day in the rat, 0.038 mg/kg/day in the mouse, and 0.025 mg/kg/day in the dog. Equivocal results have been obtained regarding the teratogenicity of endrin. For example, in one study in which one-half the LD50 was administered to pregnant hamsters and mice, increased fetal deaths, open eye, webbed foot, cleft palate, and fused ribs were observed in

young hamsters, but not in young mice. Other studies have indicated that dietary levels that do not injure the parents do not adversely affect development of the offspring. Endrin aldehyde is slightly less toxic than endrin, with an oral LD50 of 10 mg/kg in rats and 62 mg/kg in mice. Endrin ketone, however, has been shown to be more toxic than endrin, with an oral LD50 of 1.1 and 0.8 mg/kg in male and female rats, respectively. This indicates that endrin ketone may be responsible for much of the acute toxicity observed in mammals as a result of exposure to endrin (HSDB 1997)

In birds, the acute oral LD50s have ranged from 1.19 mg/kg in female California quail to 5.64 mg/kg in female mallard ducks. In the diet of poultry, 20 ppm of endrin produced anorexia, ataxia, convulsions, and death. The 30-day empirical minimum lethal dose for mallards has been calculated to be 0.25 mg/kg/day for both sexes. The reproductive and developmental effects of endrin in birds, as in mammals, have also been shown to be equivocal. For example, reduced egg production in quail and pheasants as well as reduced chick survival in pheasants have been observed as a result of exposure to endrin, but no reproductive effects were observed at similar concentrations in mallard ducks (HSDB 1997).

E.3.6 Chlordane

Technical chlordane is an organochloride pesticide that was introduced in the U.S. in 1947 (Eisler 1990). After concerns of its potential carcinogenicity, the production of chlordane was reduced and it was banned from use in the U.S. in 1983, except when used for the control of underground termites

Technical chlordane consists of roughly 45 components, primarily cis-chlordane, trans-chlordane, heptachlor and various other chlordane isomers (Eisler 1990). The half-life of cis-chlordane in water is relatively short, between 1.1 and 17.5 h (Feroz and Khan 1979). However, in soil the half-life is much longer ranging anywhere from .5 to 10 years. Chlordane persists in soil because of its low solubility in water, relatively low vapor pressure and great tendency to adsorb to soil particles

The major route of global dissemination for chlordane is generally considered to be atmospheric transport. Some chlordane isomers will persist in soil for 3 to 15 years but plants generally do not appear to accumulate it in their tissues. Chlordane concentrations in living organisms are typically greatest near areas where chlordane has been applied for termite and pest control, in predatory species and in tissues with high lipid content (Eisler 1990). Except in certain marine mammals, food chain biomagnification of chlordane is usually low (Eisler 1990)

Chlordane is a nerve stimulant causing lack of coordination and hyperexcitability in animals at low chronic doses and tremors and convulsions at high acute doses (Ingle 1965; Klassen et al. 1986). Chlordane is readily absorbed by warm-blooded animals through skin, diet and inhalation (Eisler 1990). Quickly distributed through the body, it concentrates in the liver and fat (WHO 1984). Large amounts of chlordane (75%) were absorbed in the gut in oral dosing studies using rats and mice (Nomeir and Hajjar 1987), while rabbits absorbed 33% after an oral dose (EPA 1988). Chlordane residues in mammals were not measurable 4 to 8 weeks after exposure (Ingle 1965).

Chlordane has been extensively applied to soil to control soil invertebrate pests. When applied at rates ranging from 0.6 and 2.24 kg/hr, non-target species such as earthworms were adversely affected (Eisler 1990). Bird species sensitive to chlordane had reduced survival after a single oral dose of 14.1 mg/kg BW/day. Aquatic species are also adversely affected at concentrations in water of 0.2 to 3.0 ug/L technical chlordane. The greatest concern over the use of chlordane is driven by findings of liver cancer in domestic mice after exposure to chlordane. In addition, mammals fed 0.76 to 5.0 mg/kg of chlordane in feed were found to have elevated tissue residues and growth inhibition. Once metabolized in mammals, chlordane primarily becomes oxychlordane which is 20 times more toxic than chlordane itself and persists in adipose tissue

E 4 PCBs

A variety of PCB-induced toxic effects have been observed in mammals. Mink are particularly sensitive to dietary PCB levels (Aulerich et al. 1985). Anorexia, weight loss, lethargy, enlarged livers, and intestinal discharge of blood have been noted in exposed mink (Eisler 1986b). Placental and mammary transfer of PCB has been shown to be a direct route of PCBs between mother and young. PCB exposure can lead to behavioral disorders, specifically in sleep/wake cycles, and in animals that hibernate or aestivate (Montz et al. 1982; Sanders and Kirkpatrick 1977). Negative effects of PCBs on metabolism, thyroid control, ATPase activity, oxidative phosphorylation, steroid hormone activity, immunity, and vitamin A pathways have been noted (Safe 1984; U.S EPA 1980a)

PCB toxicity in mammals is highly variable. While some PCBs are extremely toxic, and can produce death and cause reproductive failure in very low levels, others appear to produce few, if any, toxic responses (Eisler 1986b) Toxic responses to PCBs are highly species specific. Mink are highly susceptible to PCB toxicity, while closely related mammals, such as the European ferret, are more resistant (Eisler 1986b). Younger mammals appear to be more susceptible to PCB poisoning than adults (Eisler 1986b) Mutagenic, carcinogenic, and teratogenic effects of PCB exposure have been observed, with mutagenic activity appearing to increase with increasing chlorination of the PCB molecule (Eisler 1986b).

As with mammals, there is also a great degree of variability among different bird species in response to PCBs. In sensitive species, normal patterns of growth, behavior, reproduction, and metabolism may be altered. Liver concentrations of PCBs are generally highest in piscivorous birds, followed by birds that feed on other smalls bird and mammals, birds that feed on worms and insects, and herbivorous or seed eating birds, respectively (NAS 1979)

E 5 Metals

E 5.1 Aluminum

Because of its strong reactivity, aluminum (Al) is not found as a free metal in nature. Aluminum has only one oxidation state (+3), thus its behavior in the environment depends on its ordination chemistry and the surrounding conditions. In soils, a low pH generally results in an increase in aluminum mobility. In water, an equilibrium with a solid phase is established that controls the extent of aluminum dissolution (ATSDR 1990a).

Plants vary in their ability to remove aluminum from soils, although bioconcentration factors for plants are generally less than one. Biomagnification of aluminum in terrestrial food chains does not appear to occur. There is no data on the biomagnification of aluminum in aquatic food chains (ATSDR 1990a)

The nervous system may be a target area for aluminum. Aluminum accumulates in neurofibrillary tangles in humans with Alzheimer's disease. Aluminum may also interact with neuronal DNA to alter gene expression and protein formation. Mammalian studies do not indicate that aluminum affects reproduction although some developmental effects have been reported in mammals (ATSDR 1990a).

E.5.2 Antimony

Antimony (Sb) is a silvery white metal of medium hardness and low solubility in water. It is found at very low levels in the environment. Metallic antimony is stable under ordinary conditions and is not readily altered by air or water. Antimony displays four oxidation states, Sb(-3), Sb(0), Sb(+3), and Sb(+5) The +3 state is the most common and stable (ATSDR 1991)

The speciation and physicochemical state of antimony are important to its behavior in the environment and availability to biota. Antimony that is incorporated into mineral lattices is inert and unlikely to be bioavailable. Unfortunately, most analytical methods for antimony do not distinguish between this form and adsorbed forms. Little is known about the adsorption of antimony in soil; however, since antimony forms anionic species, adsorption should be greatest under weakly acidic conditions. Antimony's adsorption to soil and sediment is primarily correlated with the iron, manganese, and aluminum content; it coprecipitates with hydroxylated oxides of these elements (ATSDR 1991).

As a natural constituent of soil, antimony is transported into stream and waterways from natural weathering of soil and anthropogenic sources. Antimony has a low occurrence in ambient waters. Antimony in aerobic freshwater and seawater is largely in the +5 oxidation state. Trivalent antimony is the dominant oxidation state in anaerobic water. Antimony can be reduced and methylated by microorganisms in anaerobic sediment, releasing volatile methylated antimony compounds into the water (ATSDR 1991)

Antimony does not appear to bioconcentrate appreciably in fish or other aquatic organisms. Much of the antimony occurring in plants has been found to be a result of surface deposition. Uptake of antimony from soil by plants is reported to be minor. Body burden analyses of terrestrial organisms suggest that biomagnification of antimony does not occur from lower to higher trophic levels (ATSDR 1991).

The majority of effects resulting from the inhalation of antimony is attributed to the accumulation of antimony dust in the lung (pneumoconiosis) which may progress to a proliferation of alveolar macrophages to fibrosis. The heart is another target organ in antimony exposure, resulting in altered blood pressure, increased heart rate, and decreased contractile force. Antimony is known historically for its emetic properties, causing vomiting, diarrhea, gastric discomfort, and ulcers. Dietary exposure studies have reported decreased hemoglobin and hematocrit levels, altered erythrocyte counts, and swelling of the hepatic cords (ATSDR 1991).

E 5.3 Arsenic

Arsenic has four valence states (-3, 0, +3, and +5), rarely occurring in its free state in nature. It is usually a component of sulfidic ores, occurring as arsenides and arsenates, along with arsenic trioxide, which is a weathering product of arsenides. Biotransformations may occur, resulting in volatile arsenicals that normally are returned to land where soil adsorption, plant uptake, erosion, leaching, reduction to arsines, and other processes occur. Inorganic arsenic is more mobile than organic arsenic, and thus poses greater problems by leaching into surface waters and groundwater. The trivalent arsenic species (+3) are generally considered to be more toxic, more soluble, and more mobile than As (+5) species (Eisler 1988a)

Arsenic in water exists primarily as a dissolved ionic species. Particulates account for less than one percent of the total measurable arsenic. Arsenates are more strongly adsorbed to sediments than are other arsenic forms. In bodies of water that become stratified in summer, arsenic released from sediments accumulates in the hypolimnion until turnover, when it is mixed with epilimnetic waters. This mixing may result in a ten to twenty percent increase in arsenic concentrations (Eisler 1988a).

Eisler (1988a) reports the following points to be agreed upon by most investigators: (1) arsenic may be absorbed by ingestion, inhalation, or permeation of the skin or mucous membrane, (2) cells accumulate arsenic by using an active transport system normally used in phosphate transport, (3) arsenicals are readily absorbed after ingestion, most being rapidly excreted in the urine during the first few days, (4) the toxicity of arsenicals conforms to the following order from greatest to least toxicity: arsines > inorganic arsenites > organic trivalent compounds (arsenoxides) > inorganic arsenates > organic pentavalent compounds > arsonium compounds > elemental arsenic, (5) solubility in water

and body fluids appear to be directly related to toxicity, and (6) the mechanisms of arsenical toxicity differ considerably among arsenic species, although signs of poisoning appear similar for all arsenicals.

The primary mechanism of inorganic trivalent arsenic toxicity is through reaction with sulfhydryl groups of proteins and subsequent enzyme inhibition; inorganic pentavalent arsenic does not react as readily with sulfhydryl groups. Inorganic trivalent arsenic interrupts oxidative metabolic pathways and sometimes causes morphological changes in liver mitochondria. Methylation greatly reduces the toxicity of inorganic arsenic (both trivalent and pentavalent) and is usually the major detoxification mechanism (Eisler 1988a)

The mechanism of organic arsenic toxicity begins with its initial metabolism to the trivalent arsenoxide form, followed by its subsequent reaction with sulfhydryl groups of tissue proteins and enzymes, to form an arylbis (organylthio) arsine. This form inhibits oxidative degradation of carbohydrates and decreases cellular ATP (Eisler 1988a)

E.5.4 Barium

Because barium is an element, it does not degrade. Barium is widely distributed in both terrestrial and aquatic environments. Based on its Kd (60 in Baes et al. [1984]), barium would be expected to adhere to particulate matter. Although barium is found in most aquatic environments, most barium precipitates out in the form of insoluable salts (EPA 1986). Transport of barium by suspended sediments in lotic water bodies may be significant. Based on its Henry's Law Constant (value of zero in EPA [1992]), volatilization should not be a significant fate process. Barium is not expected to bioconcentrate significantly in plants or freshwater aquatic organisms

Barium occurs naturally in most surface water and groundwater. In groundwater and surface water, barium is likely to precipitate out of solution as an insoluable salt (EPA 1986). The chemical form of barium largely dictates its adsorption into soils and sediments. Barium in sediments is found largely in the relatively insoluble form of barium sulfate and also in the insoluable form of barium carbonate. Humid and fulvic acid have not been found to increase the mobility of barium (ATSDR 1990c). Based on its Henry's Law Constant (value of zero in EPA [1992]), volatilization from surface water should not be a significant fate process

Based on its Kd (value of 60 reported in Baes et al. [1984]), barium would be expected to adsorb to soil and sediment. Soils with high cation exchange capacity adsorb barium and limit its mobility. Barium is more mobile and more likely to be leached from soils in the presence of chloride due to the solubility of barium chloride relative to other forms of barium (ATSDR 1990c).

Barium will be taken up by plants under certain environmental conditions, but generally at concentrations less than the surrounding soils (Baes et al. 1984). While bioconcentration has been found to be significant in marine systems, it is less significant in freshwater systems (ATSDR 1990c)

E.5.5 Beryllium

The majority of the beryllium (Be) in the environment is the result of coal and oil combustion. Beryllium naturally enters waterways through the weathering of rock and soil, and through deposition of atmospheric beryllium. Upon reaching water and soil, beryllium is most likely retained as an insoluble form that is generally immobile. However, beryllium chloride, fluoride, nitrate, phosphate, and sulfate (tetrahydrate) are all water-soluble forms. Although chemical reactions may transform one beryllium compound into another, beryllium cannot be degraded by environmental reactions (ATSDR 1993a).

Due to its geochemical similarity to aluminum, beryllium may be expected to adsorb onto clay surfaces at low pHs, and it may remain precipitated as insoluble complexes at higher pHs. Therefore, beryllium is expected to have limited mobility in soil (ATSDR 1993a).

Beryllium is not expected to bioconcentrate in aquatic animals and no evidence for significant biomagnification within food chains has been found. Beryllium is extremely toxic to warmwater fish in soft water. The degree of toxicity decreases with increasing hardness (ATSDR 1993a)

Major exposure routes for aquatic ecological receptors include ingestion of contaminated soil and sediment. Although several studies point out the negative effects of beryllium in mammalian systems, no studies that evaluated the relationship between sediment beryllium concentration and observed toxicity to benthic organisms could be found (ATSDR 1993a)

E.5.6 Cadmium

Cadmium (Cd) is a mutagen, teratogen, and a suspected carcinogen (RTECS 1997). Tissue levels of cadmium increase with the age of an organism and eventually act as a cumulative poison (Hammons et al. 1978). Cadmium replaces essential metals (e.g., zinc) at critical sites on proteins and enzymes, and may inhibit a variety of enzymatic reactions. It inhibits Phase I and Phase II biotransformation reactions, probably by alteration of the enzymes responsible for these reactions (Sipes and Gandolfi 1986). Cytochrome P-450 monoxygenases play a major role in Phase I reactions. Cadmium also combines with sulfhydryl groups in enzymes, which affects the transfer of electrons from compounds in the citric acid cycle to compounds in the electron transport chain. Cadmium can inhibit adenosine triphosphate (ATP) activity in the following ways: 1) it binds to and inactivates enzymes which synthesize ATP, and 2) it binds to ATPase, which is required to convert ATP to ADP + PO_4 (Hammons et al. 1978).

Vertebrates tend to accumulate cadmium in the kidney and liver tissue (Eisler 1985a). Freshwater aquatic species are most sensitive to toxic effects of cadmium, followed by marine organisms, birds, and mammals.

E.5.7 Calcium

Calcium (Ca) is the fifth most abundant element and the third most abundant metal on earth. It is widespread in nature as calcum carbonate (limestone and marbel), calcium sulfate, calcium fluoride (fluorspar) and calcium phosphate (apatite). It occurs in the earth's crust at a concentration of 3.65%, and in sea water at approximately 400 g/ton. It is an important constituent of bones, teeth, and shells of living organisms, and is essential for muscular, nervous system, and renal function, as well as for blood coagulation and respiration. Therefore, calcium is regulated by the body. In addition to its nutritional value, calcium is used in industry as a catalyst for polyester fibers, in metallury as a deoxidizer for copper, beryllium, and steel, as an alloying agent for aluminum, copper, and lead, and in many other uses (HSDB 1997).

The environmental toxicology of calcium has not been extensively evaluated due to its natural existence in the environment at high concentrations. However, it is reported to be dangerous to aquatic life in high concentrations (CHRIS 1997). In invertebrates, mechanisms to control the intracellular concentration of calcium are relatively well understood. One such mechanism is via precipitation of excess calcium into granules. It has been shown that Mn entering a cell can lead to the corrosion of the granule surface and the liberation of excess calcium into the cell, resulting in toxic effects, including necrosis of the hepatopancreas (Newman and McIntosh 1991).

In mammals, it has been shown that chronic ingestion of calcium carbonate may cause hypercalcemia, alkalosis, and renal failure. Hypercalcemia may affect the heart and the nervous system. Neurologic effecst might include confusion, coma, decreased deep tendon reflexes, depression, fatigue, hallucinations, lethargy, or weakness (Meditext 1997).

E.5.8 Chromium

Chromium (Cr) can exist in oxidation states ranging from -2 to +6, but it is most frequently converted to the relatively stable trivalent (+3) and hexavalent (+6) oxidation states (Eisler 1986b). In both freshwater and marine systems, hydrolysis and precipitation are the most important processes that determine the fate and effects of chromium, whereas adsorption and bioaccumulation are relatively minor. Precipitated Cr^{+3} hydroxides remain in sediments under aerobic conditions. However, under anoxic and low pH conditions, Cr^{+3} hydroxides may solubilize and remain as ionic Cr^{+3} unless oxidized to Cr^{+6} through mixing and aeration (Eisler 1986b). In soils, the solubility and bioavailability of chromium are governed by soil pH and organic complexing substances, although organic complexes play a more significant role (James and Bartlett 1983a, James and Bartlett 1983b).

The trivalent state is the form usually found in biological materials. This form functions as an essential element in mammals by maintaining efficient glucose, lipid, and protein metabolism (Steven et al. 1976). Chromium is beneficial but not essential to higher plants (Eisler 1986b). The biomagnification and toxicity of Cr^{+3} is low relative to Cr^{+6} because of its low membrane permeability and its noncorrosivity. However, a large degree of accumulation by aquatic and terrestrial plants and animals in the lower trophic levels has been documented (Eisler 1986b), although, the mechanism of accumulation remains largely unknown.

Chromium is mutagenic, carcinogenic, and teratogenic, with Cr^{+6} exhibiting the greatest toxicity; relatively less is known about the toxicity of Cr^{+3}. At high concentrations, Cr^{+6} is associated with abnormal enzyme activity, altered blood chemistry, lowered resistance to pathogenic organisms, behavioral modifications, disrupted feeding, histopathology, osmoregulatory upset, alterations in population structure, and inhibition of photosynthesis (Eisler 1986b).

Rabbits fed dietary chromium accumulated hyaluronates, chondroitin sulfates, and neutral mucopolysaccharides in the soft tissues, causing pericapillary sclerosis (Kucher and Shabanov 1967). This accumulation blocked blood tissue barriers which are normally permeable, preventing the normal transport of metabolites. One manifestation of this condition was the inhibition of insulin production in the pancreatic islets due to damage to the beta-cells contained therein.

Chromium also leads to nephron damage via swelling and loss of microvilli, the formation of intracellular vacuoles, mitochondrial swelling, and cytoplasmic liquefication and loss of cells lining the nephron surface (Evan and Dail 1974).

The preliminary step in chromium-induced respiratory cancer is speculated to be the scarring of alveolar tissue, followed by the elicitation of inflammatory reactions in lung tissue leading to bronchopneumonia, alveolar epithelial changes, atrophy, and benign tumor formation. Direct skin contact with highly corrosive chromic acid and its anhydride produces skin ulcers and necrosis by a mechanism independent of any allergic response (Steven et al. 1976)

E.5.9 Cobalt

Because cobalt is an element, it does not degrade. Cobalt is widely distributed in nature and comprises 0.001-0.002% of the earth's crust. Based on its Kd (45 in Baes et al. [1984]), cobalt would be expected to adhere to particulate matter. Most cobalt in water is precipitated or adsorbed onto suspended soils and sediments. Cobalt may bioaccumulate in plants and aquatic organisms (ATSDR 1992a; HSDB 1997).

Cobalt is relatively insoluable in cold and hot water, but is soluable under acidic conditions (HSDB 1997). The speciation and subsequent transport of cobalt in water is affected by a number of factors including the presence of ligands, the concentration of anions, pH, and Eh. Depending on the nature

of the water, the amount of dissolved, suspended, and sedimented forms may vary substantially. Cobalt is not significantly adsorbed by organic materials (e g. humic and fulvic materials) in water. Most cobalt in water is precipitated or adsorbed onto suspended solids and sediments (ATSDR 1992a).

Cobalt is usually found in soils in the divalent state. Based on its Kd (45 in Baes et al. [1984]), cobalt would be expected to adhere to particulate matter. The mobility of cobalt in soils is primarily regulated by pH, with increasing mobility as the pH decreases (HSDB 1997; ATSDR 1992a). The mobility of cobalt also decreases as the availability of oxides (such as iron and mangenese oxides), crystalline materials, and other adsorbents in soil decreases (ASTDR 1992a).

Cobalt will be taken up by plants, but generally at concentrations less than the surrounding soil (Baes et al. 1994). In highly acidic soils, significantly higher than normal concentrations of cobalt have been found in plants. The translocation of cobalt from roots to above-ground parts of plants is not significant in most soils. The bioaccumulation factors for cobalt in marine and freshwater fish are 100-4000 and 40-1000, respectively, indicating some potential for bioaccumulation (ATSDR 1992a).

E.5.10 Copper

Copper (Cu) does not appear to have mutagenic properties, but it is a teratogen (RIECS 1997) and a possible carcinogen (Venugopal and Luckey 1978). Copper is caustic, and acute toxicity is primarily related to this property (Hatch 1978). Copper is an essential element for animals and is a component of many metalloenzymes and respiratory pigments (Demayo et al. 1982). It is also essential for iron utilization and functions in enzymes for energy production, connective tissue formation, and pigmentation (Venugopal and Luckey 1978). Excess copper ingestion leads to accumulation in tissues, especially in the liver. High levels of copper modify hepatic metabolism (Brooks 1988), which may lead to inability of the liver to store and excrete additional copper. When the liver concentration exceeds a certain level, the metal is released into the blood, causing hemolysis and jaundice. High copper levels also inhibit essential metabolic enzymes (Demayo et al. 1982). Toxic symptoms appear when the liver accumulates 3 to 15 times the normal level of copper (Demayo et al. 1982).

Although the exact mechanism of copper toxicity is not known, the following mechanisms have been proposed: formation of stable inhibitory complexes with cytochrome P-450 (Wiebel et al. 1971); impairment of function of NADPH-cytochrome reductase and alteration of mixed function oxidations (Reiners et al. 1986); and inhibition of heme biosynthesis (Martell 1981). Intranuclear inclusions may act as a detoxifying mechanism where copper is complexed by protein ligands, protecting cytoplasmic organelles (Demayo et al. 1982).

Ruminants are the most sensitive mammal species to copper toxicosis. Young animals retain more dietary copper than older animals and are more sensitive to copper toxicity (Venugopal and Luckey 1978).

E.5.11 Iron

Iron (Fe) is commonly detected at concentrations of 5 percent or more in soil. It is used primarily in the production of steel and other alloys as well as a major source of hydrogen. Iron is a constituent of hemoglobin and is essential to plant and animal life as well as being an important component in cellular oxidative processes. The disposition of ingested iron is regulated by a complex mechanism to maintain homeostasis. Therefore, bioconcentration in biota is not expected to be a significant process for iron. Generally, about 2 to 15 percent of ingested iron is absorbed from the gastrointestinal tract, and elimination is approximately 0.01 percent of the body burden per day. Adverse effects of iron toxicity may include renal failure and hepatic cirrhosis. The mechanism of toxicity begins with acute mucosal cell damage and absorption of ferrous ions directly into circulation, resulting in capillary endothelial cell damage to the liver (Shacklette and Boerngen 1984).

E.5.12 Lead

Lead (Pb) does not biomagnify to a great extent in food chains, although accumulation by plants and animals has been extensively documented (Wixson and Davis 1993; Eisler 1988b). Older organisms typically contain the highest tissue lead concentrations, with the majority of the accumulation occurring in the bony tissue of vertebrates (Eisler 1988b).

Predicting the accumulation and toxicity of lead is difficult since its effects are influenced to a very large degree, relative to other metals, by interactions among physical, chemical, and biological variables. In general, organolead compounds are more toxic than inorganic lead compounds, and young, immature organisms are most susceptible to its effects (Eisler 1988b). In plants, lead inhibits growth by reducing photosynthetic activity, mitosis, and water absorption. The mechanism by which photosynthetic activity is reduced is attributed to the blocking of sulfhydryl groups, inhibiting the conversion of coproporphyrinogen to proporphyrinogen (Holl and Hampp 1975).

The toxic effects of lead on aquatic and terrestrial organisms are extremely varied and include mortality, reduced growth and reproductive output, blood chemistry alterations, lesions, and behavioral changes. However, many effects exhibit general trends in their toxic mechanism. Generally, lead inhibits the formation of heme, adversely affects blood chemistry, and accumulates at hematopoietic organs (Eisler 1988b). At high concentrations near levels causing mortality, marked changes to the central nervous system occur prior to death (Eisler 1988b).

Plants can uptake lead through surface deposition in rain, dust, and soil, or by uptake through the roots. The ability of a plant to uptake lead from soils is inversely related to soil pH and organic matter content. Lead can inhibit photosynthesis, plant growth, and water absorption.

E.5.13 Magnesium

Magnesium (Mg) does not exist in a pure state in nature but is generally found in one of the following forms: dolomite, magnesite, brucite, periclase, carnallite, and kiersite. It is present in the earth's crust at about 2.1% by weight and thus is one of the most common elements in the earth's crust. In addition, it is found as a silicate in asbesteos and talc and is widely distributed. Magnesium is used for a variety of purposes, including as a constituent in light alloys, in the manufacturing of precision instruments, in pyrotechnics, for flash bulbs and flares, for grignard reagents, in the recovery of titanium, as an antiknock additive in gasoline, in batteries, and in many other applications (HSDB 1997).

Magnesium is an essential nutrient at low doses, and is therefore highly regulated in organisms. However, magnesium can become toxic at very high doses. In rats, a diet containing 49 mmol Mg/kg was reported to be magnesium adequate, while 8 mmol Mg/kg was reported to be magnesium deficient. Hypermagnesemia may cause impairment of neuromuscular transmission and cardiac effects (HSDB 1997).

The aquatic toxicity of magnesium has not been largely studied, due to its natural presence at high concentrations in surface waters. However, it has been shown to cause lethality after 6 hours at a concentration of 400 mg/kg in water using the stickleback as the test organism, and a 48-hour TLM of 1500 mg/kg was obtained using a marine fish. It has also been reported to have the potential to smother benthic organisms. As for the terrestrial environment, an oral LCLo of 230 mg/kg BW was reported, and a concentration of 500 ppm was reported to be toxic to livestock (OHM/TADS 1997).

E.5.14 Manganese

Manganese (Mn) does not occur as a free metal in the environment but is a component of numerous minerals. Elemental manganese and inorganic manganese compounds have negligible vapor pressures, but may exist in air as suspended particulate matter derived from industrial emissions or

the erosion of soil. Removal from the atmosphere is mostly through gravitational settling. The transport and partitioning of manganese in water is controlled by the solubility of the specific chemical form present. The metal may exist in water in any of four oxidation states (2+, 3+, 4+, or 7+). Divalent manganese (Mn+2) predominates in most waters (pH 4 to 7), but may become oxidized at a pH greater than 8 or 9. Manganese is often transported in moving water as suspended sediments. The tendency of soluble manganese compounds to adsorb to soils and sediments depends mainly on the cation exchange capacity and the organic composition of the soil. Manganese in water may be significantly bioconcentrated at lower trophic levels. However, biomagnification in the food chain may not be significant (AISDR 1990).

The amount of manganese absorbed across the gastrointestinal tract is variable. There does not appear to be a marked difference between manganese ingested in food or in water. One of the key determinants of absorption appears to be dietary iron intake, with low iron levels leading to increased manganese absorption. This is probably because both iron and manganese are absorbed by the same transport system in the gut (AISDR 1990).

E.5.15 Mercury

Mercury (Hg) may be present in the environment in a number of forms. In all inorganic forms, Hg^{2+} is the toxic species. The most toxic and bioavailable form of mercury is methylmercury (MeHg), which is highly stable and lipophilic, accumulating in food chains. Mercury can become methylated biologically or chemically. Microbial methylation of mercury occurs most rapidly under anaerobic conditions, common in wetlands and aquatic sediments. The majority of mercury detected in biological tissues is present in the form of methylmercury (Huckabee et al. 1979).

Mercury has no known biological function, and its presence in biological systems appears to result in undesirable effects. A number of toxic responses have been reported for mercury exposure. Eisler (1987a) reports that juvenile life stages are most susceptible to acute effects of mercury exposure. In fish, acute exposure results in impaired respiration, sluggishness, and loss of equilibrium (Armstrong 1979).

Mercury is a potent neurotoxin, resulting in impaired muscular coordination, weight loss, and apathy in birds, mammals, and fish (Eisler 1987a). Other reported effects include histopathological changes, changes in enzyme activity levels, mutagenicity, teratogenicity, and reproductive impairment. Mercury, especially methylmercury, is known to concentrate in biological tissues and magnify through the food chain.

Mercury can exist in three oxidation states: elemental mercury (Hg^0), mercurous ion (Hg_2^{2+}), and mercuric ion (Hg^{2+}). The mercuric ion is the most toxic inorganic chemical form (Clarkson and Marsh 1982). Methylmercury is the most hazardous form of mercury due to its high stability, its lipid solubility, and the ability to penetrate membranes in living organisms (Beijer and Jernelov 1979).

Mercury and its compounds have no known biological function. It is a mutagen, teratogen, and carcinogen, and causes embryocidal, cytochemical, and histopathological effects. Forms of mercury with relatively low toxicity can be transformed into forms of very high toxicity, such as methylmercury, through biological processes. In addition, mercury can be bioconcentrated in organisms and biomagnified through food chains.

Mercury in soils is generally not available for uptake by plants, due to the high binding capacity to clays and other charged particles (Beauford et al. 1977). Mercury levels in plant tissues increase as soil levels increase, however 95 percent of the accumulation and retention of mercury is in the root system (Beauford et al. 1977, Cocking et al. 1991).

All mercury compounds interfere with thiol metabolism in organisms, causing inhibition or inactivation of proteins containing thiol ligands and ultimately leading to mitotic disturbances (Das et

al 1982, Elhassani 1983). Mercury also binds strongly with sulfhydryl groups. Phenyl- and methylmercury compounds are among the strongest known inhibitors of cell division (Birge et al 1979). In mammals, methylmercury irreversibly destroys the neurons of the central nervous system.

For all organisms tested, early developmental stages were most sensitive to toxic effects of mercury Organomercury compounds, especially methylmercury, were more toxic than inorganic forms. In aquatic organisms, mercury adversely affects reproduction, growth, behavior, osmoregulation and oxygen exchange. At comparatively low concentrations in birds and mammals, mercury adversely affects growth and development, behavior, motor coordination, vision, hearing, histology, and metabolism In mammals, the fetus is the most sensitive life stage (Eisler 1987a).

E.5.16 Nickel

Pure nickel (Ni) is a hard, white metal that is usually used in the formation of alloys (such as stainless steel), and nickel combined with other elements is found in all soils Nickel is the twenty-fourth most abundant element and is found in the environment as oxides or sulfides It may be released into the environment through mining, oil-burning power plants, coal-burning power plants, and incinerators. Nickel will attach to soil or sediment particles, especially those containing iron or manganese. Under acidic conditions, nickel may become more mobile and seep into the groundwater. The typical nickel concentration reported in soils is from 4 - 80 mg/kg. The speciation and physicochemical state of nickel is important in considering its behavior in the environment and its availability to biota (ATSDR 1996)

The most probable exposure routes of nickel is through dermal contact, inhalation of dust, and ingestion of nickel-contaminated soil. The respiratory system is the primary target of nickel exposure following inhalation. Manifestations such as inflammation of the lungs, fibrosis, macrophage hyperplasia, and increased lung weight have been noted in animals exposed to nickel. Animals exposed to nickel through oral exposure were noted to have lethargy, ataxia, irregular breathing, salivation, and squinting (ATSDR 1996)

E 5 17 Potassium

Potassium (K) occurs in the earth's crust at a concentration of 2 59% by weight and in seawater at a concentration of 3.8×10^{-5} ug/L. With the exception of lithium, it is the lightest known metal and is one of the most reactive and electropositive of metals. It is used in the synthesis of inorganic potassium compounds, as a heat transfer medium together with sodium, as a compounent of fertilizer, as a laboratory reagent for organic synthesis, and in the seeding of combustion gases in magnetohydrodynamic generators (HSDB 1997)

Potassium is reported to be harmful to aquatic life at very low concentrations A freshwater LLm of 80 mg/L was obtained in a 24-hour acute toxicity test using mosquito fish (CHRIS 1997).

No information about the terrestrial toxicity or the mechanism of potassium toxicity was available at the time of report completion.

E.5.18 Selenium

Selenium (Se) chemistry is complex, existing as six stable isotopes of varying allopatric forms and valence states. Of these isotopes, Se-80 and Se-78 are the most common Soluble selenates (+6) occur in alkaline soil and are slowly reduced to selenites (+4) which are readily taken up by plants. In acid or neutral soils, the amount of biologically available selenium should steadily decline. Selenium volatilizes from soils at rates that are modified by temperature, moisture, time, season, concentration of water-soluble selenium, and microbiological activity (Eisler 1985c).

Concentrations of selenium in water are largely a function of selenium levels in drainage systems and of water pH. High selenium levels tend to be associated with high water pH. Selenates represent the dominant species in drinking water. In seawater, selenites are the dominant species under some conditions. Selenites are less soluble than selenates and are easily reduced to elemental selenium. Elemental selenium is insoluble and largely unavailable although it is capable of satisfying nutritional selenium requirements (Eisler 1985c).

Selenium is an essential nutrient for some plants and animals, constituting an integral part of the enzyme glutathione peroxidase and may have a role in other compounds such as vitamin E and the enzyme formic dehydrogenase. Selenium also forms part of certain proteins, including cytochrome C, hemoglobin, myoglobin, myosin, and various ribonucleoproteins. In many systems, selenium deficiency is a larger problem than selenium toxicity (Eisler 1985c).

Selenium accumulation in certain species of plants may be extremely high. Consumption of selenium-accumulating plants by livestock has induced illness and death. Plants that accumulate selenium tend to be more deep-rooted than grasses, thereby surviving aridity and remaining as the principal forage for herbivorous animals. Concentration of selenium in animals tends to be higher in older than in younger individuals. In livestock, selenium is distributed by the circulatory system to all body organs. Concentrations tend to be highest in the liver, blood, kidney, spleen, and brain, and lowest in muscle, skin, hair, and bone. Elimination is primarily by urine, and smaller amounts are excreted with feces, breath, perspiration, and bile (Eisler 1985c).

Sublethal effects of elevated levels of selenium in diet or water are associated with reproductive abnormalities, congenital malformations, selective bioaccumulation, growth retardation, chromosomal aberrations, intestinal lesions, shifts in community composition, and behavioral modifications (Eisler 1985c).

E 5.19 Silver

Silver (Ag) is a rare element, but occurs naturally in the environment. There are no man-made sources of silver. Silver is used to make jewelry, silverware, electronic equipment, and dental fillings. The photographic industry uses silver compounds to make photographs. Photographic materials are the primary source of silver release into the environment. Other sources include mining operations and the natural wearing down of silver-bearing rocks and soil by the wind and rain. Silver that is released into the environment may be carried long distances in air and water. Rain can wash silver compounds out of the soil and into the groundwater. Silver does remain stable in the environment in various forms. Silver does not break down and can change its form by combining with other substances.

Oral ingestion of silver appears to effect the ocular and neurological systems. Studies involving the ingestion of high levels of silver documented mortality and weight loss. Limited and inconclusive evidence was presented for effects on the reproductive and cardiovascular systems. No studies were presented for oral effects of silver on the respiratory, gastrointestinal, hematological, musculoskeletal, hepatic, or renal systems.

The extent of silver absorption through the oral ingestion route has been found to be associated with transit time through the gastrointestinal tract. The faster the transit time, the less silver is absorbed. The distribution of silver throughout the body depends upon the route and quantity of silver administered and its chemical form. Silver distributes widely in the body with high concentrations found in the liver, spleen, bone marrow, lymph nodes, skin and kidney. The deposition of silver in tissues is the result of the precipitation of insoluble silver salts, such as silver chloride and silver phosphate. These insoluble salts appear to be transformed into soluble silver sulfide albuminates, to bind to or form complexes with amino or carboxyl groups in RNA, DNA, and proteins, or to be reduced to metallic silver by ascorbic acid or catecholamines. Studies have not indicated that biomagnification of silver in the food chain is significant (HSDB 1997).

E.5.20 Sodium

Sodium (Na) is found in the earth's crust at approximately 2.83% by weight and is the principle cation in the hydrosphere. It does not exist in its free form in nature, but rather in its halide, silicate, or carbonate forms. Sodium is used in the manufacture of tetraethyl lead, in photoelectric cells, in organic syntheses, in sodium lamps, as a coolant in nuclear reactors. Sodium violently decomposes in water, forming sodium hydroxide and hydrogen (HSDB 1997).

Sodium is toxic to aquatic life only at high concentrations. A freshwater toxicity test indicated that 4720 mg/L was harmless to sticklebacks. In a 48-hour toxicity test using a saltwater species, a Tlm of 24000 - 25000 mg/L was obtained. Sodium is not expected to bioaccumulate in the food chain (OHM/TADS 1997).

No information about the terrestrial toxicity of sodium was available at the time of report completion.

E.5.21 Thallium

Thallium (Tl) is one of the most toxic of the heavy metals. It is distributed widely but it is generally present in very low concentrations. Metallic thallium is soft and malleable, similar to lead in both appearance and physical properties. Freshly-prepared thallium oxidizes rapidly. A hydroxide is formed in the presence of water. Inorganic thallium (I) compounds are more stable than the thallium (III) analogues in aqueous solution at neutral pH. In contrast, covalent organothallium compounds are stable only in the trivalent form (Mulkey and Oehme 1993).

Thallium is rapidly and completely absorbed by the respiratory system, gastrointestinal tract, or skin. Water-soluble fractions are distributed to the brain, heart, kidney, skeletal muscle, and testis. Thallium (+1) interferes with K+-dependent processes and mimics K+ in its movement and intracellular accumulation in mammals. The thallium cation is less rapidly released than the K+ cation once it moves into the cell. Thus, because of its large distribution volume and low free plasma concentration, renal excretion of thallium is slow. The kidneys filter thallium into the urine, the salivary glands and liver concentrate thallium in their secretions, and the intestinal mucosal cells actively transport thallium into the lumen of the gastrointestinal tract, where it can be reabsorbed or eliminated in the feces. A small amount is taken up and excreted in hair. A significant percentage of free plasma thallium crosses the placental barrier (Mulkey and Oehme 1993).

Thallium's ability to interfere with a variety of K+-dependent processes is thought to play a significant role in its toxicity. Thallium (+) and K+ are thought to have common cellular targets and receptor sites associated with biological activity and toxicity. Various K+-dependent proteins are known to possess a higher affinity for Tl+ than for K+, and Tl+ alters the activity of these enzymes and membrane transport proteins (Mulkey and Oehme 1993).

Thallium's calcophilic character may also contribute to its observed toxicity in animals. Thallium has a high affinity for natural ligands that contain sulfhydryl (-SH) groups. These groups are structurally important in several classes of enzymes (Mulkey and Oehme 1993).

Thallium has been shown to adversely affect protein synthesis. Mammalian ribosomes are strictly dependent on K+ and Mg+2 for normal interactions between ribosomal subunits. Thallium (+) can replace K+ causing progressive destabilization and irreversible damage to ribosomes. Interactions between thallium and riboflavin may play a role in toxicity. Thallium may impair cell energy metabolism by causing a deficiency of riboflavin and riboflavin-derived cofactors (Mulkey and Oehme 1993).

Thallium is teratogenic in chick embryos, causing achondoplasia, leg bone curvature, parrot-beak deformity, microcephaly, and decreased fetal size. Teratological investigations in mammals have

produced conflicting results (Mulkey and Oehme 1993)

E 5.22 Vanadium

Elemental vanadium does not occur naturally but it can exist in 50 different ores and fossil fuels. Other anthropogenic sources include acid-mine leachate, sewage sludge, and fertilizers. The principal use of vanadium is as an alloy constituent, especially in steel. The addition of vanadium to steel removes oxygen and nitrogen, which improves the strength. The average concentration of vanadium in the earths crust is 150 mg/kg and in the U.S. soils are 200 mg/kg (Byernum et al 1974)

The release of vanadium to water and soil occurs as a result of the weathering of rocks and from soil erosion. This process usually converts the less-soluble trivalent form to the more-soluble pentavalent form. The mobility of vanadium in soil is affected by pH, redox potential, and the presence of particulates. Relative to other minerals, vanadium is mobile in neutral or alkaline soils and its mobility decreases in acidic soils (ATSDR 1991; Van Zinderen Bakker and Jaworski 1980).

In the terrestrial systems, bioconcentration is more common in lower plant species. In addition, vanadium concentrations in plants are dependent on the amount of water-soluble vanadium, pH, and growing conditions. Vanadium appears to be present in all terrestrial mammals but the concentrations are usually below the detection limits. The highest concentration of vanadium is usually found in the liver and skeletal tissues (ATSDR 1991).

Vanadium is very poorly absorbed into the gastrointestinal tract and the toxic mechanism of vanadium on the respiratory system is similar to other metals (Castronova et al. 1984). Vanadium damages the alveolar macrophages by decreasing the macrophage membrane integrity. Damaged macrophages inhibit the ability of the respiratory system to clear itself of other particles. In vitro experiments indicate that the mechanism of toxicity of vandium is by inhibiting sodium-potassium ATPase activity, which inhibits the sodium-potassium pump. This pump is necessary for the transport of material across cell membranes (Nechay and Saunders 1978).

E 5 23 Zinc

Zinc (Zn) is essential for normal growth and reproduction in plants and animals and is regulated by metallothioneins. Metallothioneins act as temporary zinc storage sites and aid in reducing the toxicity of zinc to both vertebrates and invertebrates (Olsson et al. 1989). Zinc is not known to bioaccumulate in food chains, because it is regulated by the body and excess zinc is eliminated.

Zinc has its primary metabolic effect on zinc-dependant enzymes that regulate the biosynthesis and catabolic rate of RNA and DNA. High levels of zinc induce copper deficiency and interfere with metabolism of calcium and iron (Goyer 1986). The pancreas and bone seem to be the primary targets of zinc toxicity in birds and mammals. Pancreatic effects include cytoplasmic vacuolation, cellular atrophy, and cell death (Lu and Combs 1988, Kazacos and Van Vleet 1989). Zinc preferentially accumulates in bone, and induces osteomalacia, a softening of bone caused by a deficiency of calcium, phosphorus and other minerals (Kaji et al. 1988). Gill epithelium is the primary target site in fish. Zinc toxicosis results in destruction of gill epithelium and tissue hypoxia (Spear 1981).

REFERENCES

ACGIH. 1986. "Documentation of the Threshold Limit Values and Biological Exposure Indices, 5th ed." American Conference of Government Industrial Hygienists, Cincinnati, OH.

Anderson, D.W., and J.J. Hickey. 1972. "Eggshell changes in certain North American birds." In: K.H. Voous, ed. *Proceedings: XV International Ornithological Congress*. The Hague, Netherlands. pp. 514-540.

Armstrong, F.A.J. 1979. "Effects of Mercury Compounds in Fish." Pages 657-670 in J.O. Nriagu (ed.). *The Biogeochemistry of Mercury in the Environment*. Elsevier/North-Holland Biomedical Press, New York. In: Eisler, R. 1987. "Mercury Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish and Wildlife Service Biological Report, 85(1.10). 90 pp.

ATSDR (Agency for Toxic Substances and Disease Registry). 1991. *Toxicological Profile for Vanadium*. U.S. Department of Health and Human Services. Prepared by Clement Associates, Inc. under contract No. 205-88-0608. Atlanta, GA.

ATSDR (Agency for Toxic Substances and Disease Registry). 1990a. *Toxicological Profile for Aluminum*. Report prepared by the Research Triangle Institute for the U.S. Department of Health and Human Service, Agency for Toxic Substances and Disease Registry, Atlanta, GA.

ATSDR (Agency for Toxic Substances and Disease Registry). 1990b. *Toxicology Profile for Barium*. Draft.

ATSDR (Agency for Toxic Substances and Disease Registry). 1990c. *Toxicological Profile for Manganese*. Report prepared by the Research Triangle Institute for the U.S. Department of Health and Human Service, Agency for Toxic Substances and Disease Registry, Atlanta, GA.

ATSDR (Agency for Toxic Substances and Disease Registry). 1991. *Toxicological Profile for Antimony*. Report prepared by the Research Triangle Institute for the U.S. Department of Health and Human Service, Agency for Toxic Substances and Disease Registry, Atlanta, GA.

ATSDR (Agency for Toxic Substances and Disease Registry). 1992. *Toxicological Profile for Cobalt*. IP-91/10.

ATSDR (Agency for Toxic Substances and Disease Registry). 1993. *Toxicological Profile for Beryllium*. Report prepared by the Research Triangle Institute for the U.S. Department of Health and Human Service, Agency for Toxic Substances and Disease Registry, Atlanta, GA.

ATSDR (Agency for Toxic Substances and Disease Registry). 1996. *Toxicological Profile for Nickel*. Report prepared by the Research Triangle Institute for the U.S. Department of Health and Human Service, Agency for Toxic Substances and Disease Registry, Atlanta, GA.

Aulerich, R.J., S.J. Bursian, W.J. Breslin, B.A. Olson, and R.K. Ringer. 1985. "Toxicological manifestations of 2,4,5,2',4',5'-, 2,3,6,2'3'6'-, and 3,4,5,3'4'5'-hexachlorobiphenyl and Aroclor 1254 in Mink." *J. Toxicol. Environ Health.*, 15:63-79.

Baes, C.F. III, R.D. Sharp, A.L. Sjoreen, and R.W. Shor. 1984. *A review and analysis of parameters for assessing transport of environmentally released radionuclides through agriculture*. Oak Ridge National Laboratory Report ORNL-5786.

Beauford, W. J. Barber and A.R. Barringer. 1977. "Uptake and Distribution of Mercury within Higher Plants." *Physiol Plant*. 39:261-265.

Beijer, K. and A. Jernelov. 1979. "Methylation of Mercury in Natural Waters." Pages 201-210 in J.O. Nriagu (ed.) "The Biogeochemistry of Mercury in the Environment." Elsevier/North-Holland Biomedical Press, New York, In: Birge, W.J., J.A. Black and A.G. Westerman. 1979. "Evaluation of aquatic pollutants using fish and amphibian eggs as bioassay organisms." In: *Animals as Monitors of Environmental Pollutants*, National Academy of Science, Washington, D.C., pp. 108-118

Beusen, J.M., and B. Neven. 1987. "Toxicity of Vanadium to Different Freshwater Organisms." *Bull. Environ. Contam. Toxicol.* 39:194-201

Bjornaes, S. and L. Naalsund. 1988. *Toxicol.* 49(2-3):367-274. (Full citation pending).

Brooks, L. 1988. "Inhibition of NADPH-cytochrome c reductase and attenuation of acute diethylnitrosamine hepatotoxicity by copper." Ph.D. Dissertation, Rutgers University, New Brunswick, N.J.

Browning, E. 1965. "Toxicity and Metabolism of Industrial Solvents." American Elsevier, New York.

Budavari, S., M.J. O'Neil, A. Smith, and P.E. Heckelman (eds.). 1989. *The Merck Index: An Encyclopedia of Chemicals, Drugs, and Biologicals*. 11th Edition. Merck & Co., Inc., Rahway, New Jersey.

Byerrum, R.U., R.E. Eckardt, L.L. Hopkins. 1974. *Vanadium*. Washington, D.C. National Academy of Sciences.

Castranova, V., L. Bowman, and J.R. Wright. 1984. "Toxicity of Metallic Ions in the Lung: Effects on Alveolar Macrophages and Alveolar Type II Cells." *J. Toxicol. Environ. Health* 13:845-856.

CHRIS. 1997. Chemical Hazard Response Information System. U.S. Coast Guard.

Clarkson, T.W. and D.O. Marsh. 1982. "Mercury Toxicity in Man." Pages 549-568 in A.S. Prasad (ed.) *Clinical, Biochemical, and Nutritional Aspects of Trace Elements*. Vol. 6. Alan R. Liss, Inc., New York. In: Eisler, R. 1987. "Mercury Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish and Wildlife Service Biological Report, 85(1.10). 90 pp.

Clayton, G.D. and F.E. Clayton. 1981-1982. "Patty's Industrial Hygiene and Toxicology: Volume 2A,2B,2C: Toxicology, 3rd ed." John Wiley and Sons, New York.

Cocking, D.R. Hayes, M.L. King, M.J. Rohrer, R. Thomas and D. Ward. 1991. "Compartmentalization of Mercury in Biotic Components of Terrestrial Floodplain Ecosystems Adjacent to the South River at Waynesboro, VA." *Water, Air and Soil Pollution*. 57-58:159-170.

Das, S.K., A. Sharma, and G. Talukder. 1982. "Effects of Mercury on Cellular Systems in Mammals - A Review." *Nucleus* (Calcutta) 25:193-230. In: Eisler, R. 1987. "Mercury Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish and Wildlife Service Biological Report, 85(1.10). 90 pp.

Demayo, A., M.C. Taylor and K.W. Taylor. 1982. "Effects of copper on humans, laboratory and farm animals, terrestrial plants and aquatic life." *CRC Critical Reviews in Environmental Control*. 12(3):183-255.

Dilworth, T.G., J.A. Keith, P.A. Pearce and L.M. Reynolds. 1972. "DDE and eggshell thickness in New Brunswick woodcock." *J. of Wild. Manage.* 36(4):1186-1193.

Eisler, R. 1985a. "Cadmium Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish and Wildlife Service Biological Report, 85(1.2). 46 pp.

Eisler, R. 1985b. "Selenium Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish and Wildlife Service Biological Report, 85(1.5). 57 pp.

Eisler, R. 1986a "Chromium Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish and Wildlife Service Biological Report, 85(1.86). 60 pp.

Eisler, R. 1986b. "Polychlorinated Biphenyl Hazards to Fish, Wildlife and Invertebrates: A Synoptic Review." U.S. Fish and Wildlife Service Biological Report, 85(1.7).

Eisler, R. 1987a. "Mercury Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review " U.S. Fish and Wildlife Service Biological Report, 85(1.10). 90 pp.

Eisler, R. 1987b "Polycyclic Aromatic Hydrocarbon Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review " *U.S. Fish and Wildlife Service Biological Report,* 85(1.11).

Eisler, R. 1988a "Arsenic Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review " U.S. Fish and Wildlife Service Biological Report, 85(1.12).

Eisler, R. 1988b "Lead Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review " U.S. Fish and Wildlife Service Biological Report, 85(1.14) 134 pp.

Eisler, R. 1990. "Chlordane Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review " U.S. Fish and Wildlife Service Biological Report, 85(1.21). 49 pp

Elhassani, S.B. 1983. "The Many Faces of Methylmercury Poisoning" *J. Toxicol.* 19:875-906. In: Eisler, R. 1987. "Mercury Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish and Wildlife Service Biological Report, 85(1.10). 90 pp

Ellenhorn, M.J. and D.G. Barcelow. 1988. "Medical Toxicology - Diagnosis and Treatment of Human Poisoning." Elsevier Science Publishing Co., New York.

Evan, A.P. and W.G. Dail. 1974. "The Effects of Sodium Chromate on the Proximal Tubules of the Rat Kidney." *Lab Invest.*, 30:704-715. In: Steven, J.D., L.J. Davies, E.K. Stanley, R.A. Abbott, M. Inhat, L. Bidstrup, and J.F. Jaworski. 1976. "Effects of Chromium in the Canadian Environment." *Nat. Res. Counc. Can.*, NRCC No. 15017. 168 pp

Feroz, M. and M.A.Q. Khan. 1979. Fate of ^{14}C-cis-chlordane in the goldfish (Carassius auratus) (L.). Bull. *Environ. Contam. Toxicol.* 23:64-69.

Fourman, G.L. 1989. "Enzymes involved in the metabolism of PAHs by fish and other aquatic animals: Part II, conjugative enzymes (or Phase II enzymes)." In: Metabolism of Polycyclic Aromatic Hydrocarbons in the Aquatic Environment. Pages 185-202, U. Varnasi (ed.), CRC Press, Boca Raton, FL.

Fuxe et al. 1982. Toxicol. Letters 12 (2-3):115-123. (full citation pending).

Gosselin, R.E., R.P. Smith, and H.C. Hodge. 1984. Clinical Toxicology of Commercial Products, 5th ed. Williams and Wilkins, Baltimore, MD.

Goyer, R.A. 1986. "Toxic Effects of Metals." Pages 582-635 in C.D. Klaussen, M.O. Amdur, and J. Doull, editors. Casarett and Doull's Toxicology. Third Edition. Macmillan, New York. In: Eisler, R. 1993. "Zinc Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish and Wildlife Service Report, No. 26. 106 pp.

Hammons, A.S., J.E. Huff, H.M. Braunstein, J.S. Drury, C.R. Shriner, E.B. Lewis, B.L. Whitfield, and L.E. Towill. 1978. "Reviews of the Environmental Effects of Pollutants: IV Cadmium." United States Environmental Protection Agency, Rep. 600/1-78-026. 251pp.

Hatch, R.C. 1978. "Poisons Causing Respiratory Insufficiency." In: *Veterinary Pharmacology and Therapeutics.* L.M. Jones, N.H. Booth and L.E. McDonald (eds.). Ames Press, Iowa State University, Ames, Iowa.

Holl, W. and R. Hampp. 1975. "Lead and Plants." *Residue Rev.*, 54:79-111.

Howard, P.H. 1989. "Handbook of Environmental Fate and Exposure Data for Organic Chemicals, Volume I, Large Production and Priority Pollutants." Lewis Publishers, Chelsea, MI.

Howard, P.H. 1990. "Handbook of Environmental Fate and Exposure Data for Organic Chemicals, Volume II, Solvents." Lewis Publishers, Chelsea, MI.

Howard, P.H. 1991. "Handbook of Environmental Fate and Exposure Data for Organic Chemicals, Volume III, Pesticides." Lewis Publishers, Chelsea, MI.

HSDB (Hazardous Substances Data Bank). 1998. National Library of Medicine, Bethesda, Maryland (CD-ROM version), MICROMEDEX, Inc., Englewood, Colorado (Edition expires [1999]).

Huckabee, J.W., J.M. Elwood, and S.G. Hildebrand. 1979. "Accumulation of Mercury in Freshwater Biota." Pages 277-302 in J.O. Nriagu (ed.). "The Biogeochemistry of Mercury in the Environment." Elsevier/North-Holland Biomedical Press, New York, In: Eisler, R. 1987. "Mercury Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish and Wildlife Service Biological Report, 85(1.10). 90 pp.

I.L.O. 1983. "Encyclopedia of Occupational Health and Safety, Volumes I and II." International Labour Office. Geneva, Switzerland.

Ingle, L. 1965. A monograph on chlordane. Toxicological and pharmacological properties. Library of Congress Number 65-28686. 88 pp.

IRIS (Integrated Risk Information System). 1998. U.S. Environmental Protection Agency, Washington, D.C. (CD-ROM version), MICROMEDEX, Inc., Englewood, Colorado (Edition expires [1999]).

James, B.R. and R.J. Bartlett. 1983a. "Behavior of Chromium in Soils: V. Fate of Organically Complexed Cr (III) Added to Soil." *J. Environ. Qual.*, 12:169-172 In: Eisler, R. 1986. "Chromium Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish and Wildlife Service Biological Report, 85(1.86). 60 pp.

James, B.R. and R.J. Bartlett. 1983b. "Behavior of Chromium in Soils: VI. Interactions Between Oxidation-Re-duction and Organic Complexation." *J. Environ. Qual.*, 12:169-172 In: Eisler, R. 1986. "Chromium Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish and Wildlife Service Biological Report, 85(1.86). 60 pp.

Kaji, I., R. Kawatani, M. Takata, I. Hoshino, I. Miyahara, H. Konzuka, and F. Koizumi. 1988. "The Effects of Cadmium, Copper or Zinc on Formation of Embryonic Chick Bone in Tissue Culture." *Toxicology* 50:303-316. In: Eisler, R. 1993. "Zinc Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish and Wildlife Service Report, No. 26. 106p.

Kazacos, E.A. and J.F. Van Vleet. 1989. "Sequential Ultrastructural Changes of the Pancreas in Zinc Toxicosis in Ducklings." *American Journal of Pathology* 134:581-595. In: Eisler, R. 1993. "Zinc Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish and Wildlife Service Report, No. 26. 106 pp.

Klassen, C.D., Amdur, M.O. and J. Doull. 1986. Casarett and Doull's Toxicology. 3rd. ed. MacMillan Publishing Company, New York. 974 pp.

Kucher, I.M. and A.M. Shabanov. 1967. "Histochemical Investigation of the Pancreatic Islets in $K_2CR_2O_7$ Poisoning." *Gistokhim. Norm. Patol. Morfol.*:353-357. Cited in *Chem. Abstr.*, 72:41127b (1970) In: Steven, J.D., I.J. Davies, E.K. Stanley, R.A. Abbott, M. Inhat, L. Bidstrup, and J.F. Jaworski. 1976. "Effects of Chromium in the Canadian Environment." *Nat. Res. Counc. Can.*, NRCC No. 15017. 168 pp.

Llobet, J.M. and J.L. Domingo 1984 "Acute Toxicity of Vanadium Compounds in Rats and Mice." *Toxicological Letters* 23:227-231.

Lu, P-Y., R.L. Metcalf, N. Plummer, and D. Mandrel. 1977. "The environmental fate of three carcinogens: benzo-(a)-pyrene, benzidine, and vinyl chloride evaluated in laboratory model ecosystems." *Arch. Environ. Contam. Toxicol.*, 6:129-142.

Lu, J. and G.F. Combs. 1988 "Effects of Excess Dietary Zinc on Pancreatic Exocrine Function in the Chick." *J. Nutrition* 118:681-689. In: Eisler, R. 1993. "Zinc Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish and Wildlife Service Report, No. 26. 106 pp.

Lundholm, E. 1987. "Thinning of eggshells of birds by DDE; mode of action on the eggshell gland." *Comp Biochem. Physiol.* 88C:1-22.

Lundholm, E. 1988. "The effects of DDE, PCB and chlordane on the binding of progesterone to its cytoplasmic receptor in the eggshell gland mucosa of birds and the endometrium of the mammalian uterus." *Comp. Biochem. Physiol.* 89:361-368.

Mamedov, A.M. and V.A. Aliev. 1986 *Gig Sanit* 4:84-85. (Full citation pending).

Martell, A.E. 1981 "Chemistry and Metabolism of Metals Relevant to their Carcinogenicity." *Environmental Health Perspectives,* 40:27-34.

Masini, A. et al. 1985 *Biochem. Pharmacol* 34(8):1171-1174. (Full citation pending)

Matsumura, F. 1975 *Toxicology of Insecticides*. New York: Plenum Press. 503p.

Meditext. 1997. Medical Management Database.

Miller, D.S., W.B. Kinter, and D.B. Peakall. 1976. "Enzymatic basis for DDE-induced eggshell thinning in a sensitive bird." *Nature*. 259:122-124.

Montz, W.E., W.C. Card, and R.L. Kirkpatrick. 1982. "Effects of Polychlorinated Biphenyls and Nutritional Restriction on Barbituate-Induced Sleeping Times and Selected Blood Characteristics in Raccoons (*Procyon lotor*)." *Bull. Environ. Contam. Toxicol.*, 28:578-583.

Mulkey, J.P. and F.W. Oehme. 1993. "A Review of Thallium Toxicity." Vet. Human Toxicol. 35(5):445-453.
NAS (National Academy of Sciences). 1979. *Arsenic*. United States National Academy of Sciences, National Research Council, Subcommittee on Zinc. University Park Press, Baltimore, MD.

National Academy of Sciences (NAS). 1979. *Polychlorinated biphenyls*. United States National Academy of Sciences, National Research Council, Subcommittee on Zinc. Baltimore, MD. University Park Press.

Nechay, B.R. and Saunders, J.P. 1978. "Inhibition by Vanadium of Sodium and Potassium Dependent ATPase Derived from Animal and Human Tissues." *J. Environ. Pathol. Toxicol.* 2:247-262.

Neff, J.M. 1979. *Polycyclic Aromatic Hydrocarbons in the Aquatic Environment*. Applied Science Publ. Ltd., London.

Sims, R C. and R. Overcash 1983. "Fate of polynuclear aromatic compounds (PNAs) in soil-plant systems. *Residue Rev*., 88:1-96.

Sipes, I G. and A J. Gandolfi 1986 "Biotransformation of Toxicants." In: *"Toxicology, The Basic Science of Poisons, 3rd Edition* C.D Klaasen, M O Amdur, and J Doull (eds.). Macmillan Publ. Co., New York, NY.

Spear, P.A. 1981. "Zinc in the Aquatic Environment: Chemistry, Distribution, and Toxicology." National Research Council of Canada Publication. NRCC 17589. 145p. In: Eisler, R. 1993. "Zinc Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U S Fish and Wildlife Service Report, No. 26. 106 pp.

Stein, J E., W.L. Reichert, M. Nishimoto and U. Varnasi 1990. "Overview of Studies on Liver Carcinogenesis in English Sole from Puget Sound: Evidence for a Xenobiotic Chemical Etiology. II: Biochemical Studies." *Sci Tot. Environment,* 94:51-69.

Stendahl, D H and J B. Sprague 1982. "Effects of Water Hardness and pH on Vanadium Lethality to Rainbow Trout." *Water Res.* 16:1479-1488.

Steven, J D., L.J. Davies, E K. Stanley, R A. Abbott, M. Inhat, I. Bidstrup, and J F. Jaworski. 1976. "Effects of Chromium in the Canadian Environment." *Nat Res. Counc Can*., NRCC No. 15017. 168 pp.

U.S. Environmental Protection Agency (U.S. EPA). 1976. "Criteria Documents for Aldrin/Dieldrin." U.S. Environmental Protection Agency. Rep. EPA-440/9-76-008. 93p.

U.S. Environmental Protection Agency (U.S. EPA). 1978. "Chemical Hazard Information Profile: Chloromethane." EPA-560/10-78-001. 125p.

U.S. Environmental Protection Agency (U.S. EPA). 1980. *Ambient Water Quality Criteria for Aldrin/Dieldrin*. U.S. Environmental Protection Agency. Rep. 440/5-80-019. 211p.

U S. Environmental Protection Agency (U.S. EPA). 1980. *Ambient Water Quality Criteria for Polychlorinated biphenyls*. U.S. Environmental Protection Agency. Rep. 440/5-80-068. 211 pp.

U.S. Environmental Protection Agency (U S. EPA). 1986. *Quality criteria for water*. Office of Water Regulation and Standards. EPA/440/5-86/001.

U S. Environmental Protection Agency (U.S. EPA). 1988a. "Pesticide Fact Handbook." Noyes Data Corporation, Mill Road, NJ.

U S. Environmental Protection Agency (U S. EPA). 1988b. United States Environmental Protection Agency Office of Drinking Water Health Advisories. Chlordane. Rev. Environ. Contam. Toxicol. 104:47-62.

U S. Environmental Protection Agency (U.S. EPA). 1992. *Default parameters for indirect exposure methodology*. Washington, D C. February.

The Chemical Society. 1972. "Foreign Compound Metabolism in Mammals, Volume 2: A Review of the Literature Published Between 1970 and 1971." The Chemical Society, London.

Van Zinderen Bakker and J F. Jaworski. 1980. *Effects of Vanadium in the Canadian Environment*. Ottawa, Canada: National Research Council of Canada, Associate Committee Scientific Criteria for Environmental Quality.

Varnasi, U., W.L. Reichert and J.E. Stein. 1989. "^{32}P-Postlabeling Analysis of DNA Adducts in Liver of Wild English Sole (*Parophrys vetulus*) and Winter Flounder (*Pseudopleuronectes americanus*)." *Cancer Research,* 49:1171-1177.

Venugopal, B. and I D. Luckey 1978 *Metal Toxicity in Mammals. 2 Chemical Toxicity of Metals and Metalloids*. Plenum Press, New York, NY.

Wallace, A., Alexander, G.V and F.M. Chaudhry 1977. "Phytotoxicity of Cobalt, Vanadium, Titanium, Silver, and Chromium." *Commun. in Soil Science and Plant Analysis* 8(9): 751-756.

Wiebel, F.J., J.C. Leutz, L. Diamond and H.V. Gelboin. 1971 "Aryl Hydrocarbon (Benzo(a)pyrene) Hydroxylase in Microsomes from Rat Tissues: Differential Inhibition and Stimulation by Benzoflavones and Organic Solvents" *Arch Biochem. Biophys.*, 144:78-86.

Wixson, B.G. and B.E. Davis 1993. "Lead in Soil" Lead in Soil Task Force, Science Reviews, Northwood. 132 pp.

World Health Organization (WHO) 1984. Chlordane. Environmental Health Criteria 34. World Health Organization. Geneva, Switzerland. 82 pp.

APPENDIX F

Toxicity Profiles
Cornell-Dubilier Site
South Plainfield, NJ
April 1998

APPENDIX F

TOXICITY PROFILES

F.1 Chronic Toxicity Profiles for the Food Chain Model

F.1.1 a-Chlordane/g-Chlordane

F.1.1.1 Chronic a-Chlordane/g-Chlordane Toxicity to Birds

One study was found pertaining to the dietary toxicity of chlordane to the red-winged blackbird. A dietary 6-7 day LD50 of 150 mg/kg of technical chlordane was reported for the red-winged blackbird (Stickel et al. 1979). However, due to the short duration and high dose used in this study, dietary studies using other birds were used to assess the dietary toxicity of chlordane to the red-winged blackbird.

Two studies were found in which the dietary toxicity of chlordane to the mallard duck was examined. Hudson et al. (1984) reported an LD50 from a single oral dose of 1,200 mg/kg BW to 4- to 5-month old ducks. In another study, a 5-day LD50 of 858 mg/kg in diet was reported by Hill et al. (1975). However, due to the short duration and high doses used in these studies, dietary studies using other birds were used to assess the dietary toxicity of chlordane to the mallard duck.

No studies were found in which the dietary toxicity of chlordane to the green heron was examined. Therefore, dietary studies using other birds were used to assess the dietary toxicity of chlordane to the green heron.

In one study, common barn owls (*Tyto alba*) were fed diets containing 75 mg/kg until 50% died and the survivors were sacrificed and measured for residues. Mortality was reached on day 40 (Eisler, 1990). In a longer term study, European starlings (*Sturnus vulgaris*) were fed a diet of various chlordane concentrations of which the lowest concentration (0.19 mg/kg BW/day) caused 50% mortality in 57 days.

For this risk assessment, a dietary exposure level of 0.19 mg/kg BW/day was used as a LOAEL and a dietary exposure level of 0.019 mg/kg BW/day was used as a NOAEL to estimate the risk of chlordane to the selected avian receptors.

F.1.1.2 Chronic a-Chlordane/g-Chlordane Toxicity to Mammals

No literature was found pertaining to the dietary toxicity of chlordane to the raccoon or the red fox. Therefore, literature pertaining to the dietary toxicity of chlordane to other mammals was reviewed. In one study, an acute oral LD50 of 200 mg/kg BW has also been reported for chlordane toxicity to the rat (WHO 1984). Dogs fed diets containing 0.3, 3, 15, or 30 mg/kg of technical chlordane for 2 years exhibited liver abnormalities in the 15 and 30 mg/kg groups. There were no adverse effects on behavior, appearance, survival, weight gain, or blood chemistry at the lower doses (WHO 1984). In an acute study, a single oral dose of 200 to 700 mg/kg BW/day was reported as a NOAEL (mortality endpoint) for chlordane toxicity to the domestic dog. However, chronic oral doses between 5 and 200 mg/kg BW/day resulted in dose-dependent mortality, with all test animals dying within 25 days to 93 weeks (WHO 1984). In another study, with the exception of the highest concentrations, rats fed diets containing 0.3, 3, 15, 30, or 60 mg/kg of technical chlordane

for three generations exhibited no measurable effect on fertility, number of young produced, growth, or mortality rate. There were also no gross or microscopic differences among treatment groups up to the 30 mg/kg dose. At 60 mg/kg, the second F_3 generation litters had elevated mortality (11 percent) during the latter part of the nursing period. These animals also exhibited gross and microscopic pathology (WHO 1984).

To express these doses in units of mg/kg BW/day, these values were multiplied by the food ingestion rate for a rat (.015 kg/day) and divided by the body weight of a rat (0.2 kg) to yield the following dietary exposure concentrations:

Dose (mg/kg)	Dose (mg/kg BW/day)
30 (NOAEL, chronic)	1.8
60 (LOAEL, chronic)	3.6

Therefore, a NOAEL of 1.8 mg/kg BW/day and a LOAEL of 3.6 mg/kg BW/day were used in this risk assessment for the evaluation of the dietary toxicity of chlordane to the selected mammalian receptors.

F.1.2 Methoxychlor

F.1.2.1 Chronic Methoxychlor Toxicity to Birds

No literature pertaining to the dietary toxicity of methoxychlor to the red-winged blackbird or the green heron were found. Therefore, literature pertaining to the dietary toxicity of methoxychlor to other bird species was reviewed. Acute oral LC50s of >5,000 mg/kg, dry weight, were reported for the bobwhite, Japanese quail, and pheasant (Heath et al. 1972). Using an accepted correction factor of 10, these doses equate to a LOAEL of 500 mg/kg and a NOAEL of 50 mg/kg, dry weight. Assuming that the diet was 1/3 solids, this equates to a LOAEL of 166.7 mg/kg and a NOAEL of 16.7 mg/kg, wet weight. To express these doses in units of mg/kg BW/day, these values were multiplied by the food ingestion rate of the respective species (bobwhite 0.02 kg/day, Japanese quail 0.01 kg/day, pheasant 0.06 kg/day) and divided by the body weight of the respective species (bobwhite 0.178 kg, Japanese quail 0.09 kg, pheasant 0.953) to yield the following dietary exposure concentrations:

Dose (mg/kg)	Dose (mg/kg BW/day)
16.7 (NOAEL, pheasant)	1.05
16.7 (NOAEL, Jap. quail)	1.86
16.7 (NOAEL, bobwhite)	1.87
166.7 (LOAEL, pheasant)	10.5
166.7 (LOAEL, Jap. quail)	18.6
166.7 (LOAEL, bobwhite)	18.7

A LOAEL of 10.5 mg/kg BW/day, wet weight, and a NOAEL of 1.05 mg/kg BW/day, wet weight, were used in this risk assessment to evaluate the dietary toxicity of methoxychlor to the red-winged blackbird and the green heron.

One study was found in which the dietary toxicity of methoxychlor to mallard ducks was examined. An acute oral LD50 of >2,000 mg/kg was reported for 3-month old mallard ducks (n = 3) (Hudson et al. 1984). Using an accepted conversion factor of 10, this dose equates to a LOAEL of >200 mg/kg and a NOAEL of >20 mg/kg. To express these doses in units of mg/kg BW/day, these values were multiplied by the food ingestion rate of a mallard duck (0.25 kg/day) and divided by the lowest mean reported body weight of a mallard duck

(1.043 kg) to yield dietary exposure concentrations of 48 mg/kg BW/day (LOAEL) and 4.8 mg/kg BW/day (NOAEL)

A LOAEL of 48 mg/kg BW/day and a NOAEL of 4.8 mg/kg BW/day were used in this risk assessment to evaluate the dietary toxicity of methoxychlor to the mallard duck.

F.1.2.2 Chronic Methoxychlor Toxicity to Mammals

No literature pertaining to the toxicity of methoxychlor to the raccoon or red fox could be found. Only one study evaluating the dietary toxicity of methoxychlor to a mammal, the rabbit, was found in the literature. An oral dose of 5.01 mg/kg of methoxychlor for 7 to 19 days during gestation resulted in an excessive loss of litters (U.S. EPA 1991). Using an accepted conversion factor of 10, this dose results in a NOAEL of 0.5 mg/kg. To express these doses in units of mg/kg BW/day, these values were multiplied by the food ingestion rate of a rabbit (0.06 kg/day) and divided by the body weight of a rabbit (2 kg) to yield dietary exposure concentrations of 0.15 mg/kg BW/day (LOAEL) and 0.015 mg/kg BW/day.

A LOAEL of 0.15 mg/kg BW/day and a NOAEL of 0.015 mg/kg BW/day were used in this risk assessment to evaluate the dietary toxicity of methoxychlor to the raccoon and the red fox.

F.1.3 Dieldrin

F.1.3.1 Chronic Dieldrin Toxicity to Birds

Three studies were found in which the toxic effects of dieldrin to mallard ducks was evaluated. In one study, exposure of mallard ducks (*Anas platyrhynchos*) to dietary concentrations of dieldrin ranging from 4 to 30 mg/kg dieldrin (0.36 to 2.7 mg/kg BW/day) for 75 days resulted in a decrease in the biogenic amines serotonin, norepinephrine, and dopamine (Sharma et al. 1976). However, due to the nature of the endpoints evaluated in this study, toxicity studies evaluating endpoints with more ecological significance using other bird species were used in this risk assessment to evaluate the dietary toxicity of dieldrin to the mallard duck.

No studies were found in which the dietary toxicity of dieldrin to the red-winged blackbird or the green heron were evaluated. Therefore, studies in which the dietary toxicity of dieldrin to other bird species were reviewed. Adverse reproductive effects were observed in pheasants exposed to a concentration of 25 and 50 mg/kg dieldrin (4.3 and 8.75 mg/kg BW/day) in their diet (Genelly and Rudd 1956). Hungarian partridges exposed to 3 mg/kg dieldrin (0.5 mg/kg BW/day) in their diet for 90 days during the breeding season resulted in decreased egg production and hatchability (Neill et al. 1969). Chickens exposed to 5 mg/kg dieldrin (0.9 mg/kg BW/day) in their diet showed no effects on egg production or hatchability (Graves et al. 1969). It was estimated that the lowest observed adverse effect level of dieldrin in brown pelican (*Pelecanus occidentalis*) eggs is approximately 1 mg/kg (0.3 mg/kg BW/day) in their diet (Blus 1982). Eggshells of normal thickness were laid by pheasants fed a diet containing approximately 0.1 mg/kg BW/day dieldrin (Dahlgren and Linder 1974).

A LOAEL of 0.3 mg/kg BW/day and a NOAEL of 0.1 mg/kg BW/day will be used in this risk assessment to evaluate the dietary toxicity of dieldrin to the red-winged blackbird, the mallard duck, and the green heron.

F.1.3.2 Chronic Dieldrin Toxicity to Mammals

No studies were found in which the dietary toxicity of dieldrin to the raccoon or red fox were evaluated. Therefore, studies in which the dietary toxicity of dieldrin to other mammal species were reviewed.

In one study, rats of varying ages (28 to 750 days old) were exposed to dietary concentrations of dieldrin ranging from 0.08 to 40 mg/kg (0.0003 to 2.4 mg/kg BW/day) (Harr et al. 1970). The exposure resulted in nonspecific neural and vascular lesions, cranial edema, and convulsions at the greater concentrations; no effects were noted at dietary concentrations less than 2.1 mg/kg (0.13 mg/kg BW/day). In a 128-week study, no adverse effects were noted in mice exposed to 0.1 and 1 mg/kg dieldrin (0.013 and 0.13 mg/kg BW/day) in their diet (Walker et al. 1972). In a similar study, no effect on mortality or longevity was observed in three generations of rats exposed to 2.5, 12.5, or 25.0 mg/kg dieldrin in the diet (0.15, 0.75, and 1.5 mg/kg BW/day); however, an increase in the liver/body weight ratio was observed at all concentrations (Treon and Cleveland 1955).

For the purposes of this risk assessment, a NOAEL of 1.5 mg/kg BW/day and a LOAEL of 15 mg/kg BW/day (using an accepted conversion factor of 10) will be used to evaluate the dietary toxicity of dieldrin to the raccoon and the red fox.

F.1.4 Endrin/Endrin Aldehyde/Endrin Ketone

F.1.4.1 Chronic Endrin/Endrin Aldehyde/Endrin Ketone Toxicity to Birds

No literature was found pertaining to the dietary toxicity of endrin to the red-winged blackbird or the green heron. Therefore, literature pertaining to the dietary toxicity of endrin other bird species was reviewed. Acute oral LD50s of 14, 14, and 18 mg/kg, dry weight, were reported for the bobwhite, pheasant, and Japanese quail, respectively (Heath et al. 1972). Using an accepted conversion factor of 10, these doses equate to LOAELs of 1.4, 1.4, and 1.8 mg/kg, dry weight, respectively, and NOAELs of 0.14, 0.14, and 0.18 mg/kg, dry weight, respectively. Assuming that the diet was 1/3 solids, this equates to LOAELs of 0.47, 0.47, and 0.6 mg/kg, wet weight, respectively, and NOAELs of 0.047, 0.047, and 0.06 mg/kg, wet weight, respectively. To express these doses in units of mg/kg BW/day, these values were multiplied by the food ingestion rate of the respective species (bobwhite 0.02 kg/day, pheasant 0.06 kg/day, Japanese quail 0.01 kg/day) and divided by the body weight of the respective species (bobwhite 0.178 kg, pheasant 0.953 kg, Japanese quail 0.09 kg) to yield the following dietary exposure concentrations:

Dose (mg/kg)	Dose (mg/kg BW/day)
0.047 (NOAEL, pheasant)	0.003
0.047 (NOAEL, bobwhite)	0.005
0.06 (NOAEL, Jap. quail)	0.007
0.47 (LOAEL, pheasant)	0.03
0.47 (LOAEL, bobwhite)	0.05
0.6 (LOAEL, Jap. quail)	0.07

A LOAEL of 0.03 mg/kg BW/day, wet weight, and a NOAEL of 0.003 mg/kg BW/day, wet weight, were used in this risk assessment to evaluate the dietary toxicity of endrin and its derivatives to the red-winged blackbird and the green heron.

One study was found which examined the dietary toxicity of endrin to the mallard duck. An acute oral LD50 of 5.64 mg/kg was reported for 12-month old female mallard ducks (Hudson et al. 1984). Using an accepted conversion factor of 10, this dose equates to a LOAEL of 0.564 mg/kg and a NOAEL of 0.0564 mg/kg. To express these doses in units of mg/kg BW/day, these values were multiplied by the food ingestion rate of a mallard duck (0.25 kg/day) and divided by the lowest mean reported body weight of a mallard duck (1.043 kg) to yield dietary exposure concentrations of 0.14 mg/kg BW/day (LOAEL) and 0.014 mg/kg BW/day (NOAEL).

A LOAEL of 0.14 mg/kg BW/day and a NOAEL of 0.014 mg/kg BW/day were used in this risk assessment for the evaluation of the dietary toxicity of endrin and its derivatives to the mallard duck.

F.1.4.2 Chronic Endrin/Endrin Aldehyde/Endrin Ketone Toxicity to Mammals

No literature pertaining to the dietary toxicity of endrin or its derivatives to the raccoon or the red fox was found. Therefore, literature pertaining to the dietary toxicity of endrin and/or its derivatives to other mammals was reviewed. One study was found which examined the dietary toxicity of endrin to the dog. A dietary concentration of 4 mg/kg of endrin for 2 years resulted in few convulsions in the test animals and slight pathology. A dietary concentration of 3 mg/kg resulted only in an increase in heart and liver weight rations (Hayes and Laws, n.d.). In another study, a concentration of 25 mg/kg of endrin in the diet of male and female rats for 2 years resulted in increased mortality in the females. Dietary concentrations of 5 mg/kg for 2 years resulted only in an increase in liver weight ratios in males and kidney weight ratios in females (Hayes and Laws, n.d.). To express these doses in units of mg/kg BW/day, these values were multiplied by the food ingestion rate for a rat (0.015 kg/day) and divided by the body weight of a rat (0.25 kg) to yield dietary exposure concentrations of 1.5 mg/kg BW/day (LOAEL) and 0.3 mg/kg BW/day (NOAEL).

A LOAEL of 1.5 mg/kg BW/day and a NOAEL of 0.3 mg/kg BW/day were used in this risk assessment to evaluate the dietary toxicity of endrin and its derivatives to the raccoon and the red fox.

F.1.5 Heptachlor/Heptachlor epoxide

F.1.5.1 Chronic Heptachlor/Heptachlor epoxide Toxicity to Birds

No literature was found pertaining to the dietary toxicity of heptachlor/heptachlor epoxide to the red-winged blackbird or the green heron. Therefore, literature pertaining to the dietary toxicity of heptachlor/heptachlor epoxide to other bird species was reviewed. Acute oral LC50s of 92, 93, and 224 mg/kg, dry weight, were reported for the bobwhite, Japanese quail, and pheasant, respectively (Heath et al. 1972). Using an accepted conversion factor of 10, these doses equate to LOAELs of 9.2, 9.3, and 22.4 mg/kg, respectively, and NOAELs of 0.92, 0.93, 2.24 mg/kg, respectively. Assuming that the diet was 1/3 solids, this equates to LOAELs of 3.1, 3.1, and 7.5 mg/kg, wet weight, respectively, and NOAELs of 0.31, 0.31, and 0.75 mg/kg, wet weight, respectively. To express these doses in units of mg/kg BW/day, these values were multiplied by the food ingestion rate of the respective species (bobwhite 0.02 kg/day, Japanese quail, 0.01 kg/day, pheasant 0.06 kg/day) and divided by the body weight of the respective species (bobwhite 0.178 kg, Japanese quail 0.09 kg, pheasant 0.953 kg) to yield the following dietary exposure concentrations:

Dose (mg/kg)	Dose (mg/kg BW/day)
0.307 (NOAEL, bobwhite)	0.03
0.31 (NOAEL, Japanese quail)	0.03
0.75 (NOAEL, pheasant)	0.05
3.1 (LOAEL, bobwhite)	0.35
3.1 (LOAEL, Japanese quail)	0.34
7.5 (LOAEL, pheasant)	0.47

A LOAEL of 0.34 mg/kg BW/day, wet weight, and a NOAEL of 0.03 mg/kg BW/day, wet weight, were used in this risk assessment to evaluate the dietary toxicity of heptachlor/heptachlor epoxide to the red-winged blackbird and the green heron.

One study was found which examined the dietary toxicity of heptachlor/heptachlor epoxide to the mallard duck. An acute oral LC50 of 480 mg/kg, dry weight, in feed was reported for the mallard duck (Heath et al. 1972). Using an accepted conversion factor of 10, this dose equates to a LOAEL of 4.8 mg/kg and a NOAEL of 0.48 mg/kg. Assuming that the diet was 1/3 solids, this equates to a wet weight LOAEL of 1.6 mg/kg and a wet weight NOAEL of 0.16 mg/kg. To express these doses in units of mg/kg BW/day, these values were multiplied by the food ingestion rate of a mallard duck (0.25 kg/day) and divided by the lowest mean body weight of a mallard duck (1.043 kg) to yield dietary exposure concentrations of 0.4 mg/kg BW/day (LOAEL) and 0.04 mg/kg BW/day (NOAEL).

A LOAEL of 0.4 mg/kg BW/day, wet weight, and a NOAEL of 0.04 mg/kg BW/day, wet weight, were used in this risk assessment to evaluate the dietary toxicity of heptachlor/heptachlor epoxide to the mallard duck.

F.1.5.2 Chronic Heptachlor/Heptachlor epoxide Toxicity to Mammals

No literature was found pertaining to the dietary toxicity of heptachlor/heptachlor epoxide to the raccoon. Therefore, literature pertaining to the dietary toxicity of heptachlor/heptachlor epoxide to another omnivorous mammal, the rat, was reviewed. Only one study was found which examined the dietary toxicity of heptachlor/heptachlor epoxide to the rat. Dietary exposure to heptachlor at 3 mg/kg for 2 years resulted only in an increase in rat liver weights (U.S. EPA 1991). Using an accepted conversion factor of 10, this dose equates to a LOAEL of 30 mg/kg. To express these doses in units of mg/kg BW/day, these values were multiplied by the food ingestion rate for a rat (.015 kg/day) and divided by the body weight of a rat (0.25 kg) to yield dietary exposure concentrations of 18 mg/kg BW/day (LOAEL) and 1.8 mg/kg BW/day (NOAEL).

A LOAEL of 18 mg/kg BW/day and a NOAEL of 1.8 mg/kg BW/day were used in this risk assessment to evaluate the dietary toxicity of heptachlor/heptachlor epoxide to the raccoon.

One study was found which examined the dietary toxicity of heptachlor/heptachlor epoxide to the fox. The minimum amount of dietary heptachlor which caused toxic symptoms and death in wild-collected foxes (unspecified species) over 12 days was 105 mg/kg (Blackmore 1963). Using an accepted conversion factor of 10, this dose equates to a NOAEL of 10.5 mg/kg. To express these doses in units of mg/kg BW/day, these values were multiplied by the food ingestion rate of a fox (0.432 kg/day) and divided by the body weight of a fox (2.7 kg) to yield a LOAEL of 16.8 mg/kg BW/day and a NOAEL of 1.68 mg/kg BW/day.

A LOAEL of 16.8 mg/kg BW/day and a NOAEL of 1 68 mg/kg BW/day were used in this risk assessment to evaluate the dietary toxicity of heptachlor/heptachlor epoxide to the red fox

F.1.6 DDT/DDD/DDE

F.1.6.1 Chronic DDT/DDD/DDE Toxicity to Birds

No literature was found pertaining to the dietary toxicity of DDT or any of its derivatives to the red-winged blackbird or any other insectivorous bird Therefore, literature pertaining to the dietary toxicity of DDT to other passerine bird species was reviewed. One study was found which examined the dietary toxicity of DDT and DDE separately to a passerine bird species. Bengalese finches (*Lonchura striata*) were fed diets contaminated with DDT and DDE separately from 6 weeks prior to pairing until fledging of the young had occurred Ingestion of diets containing 8 mg/kg DDT (equivalent to 2.49 mg/kg BW/day) reduced fertility, hatchability, and fledging success, while ingestion of diets containing 4 mg/kg DDE (equivalent to 1.25 mg/kg BW/day) caused the same effects (Jefferies 1971). Using an accepted conversion factor of 10, the latter dose equates to a NOAEL of 0.125 mg/kg BW/day

A LOAEL of 1.25 mg/kg BW/day and a NOAEL of 0.125 mg/kg BW/day were used in this risk assessment to evaluate the dietary toxicity of DDT and its derivatives to the red-winged blackbird

One study was found which examined the acute dietary toxicity of DDT, DDD, and DDE separately to the mallard duck Acute dietary LD50's of 1,869 mg/kg, 4,814 mg/kg, and 3,572 mg/kg dry weight, were reported for DDT, DDD, and DDE, respectively (Heath et al 1972) Another study was found in which the toxicity of DDE to a closely related species, the black duck, was evaluated In this study, black duck hens fed 10 mg/kg, dry weight, (equivalent to 3 mg/kg, wet weight) DDE laid eggs with shells 22 percent thinner at the equator, 30 percent thinner at the cap, and 33 percent thinner at the apex than those of the controls (Longcore and Samson 1973) To express this dose in units of mg/kg BW/day, this value was multiplied by the food ingestion rate of the black duck (0 05 kg/day) and divided by the lowest reported body weight of a black duck (0 9 kg) to yield a LOAEL of 0 17 mg/kg BW/day Using an accepted conversion factor of 10, this correlates to a NOAEL of 0.017 mg/kg BW/day

A LOAEL of 0.17 mg/kg BW/day, wet weight, and a NOAEL of 0 017 mg/kg BW/day, wet weight, were used in this risk assessment to evaluate the dietary toxicity of DDT and its derivatives to the mallard duck

No literature was found pertaining to the dietary toxicity of DDT or any of its derivatives to the green heron. Therefore, literature pertaining to the dietary toxicity of DDT and its derivatives to other carnivorous bird species was reviewed An acute oral LC50 of >1,200 mg/kg BW was reported for the sandhill crane (Hudson et al 1984). Wiemeyer and Porter (1970) report mortality in American kestrels receiving 2 8 mg/kg DDE for 14 to 16 months To express this dose in units of mg/kg BW/day, this value was multiplied by the food ingestion rate of an American kestrel (0 03 kg/day) and divided by the lowest reported mean body weight of an American kestrel (0.103 kg) to yield a dietary exposure concentration of 0 81 mg/kg BW/day Female American kestrels maintained on a diet containing 0.55 mg/kg BW/day DDE produced eggs with shells that were 15.1 percent thinner than experimental controls (Lincer 1975). Eggshell thinning to the extent reported may be expected to impact

breeding success, since Anderson et al. (1969) states that whenever eggshell thinning exceeds 10 percent, that bird population would be in a decline.

For the purposes of this risk assessment, a LOAEL of 0.55 mg/kg BW/day and a NOAEL of 0.055 were selected to evaluate the toxicity of DDT and its derivatives to the green heron

F.1.6.2 Chronic DDT/DDD/DDE Toxicity to Mammals

No literature was found pertaining to the dietary toxicity of DDT or its derivatives to the raccoon. Therefore, literature pertaining to the dietary toxicity of DDT, DDD, and DDE to another omnivorous mammal, the rat, was reviewed and used to predict the effects of DDT and its derivatives on the raccoon. Liver damage was observed in rats at a dietary DDT concentration of 500 mg/kg (for 2.9 years) but not at 25 mg/kg (2 years) (Rossi et al. 1977; Treon and Cleveland 1955). No mortality was reported in the 500 mg/kg treatment. In contrast to these numbers, an acute oral LD50 of 118 mg/kg is reported for the rat (Omer 1970), and a single oral dose of 250 mg/kg is reported to be lethal (Galley 1952). DDD was found to be less acutely toxic, with an acute oral LD50 of >4,000 mg/kg for the rat (Gaines 1969). When DDE was administered in the diet at 200 mg/kg for 6 weeks, the rats exhibited differential degrees of humoral and cellular immune suppression (Banerjee et al. 1996). In another study, virgin female Sprague-Dawley rats were given daily doses of 10 mg/kg BW of DDE for 5 days/week for 5 weeks prior to mating. This dose was continued throughout gestation and lactation periods and was not toxic to the dams nor did it have a pronounced effect on neonatal mortality. Furthermore, no significant differences in lactation parameters were observed between DDE-treated groups and the control group (Kornbrust et al. 1986). In another study, however, male and female Osborne-Mendel rats fed DDE at concentrations of 41.95 and 21.85 mg/kg BW/day (males) and 23.1 and 12.1 mg/kg BW/day (females) for 78 weeks exhibited increased mortality in both sexes. In addition, the DDE was hepatotoxic and induced centrolobular necrosis and fatty metamorphosis (NCI/DHEW 1978).

For the purposes of this risk assessment, a LOAEL of 12.1 mg/kg BW/day and a corresponding NOAEL of 1.21 mg/kg BW/day (using an accepted converstion factor of 10) were used to evaluated the effects of DDT and its derivatives to raccoons.

No literature was found pertaining to the dietary toxicity of DDT to the red fox. Therefore, literature pertaining to the dietary toxicity of DDT and its derivatives to another canid, the domestic dog, was reviewed. In one study, no effect on the liver was observed in dogs receiving 400 mg/kg of DDT in their diet for 39 to 49 months, however, minor liver damage was seen at a dietary concentration of 2,000 mg/kg (Lehman 1965). In another study, an acute oral LC50 of 60 mg/kg DDT was reported for the domestic dog (ESE, Inc. 1989). In a study using DDE, a single feeding of 50 mg/kg BW of o,p'-DDE resulted in a complete inhibition of ATPase in the homogenate and the microsomal fraction of the adrenal cortex. Two feedings at this dose caused activation of the enzymes in the homogenate and the mitochondrial fraction (Komissarenko et al. 1997). In a study evaluating the effects of DDD, dogs receiving 50 to 200 mg/kg BW/day of DDD for 1 to 30 months exhibited weakness, anorexia, and mortality (Nelson and Woodard 1949).

For the purposes of this risk assessment, a LOAEL of 50 mg/kg BW/day and a NOAEL of 5 mg/kg BW/day (using an accepted conversion factor of 10) were used to evaluate the dietary toxicity of DDT and its derivatives to the red fox.

F.1.7 PCBs

F.1.7.1 Chronic PCB Toxicity to Birds

One study was found in which the chronic toxicity of PCBs to the mallard duck was evaluated. Aroclor 1254 was fed to 9 month-old mallard hens at a concentration of 25 mg/kg, dry weight, in the diet for at least one month prior to egg laying, and no detrimental effects on reproduction or nest attentiveness were observed (Custer and Heinz 1980). Assuming that the diet was 1/3 solids, this equates to a wet weight concentration of approximately 8.3 mg/kg. To convert this dosage to units of mg/kg BW/day, the dose was first multiplied by the food ingestion rate for the mallard duck (0.25 kg/day), and then divided by the lowest reported adult body weight (1.043 kg) to yield a dose of approximately 2.0 mg/kg BW/day.

Therefore, for the purposes of this risk assessment, a NOAEL of 2.0 mg/kg BW/day and a LOAEL of 20 mg/kg BW/day (using an accepted conversion factor of 10) were used to assess the potential risk posed by PCBs to the mallard duck.

No studies were found in the literature in which the chronic dietary toxicity of PCBs to the green heron was evaluated. Therefore, studies on the toxicity of PCBs to other bird species were reviewed and used to assess the toxicity of PCBs to the green heron.

One study was found in which the toxicity of PCBs to the red-winged blackbird was evaluated. In this study, a dietary concentration of 1500 mg/kg (dry weight) was administered to red-winged blackbirds for 6 days, by which time 50% of the birds had died (Stickel et al. 1984). However, due to the acute nature of this study (short duration and high mortality), this study was not used to assess the chronic effects of PCBs to the red-winged blackbird. Therefore, studies on the toxicity of PCBs to other bird species were reviewed and used to estimate the toxicity of PCBs to the red-winged blackbird.

Delayed reproduction was reported in ringed turtle doves fed a diet of 10 parts per million (ppm) Aroclor 1254 for 3 months (Heinz et al. 1984). Torre and Peterle (1983) investigated the behavioral component of reproduction in mourning doves given dietary supplements of 0, 10, or 40 ppm Aroclor 1254. Control doves displayed normal courtship behaviors and patterns. Doves that were fed at the 10 ppm supplemental level spent twice as much time in the courtship phase as the control birds, with only 50% completing courtship and nesting. Of the 50% that did nest and incubate eggs, nest initiation was significantly delayed. None of the doves on the 40 ppm dietary supplement completed the nesting process. In a different study, hatchability of chicken eggs was reduced in hens fed a diet which was supplemented with 20 ppm of total PCBs; reproductive impairment was observed at supplemental dietary levels as low as 5 ppm (Heinz et al. 1984).

American kestrels fed a diet of 9-10 mg/kg BW/day of Arochlor 1254 for a period of 62-69 days, showed a marked decrease in sperm concentration (Bird et al. 1983). In a separate study, male and female pairs of American kestrels were fed diets containing 3 mg/kg, wet weight, of Aroclor 1248 incorporated into a commercial diet for approximately 20 weeks. Eggs were collected from the pairs 2 to 4 days after egg-laying was complete. The eggs collected from the treated pairs of birds exhibited a significant 5 percent reduction in eggshell thickness (Lowe and Stendell 1991). Neither the body weights nor the food ingestion rates were reported in this study, therefore values from a different study were used to convert the 3 mg/kg dose into a exposure concentration to be used in this risk assessment. The 3 mg/kg dose was divided by the lowest reported mean adult American kestrel body

weight of 0.103 kg and a food ingestion rate of 0 03 kg/day (U.S. EPA 1993) to yield an exposure concentration of 0.87 mg/kg BW/day.

For the purposes of this risk assessment, a LOAEL of 0.87 mg/kg BW/day and a corresponding NOAEL of 0.087 mg/kg BW/day (using an accepted conversion factor of 10) were used to assess the risk of PCBs to the red-winged blackbird and the green heron.

F 1.7.2 Chronic PCB Toxicity to Mammals

No studies were located in which the toxicity of PCBs to the red fox was investigated One study was found in which the dietary toxicity of PCBs to the raccoon investigated. In this study, an 8-day LD50 of > 50 mg Arochlor 1254/kg in the diet was calculated (Montz et al. 1982). Due to the short-term exposure duration and the endpoint evaluated (50% mortality), this study was not used in this risk assessment to evaluate the chronic effects of PCBs to the raccoon However, several studies were found pertaining to the dietary toxicity of PCBs to mink, most of which examined its effects on reproduction, growth and survival. Since mink have been identified as one of the most sensitive organisms to the effects of PCBs (Giesy et al. 1994), the dietary toxicity of PCBs to mink will be used to estimate the dietary toxicity of PCBs to the raccoon and the red fox in this risk assessment.

In mink, reproductive effects are seen at parent dietary levels as low as 0.13 mg/kg BW/day (Heaton et al. 1995) and embryotoxicity at parent dietary levels of 0.66 mg/kg BW/day (Aulerich and Ringer 1977). Some adult mortality and behavioral effects are seen at dietary levels starting at 0.148 mg/kg BW/day (Platanow and Karstad 1973), reduced adult weight at dietary levels starting at 1.31 mg/kg BW/day (Aulerich and Ringer 1977), and complete adult mortality at dietary levels starting at 3 3 mg/kg BW/day (Aulerich and Ringer 1977)

Male and female ranch-bred mink were acclimated to a diet consisting of ocean fish scraps, commercial mink cereal, and meat by-products Ocean fish scraps made up 40 percent of this diet. Dietary treatment levels were prepared by substituting 10, 20, and 40 percent of the ocean fish scraps with PCB-contaminated carp The mean dietary PCB concentrations were 0.015 mg/kg (control), 0.72 mg/kg (10 percent carp), 1.53 mg/kg (20 percent carp), and 2 56 mg/kg (40 percent carp) Groups of 15 mink (3 males, 12 females) were assigned to one of the four treatment groups for a period of 12 weeks. Mink receiving the highest PCB-containing diet (40 percent carp or 0.32 mg/kg BW/day, as reported by the investigators) exhibited a 42 percent reduction in mean litter size, 86 percent fewer live kits at birth, and no kits surviving beyond 24-hours post-partum Even mink receiving the 10 percent carp diet (or 0 13 mg/kg BW/day, as reported by the investigators) exhibited a 67 percent reduction in kits surviving three to six weeks relative to the control (Heaton et al. 1995)

One-year-old mink were fed a diet of beef and cereal prepared from cows which had been given 10 consecutive daily oral doses of 1 and 10 mg/kg of Aroclor 1254 dissolved in an olive oil and dairy concentrate (Platanow and Karstad 1973) The cows did not exhibit any clinical, gross, or histopathological signs of PCB toxicity The cows were killed 24 hours following the last dose, and the musculature, liver, and kidneys ground and mixed with commercial mink food cereal at a level of 24 percent cereal The resulting rations containing 0.64 and 3 57 mg/kg of total PCB were fed to mink for a period of 160 days. The mink were fed this diet *ad libitum* 2 months prior to the breeding season and continued for 160 days. All 16 mink that were fed 3 57 mg/kg of PCBs died by day 105. Two of the 16 mink that were fed 0 64 mg/kg died by days 122 and 129. The mink exhibited poor appetites, lethargy, and weakness before dying. Some passed tarry feces, indicating gastrointestinal

hemorrhaging. At both treatment levels, males survived longer than females. These doses were converted to a daily exposure concentration by multiplying them with the inverse of the lowest reported body weight of the mink (0.52 kg) and the food ingestion rate of the mink (0.121 kg/day). This yielded exposure concentrations of 0.148 and 0.785 mg/kg BW/day for the 0.64 and 3.57 mg/kg dose, respectively.

Eight month old mink fed a basal diet containing 1.0 mg/kg of Aroclor 1254 for a period of approximately six months exhibited no mortality or any significant changes in the thyroid, pituitary, adrenal glands, or serum T3 and T4 levels (Wren et al 1987a). Reproduction and kit development was evaluated under the same test conditions in a separate study (Wren et al. 1987b) by the same investigators. Male fertility and female offspring production were not affected by the 1.0 mg/kg Aroclor 1254 diet. However, growth rate of kits nursed by exposed mothers was significantly reduced. The investigators estimated the daily exposure concentrations to be 0.10 mg/kg BW/day for males and 0.18 mg/kg BW/day for females.

In a preliminary study to determine the cause of reproductive complications in mink fed Great Lakes fish, adult breeder mink were fed a basal diet supplemented with 30 mg/kg of PCBs for six months (181 days). However, all of the mink died emaciated by the end of the experimental period (Aulerich and Ringer 1977). For this risk assessment, the 30 mg/kg dose was converted to a daily exposure concentration by multiplying it with the inverse of the lowest reported body weight for the mink (0.52 kg) and the food ingestion rate (0.121 kg/day) to yield an exposure concentration of 6.6 mg/kg BW/day.

As a result of this preliminary study, a long-term study was conducted to ascertain the effects of long-term, low-level consumption of PCBs on growth. Mink were fed a basal diet supplemented with 5 and 10 mg/kg of PCBs for a period of approximately 8.5 months. The basal diet plus 10 mg/kg of PCBs resulted in a significant 56 percent decrease in body weight gain after a period of 4 months. Body weight gain was reduced by 39 percent in the 5 mg/kg treatment group, but this reduction was not significant. Both the 5 and 10 mg/kg treatment groups failed to produce offspring; the control group produced 17 live and 8 dead kits. Various degrees of embryotoxicity were observed during necropsy of the treated animals (Aulerich and Ringer 1977). The 5 and 10 mg/kg doses were converted to a daily exposure concentration by multiplying it with the inverse of the lowest body weight reported by the investigators for this treatment group (0.923 kg) and the food ingestion rate (0.121 kg/day) of the mink. This yielded exposure concentrations of 0.66 and 1.31 mg/kg BW/day for the 5 and 10 mg/kg treatment group, respectively.

Based on the results of this experiment, another experiment was conducted to determine the effects of long-term consumption of low-level PCBs on reproduction. Fifteen mg/kg of PCB as Aroclor 1254 in the diet resulted in a complete inhibition of reproduction and 31 percent adult mortality, compared to 6 percent mortality in the controls. Five mg/kg of Aroclor 1254 resulted in a 95 percent reduction in the number of kits born live; the ratio of live kits to female adults was reduced by 87 percent. However, in an effort to determine the persistency of the impaired reproductive condition, 11 adult females that received 5 mg/kg of Aroclor 1254 for a period of six months were placed on a control diet for one year. The results indicate that the impaired reproductive performance of these females was not a permanent condition (Aulerich and Ringer 1977). The 5 and 15 mg/kg dose was converted to a daily exposure concentration by multiplying it with the inverse of the lowest reported body weight for the mink [and the food ingestion rate (0.121 kg/day)] to yield exposure concentrations of 1.1 and 3.3 mg/kg BW/day, respectively.

For the purposes of this risk assessment, a LOAEL of 0 13 mg/kg BW/day and a NOAEL of 0.10 mg/kg BW/day were used to estimate the toxicity of PCBs to the raccoon and the red fox.

F 1.8 Arsenic

F.1.8.1 Chronic Arsenic Toxicity to Birds

One study was found in which the toxicity of arsenic to the mallard duck was evaluated. In this study, no effects on reproduction were observed in mallard ducks exposed to three dose levels of sodium arsenite up to 10 mg/kg BW/day for a period of 112 days (Stanley et al 1994).

Therefore, a NOAEL of 10 mg/kg BW/day and a LOAEL of 100 mg/kg BW/day (using an accepted conversion factor of 10) were used in this risk assessment to assess the toxicity of arsenic to the mallard duck.

No studies pertaining to the dietary toxicity of arsenic to the red-winged blackbird or green heron were found. Therefore, literature studies pertaining to the dietary toxicity of arsenic to other avian species, including the study summarized above, were reviewed. A single oral dose of an organoarsenical compound was used to develop an LD50 of 47 6 mg/kg BW/day for the California quail (Hudson et al. 1984) and 33 mg/kg BW/day for the chicken (NAS 1979).

Because of the reproductive endpoint and the longer duration of exposure, the mallard duck study was used to establish NOAEL and LOAEL values for the red-winged blackbird and green heron. A NOAEL of 10 mg/kg BW/day and an estimated LOAEL of 100 mg/kg BW/day will be used to evaluate the risk to these receptors

F 1 8.2 Chronic Arsenic Toxicity to Mammals

No studies pertaining to the dietary toxicity of arsenic to the raccoon or red fox were found Therefore, literature pertaining to the dietary toxicity of arsenic to other mammals was reviewed

The National Resources Council of Canada (NRCC 1978) states that mammals in general have oral LD50 values ranging from 10 to 50 mg/kg of lead arsenate. A study conducted on mice indicated an oral LD50 of 39.4 mg/kg BW/day after 96 hours (NAS 1979) Adverse reproductive effects were noted in a study where mice were administered a chronic oral dose as low as 1 26 mg/kg BW/day (Schroeder and Mitchner 1971) Toxicity was noted in a study using cats administered an oral dose of 1.5 mg/kg BW/day (Pershagen and Vahter 1979).

Based on these results, a LOAEL of 1.26 mg/kg BW/day and an estimated NOAEL of 0.126 mg/kg BW/day arsenic will be used to evaluate the risk posed by arsenic to the selected mammalian receptors.

F 1 9 Cadmium

F 1 9 1 Chronic Cadmium Toxicity to Birds

A variety of studies were found in which the dietary toxicity of cadmium to the mallard duck

was examined. In one study, juvenile mallard drakes were fed diets containing 0, 50, 150, or 450 mg/kg of Cd for 42±1 days (Di Giulio and Scanlon 1984). The most significant metabolic effects were seen only in the 450 mg/kg (103.5 mg/kg BW/day) treatment group. These specimens exhibited a 20.3 percent decrease in body weight, a 26 percent decrease in liver weight, a 15 percent increase in kidney weight, a 21 percent decrease in liver aldolase activity, a 46 percent increase in plasma uric acid concentrations, a 74 percent decrease in plasma triiodothyronine (I_3) concentrations, a 28 percent increase in adrenal weights, and a 31 percent increase in adrenal cortisone concentrations. Ducks in the 150 mg/kg (34.5 mg/kg BW/day) treatment group also exhibited a 12 percent increase in kidney weight and a 23 percent increase in adrenal weight. No adverse effects were observed at a dietary concentration of 50 mg/kg (11.5 mg/kg BW/day).

In another study, mallard ducklings were fed 0, 5, 10, or 20 mg/kg of Cd in diet from day 1 of age to 12 weeks of age (Cain et al. 1983). Ducklings receiving 20 mg/kg (4.6 mg/kg BW/day) exhibited an 8 percent decrease in packed cell volume, a 6 percent reduction in hemoglobin concentration, and a 52 percent increase in serum glutamic pyruvic transaminase activity, all of which were statistically significant at the 0.05 level. Necropsies of these specimens revealed mild to severe kidney lesions. Whole body Cd concentrations were 58.30 to 65.30 mg/kg, dry weight. No significant adverse effects were noted at a dietary Cd level of 5 mg/kg (1.2 mg/kg BW/day) or 10 mg/kg (2.3 mg/kg BW/day).

Finally, adult (1 year old) male and female mallard ducks were fed a diet containing 0.08, 1.6, 15.2, and 210 mg/kg, wet weight, of Cd as cadmium chloride *ad libitum* for 90 days (White and Finley 1978). The corresponding daily dietary intake as provided by the investigators was 0.018 mg/kg BW/day (0.08 mg/kg), 0.37 mg/kg BW/day (1.6 mg/kg), 3.5 mg/kg BW/day (15.2 mg/kg), and 48.3 mg/kg BW/day (210 mg/kg). Male testis weight, male kidney weights, and egg production by females were significantly less in the 210 mg/kg (48.3 mg/kg BW/day) treatment when compared to the controls. No adverse effects were observed at a dietary concentration of 15.2 mg/kg (3.5 mg/kg BW/day).

Due to the ecological significance of the egg production endpoint of the latter study, a LOAEL of 48.3 mg/kg BW/day and a NOAEL of 15.2 mg/kg BW/day were used in this risk assessment to assess the effects of cadmium on the mallard duck.

No studies pertaining to the dietary toxicity of cadmium to the red-winged blackbird or green heron were found. Therefore, literature pertaining to the dietary toxicity of cadmium to other bird species will be used as surrogates to assess the dietary toxicity of cadmium to the red-winged blackbird and green heron. In addition to the studies using mallard ducks, summarized above, a variety of other birds species have been used to examine the toxicity of cadmium. In one study, male Japanese quail fed a diet containing 75 mg/kg (12 mg/kg BW/day) of Cd as $CdCl_2$ for 4 weeks exhibited a 62 percent decrease in testis size, a lack of spermatogenesis, damage to small intestine mucosa, and severe anemia (Richardson et al. 1974). These responses were associated with a mean liver Cd concentration of 42±2.6 mg/kg. A 5-day exposure/3-day post-exposure LC_{50} of 1,496 mg Cd/kg was calculated for this species by another investigator (Hill and Camardese 1986).

White Plymouth rock hens fed a diet containing 12 mg/kg (2.1 mg/kg BW/day) of Cd as $CdSO_4$ $8H_2O$ for 48 weeks exhibited a significant ($p<0.05$) 25 percent decrease in egg production associated with a mean muscle Cd concentration of 6.46 mg/kg, dry weight (Leach et al. 1979). Similarly, domestic hens fed a diet containing 50 mg Cd/kg (8.75 mg/kg BW/day) and 100 mg Cd/kg (17.5 mg/kg BW/day) also exhibited reduced egg production and egg weight (Anke et al. 1970). A concentration of 200 mg Cd/kg (4.4 mg/kg BW/day)

resulted in ceased egg production within 2 days

Juvenile (2-week old) male Leghorn chickens were fed a diet *ad libitum* containing various concentrations of Cd in two separate experiments (Pritzl et al. 1974). Experiment 1 utilized Cd concentrations of 0, 400, 600, 800, and 1,000 mg/kg for 20 days. Experiment 2 utilized Cd concentrations of 0 and 700 mg/kg for 20 days. A significant reduction in growth rate and feed consumption was noted at a dietary concentration of 400 mg/kg (40 mg/kg BW/day). An LD_{50} of 565 mg/kg (56.5 mg/kg BW/day) was calculated from Experiment 2. In a separate study, Leghorn chickens were fed a diet containing cadmium sulfate for a period of 48 weeks. Eggshell thickness and egg production were unaffected at levels as high as 0.97 mg/kg BW/day (Leach et al. 1979).

This latter study was used to develop the NOAEL and LOAEL values for the red-winged blackbird and the green heron because of the long exposure period and the ecological significance of the endpoints. A NOAEL of 0.97 mg/kg BW/day and a LOAEL of 9.7 mg/kg BW/day (using an accepted converstion factor of 10) for cadmium were used to evaluate the effects of the red-winged blackbird and the green heron in this risk assessment.

F.1.9.2 Chronic Cadmium Toxicity to Mammals

No studies pertaining to the dietary toxicity of cadmium to the raccoon or red fox were found. Therefore literature pertaining to the dietary toxicity of cadmium to the rat was reviewed. The rat will be used as a surrogate to assess the dietary toxicity of cadmium to the raccoon and the red fox.

Male and female weanling brown rats (O.S.U. strain) fed a diet containing 5 mg/kg (0.75 mg/kg BW/day) of Cd as $CdCl_2$ for 10 weeks exhibited no adverse effects on growth (Pribble and Weswig 1973). No effects on reproduction of adult Norway rats exposed to four dose levels of cadmium chloride for a period of six weeks were noted at concentrations as high as 1 mg/kg BW/day (Sutou et al. 1980).

For this risk assessment, the latter study was used to derive the NOAEL and LOAEL because of the range of concentrations evaluated and the ecological significance of the endpoints. A dietary exposure level of 1 mg/kg BW/day was used as a NOAEL for the selected mammalian receptors. A LOAEL of 10 mg/kg BW/day was derived from this NOAEL using an accepted conversion factor of 10.

F.1.10 Lead

F.1.10.1 Chronic Lead Toxicity to Birds

No studies pertaining to the dietary toxicity of lead to the mallard duck or the green heron were found in the literature. One study on the effects of lead to the red-winged blackbird was found, in which a lethal dosage of lead acetate was administered in the diet to the birds. It was found that blood protoporphyrin decreased, ALAD increased, and renal intranuclear inclusion bodies were present prior to death (Beyer, et al. 1988). However, due to the high lethal dosage and the experimental design (4.2 mg/kg BW/day, increased by 60% each week until 50% of the birds were dead), this study will not be used to derive a LOAEL to estimate the toxicity of lead to the red-winged blackbird. Therefore, literature pertaining to the dietary toxicity of lead to other bird species was reviewed and used to assess the chronic dietary toxicity of lead to the red-winged blackbird, mallard duck, and green heron.

The gastric motility of adult male and female red-tailed hawks fed 0.82 and 1.64 mg Pb/kg BW/day in a single oral dose was evaluated through the use of surgically implanted transducers for a period of 3 weeks following the dose. Neither concentration had any effect on gastric contractions or egestion of undigested material pellets (Lawler et al. 1991).

A study conducted on red-tailed hawk found that 3 mg/kg/day of lead caused the clinical symptoms of lead poisoning (Reiser and Temple 1981). A similar study found that 3 mg/kg/day fed to starlings caused a reduction in muscle condition and altered their feeding activity (Osborn et al. 1983). Adult male and female red-tailed hawks given an oral dose of 0.82 mg/kg BW/day each day for 3 weeks resulted in an 83 percent decrease in delta-aminolevulinic acid dehydratase activity and a 74 percent increase in the levels of free porphyrins circulating in the blood (Redig et al. 1991). Edens et al. (1976) exposed Japanese quail to 4 oral dose levels of lead acetate for a period of 12 weeks. The study identified a NOAEL of 0.133 mg/kg BW/day for egg production and a LOAEL of 1.33 mg/kg BW/day for hatching success.

The results of the latter study will be used to develop the NOAEL and LOAEL values based on the ecological significance of the endpoints and the method and duration of exposure. A LOAEL of 1.33 mg/kg BW/day and a NOAEL of 0.133 mg/kg BW/day were used to evaluate the risk posed by lead to the selected avian receptors.

F.1.10.2 Chronic Lead Toxicity to Mammals

No controlled dietary toxicity studies on lead using the raccoon or red fox were found in the literature. Therefore, literature pertaining to the dietary toxicity of lead to other mammals was reviewed and will be used to assess the chronic dietary toxicity of lead to the raccoon and red fox.

Mason and MacDonald (1986) evaluated the effect of lead and cadmium on otter (*Lutra lutra*). Daily lead intake was estimated on the basis of measured fecal lead levels, the known ingestion rate for otter, and gastrointestinal lead absorption rates for mammals. Estimated lead intake correlated well with levels measured in major fish prey species. No apparent impact on population levels was found when lead intake was less than 0.15 mg/kg BW/day whereas otter populations were reduced in areas where the estimated lead intake exceeded 2 mg/kg BW/day. Adult pregnant mice (C57Bl strain) were fed a diet containing lead concentrations of 0.125, 0.25, 0.5, and 1 percent for 48 hours after mating (Jacquet et al. 1976). Dietary lead concentrations of 0.125 percent (16 mg/kg BW/day), 0.25 percent (32 mg/kg BW/day), and 0.5 percent (64 mg/kg BW/day) resulted in an increase in the number of embryos in the 4-cell stage versus the 8-cell stage. A delayed effect of increased non-divided embryos resulted from a dietary lead concentration of 1 percent (128 mg/kg BW/day). Azar et al. (1973) administered lead to rats in 5 dietary levels for three generations and measured changes in reproduction and growth. A dosage of 80 mg/kg BW/day reduced offspring weights and produced kidney damage in the young, while a dosage of 8 mg/kg BW/day did not result in adverse effects.

For this risk assessment, the latter study was used to select NOAEL and LOAEL values because of the ecological significance of the endpoints, the range of dose levels selected, and the duration of the study. A dietary exposure level of 8 mg/kg BW/day was used as a NOAEL and 80 mg/kg BW/day was used as a LOAEL to evaluate the risk posed by lead to the selected mammalian receptors.

F.1.11 Mercury

F.1.11.1 Chronic Mercury Toxicity to Birds

No studies pertaining to the dietary toxicity of mercury to the red-winged blackbird, mallard duck, or green heron were found. Therefore, literature pertaining to the dietary toxicity of mercury to other bird species was reviewed. These other bird species will be used as surrogates to assess the dietary toxicity of mercury to the red-winged blackbird, mallard duck, and green heron.

Starlings fed 0.1 mg/kg BW/day of Hg for 8 weeks were observed to have kidney lesions (Nicholson and Osborn 1984). Zebra finches fed a diet containing 1.75 mg Hg/kg BW/day suffered from neurological impairment and death while finches exposed to 0.88 mg Hg/kg BW/day had no signs of mercury poisoning (Scheuhammer 1988). Red-tailed hawks fed a diet containing 1.12 mg Hg/kg BW/day suffered from mortality, dilatation of myelin sheaths and loss of myelin. Hill and Schaffner (1976) exposed Japanese quail to five dose levels of mercuric chloride for a period of one year and identified a NOAEL of 0.60 mg/kg BW/day for egg production, fertility and hatching. Goshawks exposed to doses ranging from 0.7 to 1.2 mg/kg BW/day suffered complete mortality after between 30 and 47 days of exposure (Borg et al. 1970).

For this risk assessment, the latter study was used to estimate risk of mercury to the selected avian receptors. A dietary level of 0.7 mg/kg BW/day was used as a LOAEL. A NOAEL of 0.07 mg/kg BW/day was derived from this LOAEL using an accepted conversion factor of 10.

F.1.11.2 Chronic Mercury Toxicity to Mammals

No studies pertaining to the dietary toxicity of mercury to the raccoon or red fox were found in the literature. Therefore, studies pertaining to the dietary toxicity of mercury to other mammals were reviewed.

Rats that were fed a diet containing 0.5 mg Hg/kg BW/day showed reduced fertility (Khera 1979). In a similar study rats fed a diet containing 0.32 mg/kg BW/day showed no adverse effects (AIISDR 1993). Mink that were fed a diet containing 0.58 mg CH_3Hg/kg BW/day for a period of 100 days showed no effects (Jernelov et al. 1976). Aulerich (1974) exposed ranch mink to one oral dose level of mercuric chloride for a period of five months. The study identified a NOAEL of 1.0 mg/kg BW/day for reproduction and mortality. In another study, adult female mink were fed diets containing 1.1, 1.8, 4.8, 8.3 and 15 mg/kg Hg as methyl mercuric chloride for 93 days, and signs of intoxication (anorexia, weight loss, ataxia, splaying of hind legs, irregular vocalization, and convulsions) were evident in the 1.8 mg/kg and higher treatment groups, while no clinical signs were observed in the 1.1 mg/kg treatment group (Wobeser et al. 1975). Using an ingestion rate of 0.16 g/g BW/day and a body weight of 974 g for adult female mink (U.S. EPA 1993), this equates to a LOAEL of 0.29 mg/kg BW/day and a NOAEL of 0.18 mg/kg BW/day. Dogs exposed to 0.1 mg Hg/kg BW/day during pregnancy showed a higher than normal incidence of stillbirths (Khera 1979).

For the purposes of this risk assessment, the latter study was used to assess the hazards of mercury to the selected mammalian receptors. A LOAEL of 0.1 mg/kg BW/day Hg and a NOAEL of 0.01 mg/kg BW/day Hg (using an accepted conversion factor of 10) were used to evaluate the effects of mercury to the raccoon and red fox.

F.1.12 Selenium

F.1.12.1 Chronic Selenium Toxicity to Birds

Only one study was found in which the dietary toxicity of selenium was evaluated in birds The bird species used in this study was the mallard duck Therefore, this study was used to estimate the toxic effects of selenium to all three avian receptors, the red-winged blackbird, the mallard duck, and the green heron. In this study, mallard ducks were given diets containing 100 mg/kg of inorganic selenite usually died within a month. Birds receiving 25 mg/kg continued to survive for over 3 months, but growth and reproduction were dramatically reduced Teratogenic effects were evident at 3 months in mallard ducklings receiving 10 mg/kg. Ducks and their young appeared normal after 3 months exposure to 5 mg/kg of dietary selenite (Eisler 1985).

To express the 5 and 10 mg/kg exposure concentration in units of mg/kg BW/day, this value was multiplied by the food ingestion rate for a mallard duck (0.25 kg/day) and divided by the lowest reported mean body weight for a mallard duck (1.043 kg) to yield body weight-normalized exposure concentration of 1.2 and 2.4 mg/kg BW/day.

For this risk assessment, a LOAEL of 2.4 mg/kg BW/day and a NOAEL of 1.2 mg/kg BW/day were used to estimate the risk of selenium to the red-winged blackbird, mallard duck, and the green heron

F.1.12.2 Chronic Selenium Toxicity to Mammals

No studies pertaining to the dietary toxicity of selenium to the raccoon or the red fox were found in the literature. Therefore, literature pertaining to the dietary toxicity of selenium to the rat was reviewed. The rat will be used as a surrogate to assess the dietary toxicity of selenium to the raccoon and the red fox.

Rats fed diets containing 0.8 to 1.0 mg/kg during lifetime exposure developed intestinal lesions (Eisler 1985) To express 0.8 mg/kg in units of mg/kg BW/day, this value was multiplied by the food ingestion rate of a rat (0.015 kg/day) and the inverse body weight of a rat (1/0.25 kg) to yield a body weight-normalized exposure concentration of 0.048 mg/kg BW/day

For the purposes of this risk assessment, a LOAEL of 0.048 mg/kg BW/day and a NOAEL of 0.0048 mg/kg BW/day (using an accepted conversion factor of 10) were used to assess the toxicity of selenium to the raccoon and the red fox

F.2 Acute Toxicity Profiles for the Food Chain Model

F.2.1 PCBs

F.2.1.1 Acute PCB Toxicity to Birds

The green heron was the only measurement endpoint for which a chronic hazard quotient of greater than one was obtained when PCBs were evaluated in the food chain model using the chronic LOAEL reference value derived above. Therefore, the green heron was the only avian measurement endpoint which was evaluated for the potential of PCBs to pose an acute risk No literature information was found pertaining to the acute dietary toxicity of PCBs to

the green heron. Therefore, literature pertaining to the acute dietary toxicity of PCBs to other bird species was reviewed

In a five-day acute dietary toxicity study, LD50's (expressed as mg/kg in the diet) for Arochlor 1248 were calculated to be 1,175 mg/kg for the Northern bobwhite, 2,798 mg/kg for the Mallard duck, 1,312 mg/kg for the ring-necked pheasant, and 4,844 mg/kg for the Japanese quail. For Arochlor 1254, LD50's were calculated to be 604 mg/kg for the Northern bobwhite, 2,699 mg/kg for the Mallard duck, 1,091 mg/kg for the ring-necked pheasant, and 2,898 mg/kg for the Japanese quail (Heath et al. 1972). To express these dosages in units of mg/kg body weight/day, these values were multiplied by the food ingestion rate of the respective specie (bobwhite 0.02 kg/day, Mallard duck 0.25 kg/day, Japanese quail, 0.01 kg/day, pheasant 0.06 kg/day) and divided by the body weight of the respective species (bobwhite 0.178 kg, Mallard duck 1.043 kg, Japanese quail 0.09 kg, pheasant 0.953 kg) to yield the following dietary exposure concentrations:

Dose (mg/kg)	Dose (mg/kg BW/day)
1,175 (Arochlor 1248 LD50, bobwhite)	132
2,798 (Arochlor 1248 LD50, Mallard)	671
1,312 (Arochlor 1248 LD50, pheasant)	82.6
4,844 (Arochlor 1248 LD50, quail)	538
604 (Arochlor 1254 LD50, bobwhite)	67.8
2,699 (Arochlor 1254 LD50, Mallard)	647
1,091 (Arochlor 1254 LD50, pheasant)	68.6
2,898 (Arochlor 1254 LD50, quail)	322

Therefore, for the purposes of this risk assessment, an acute LD50 of 67.8 mg/kg BW/day was used to assess the acute toxicity of PCBs to the green heron.

F.2.1.2 Acute PCB Toxicity to Mammals

A chronic hazard quotient of greater than one was obtained when PCBs were evaluated in both the raccoon and red fox food chain models using the chronic LOAEL reference values derived above. Therefore, both the raccoon and the red fox were evaluated for the potential of PCBs to pose an acute risk. One study was found in which the dietary toxicity of PCBs to the raccoon investigated. In this study, an 8-day LD50 of > 50 mg Arochlor 1254/kg in the diet was calculated (Montz et al. 1982). However, since lethality was not observed in this study, or any of the other studies which were found in which the acute dietary toxicity of PCBs was evaluated, studies which determined acute oral LD50's of Arochlor mixtures administered orally to rats were used to evaluate the acute dietary toxicity of PCBs in both the raccoon and the red fox.

In single dosage experiments using rats, the acute oral LD50 of Arochlor 1248 was found to be between 800 and 11,000 mg/kg BW, and the acute oral LD50 of Arochlor 1254 was found to be between 500 and 1,400 mg/kg BW (Eisler 1986). Therefore, for the purposes of this risk assessment, an acute oral LD50 of 500 mg/kg body weight was used to evaluate the acute toxicity of PCBs to the raccoon and the red fox.

F.2.2 Lead

F.2.2.1 Acute Lead Toxicity to Birds

The mallard duck was the only measurement endpoint for which a chronic hazard quotient of

greater than one was obtained when lead was evaluated in the food chain model using the chronic LOAEL reference value derived above. Therefore, the mallard duck was the only avian measurement endpoint which was evaluated for the potential of lead to pose an acute risk.

A variety of toxicity studies have been performed in which lead, in the form of lead shot, was administered to mallard ducks and acute lethality was observed. In one such study, a single oral dose of 1.4 g of lead shot was administered to mallard ducks and some deaths were observed (Longcore et al. 1974a). When 1.0 g of lead shot was administered to mallards, 9% mortality was observed within 20 days (Longcore et al. 1974b). To convert these two dosages to units of mg/kg BW, they were divided by the lowest reported body weight for an adult mallard duck of 1.043 kg (EPA 1993) to yield dosages of 1,342 mg/kg BW and 959 mg/kg BW, respectively. Dieter and Finley (1978) reported that when a single oral dose of 205 mg of lead shot (reported by the authors to be equivalent to 151 mg/kg BW), some deaths were observed.

Since lead shot is a specific form of lead which is unlikely to be present within the Bound Brook stream corridor, additional literature was also reviewed in which other forms of inorganic lead were examined for their acute toxicity to other avian species. In one study, when American kestrel nestlings were dosed orally with metallic lead powder daily for 10 days, a dosage of 625 mg/kg BW was reported to cause 40% mortality in six days (Hoffman et al. 1985). In another study, a single oral dose of 75 mg Pb/kg BW, as lead acetate, was reported to cause mortality (Kendall and Scanlon 1985).

Therefore, for the purposes of this risk assessment, an acute oral dosage of 75 mg Pb/kg BW was used to evaluate the acute toxicity of lead to the mallard duck.

F.2.3 Selenium

F.2.3.1 Acute Selenium Toxicity to Mammals

The raccoon was the only measurement endpoint for which a chronic hazard quotient of greater than one was obtained when selenium was evaluated in the food chain model using the chronic LOAEL reference value derived above. Therefore, the raccoon was the only mammalian measurement endpoint which was evaluated for the potential of selenium to pose an acute risk. No literature information was found pertaining to the acute dietary toxicity of selenium to the raccoon. Therefore, literature pertaining to the acute dietary toxicity of selenium to other mammalian species was reviewed.

An oral LD50 of 6700 mg/kg BW has been reported for rats (RTECS 1997). In sheep fed plant material containing selenium, death was noted at concentrations of 3.2 to 12.8 mg Se/kg body weight (Eisler 1985). The minimum lethal oral dose of selenite was found to be 3.3 mg Se/kg body weight for horses and mules to 11 mg Se/kg BWfor cattle and 15 mg Se/kg BW for swine (Eisler 1985).

Therefore, for the purposes of this risk assessment, an acute dietary dose of 3.3 mg/kg body weight was used to evaluate the acute toxicity of selenium to the raccoon.

F.3 Toxicity of Whole Body Tissue Residue Levels

F.3.1 a-Chlordane/g-Chlordane

F.3.1.1 a-Chlordane/g-Chlordane Toxicity to Crayfish

No literature was found pertaining to toxic chlordane residue levels in freshwater aquatic macroinvertebrates. However, estuarine invertebrates exhibited reduced survival at tissue concentrations of 106 mg/kg, wet weight, lipid-normalized (Zitko 1978) Since the analytical data from the crayfish collected for this risk assessment are not lipid-normalized, the residue level of 106 mg/kg, was multiplied by the average percent lipid concentration (2.4%) measured in the crayfish collected for this risk assessment, and divided by 100 to yield a toxicity threshold for chlordane of 2.5 mg/kg, wet weight, in whole body crayfish tissue

F.3.1.2 a-Chlordane/g-Chlordane Toxicity to Fish

Chlordane residue levels of 300 to 4,000 mg/kg, wet weight, lipid-normalized, were associated with mortality in fish (Zitko 1978) To be conservative, the lower level of 300 mg/kg was used to compare with tissue levels of chlordane in fish collected from the site However, since the analytical data from the fish collected for this risk assessment are not lipid-normalized, the residue level of 300 mg/kg was multiplied by the average percent lipid concentration (3%) measured in the forage fish (whole bodies) collected for this risk assessment, and divided by 100 to yield a toxicity threshold for chlordane of 9 mg/kg, wet weight, in whole body fish tissue

F.3.1.3 a-Chlordane/g-Chlordane Toxicity to Small Mammals

No studies were found linking whole body chlordane levels to toxicity in small mammals.

F.3.2 Methoxychlor

F.3.2.1 Methoxychlor Toxicity to Crayfish

No studies were found linking whole body methoxychlor leves to toxicity in aquatic macroinvertebrates.

F.3.2.2 Methoxychlor Toxicity to Fish

No studies were found linking whole body methoxychlor levels to toxicity in fish

F.3.2.3 Methoxychlor Toxicity to Small Mammals

No studies were found linking whole body methoxychlor levels to toxicity in small mammals

F.3.3 Dieldrin

F.3.3.1 Dieldrin Toxicity to Crayfish

No studies were found linking whole body dieldrin levels to toxicity in aquatic macroinvertebrates

F.3.3.2 Dieldrin Toxicity to Fish

No studies were found linking whole body dieldrin levels to toxicity in fish

F.3.3.3 Dieldrin Toxicity to Small Mammals

No studies were found linking whole body dieldrin levels to toxicity in small mammals

F.3.4 Endrin/Endrin Aldehyde/Endrin Ketone

F.3.4.1 Endrin/Endrin Aldehyde/Endrin Ketone Toxicity to Crayfish

No studies were found linking whole body levels of endrin or any of its derivatives to toxicity in aquatic macroinvertebrates

F.3.4.2 Endrin/Endrin Aldehyde/Endrin Ketone Toxicity to Fish

No studies were found linking fish fillet or whole body levels of endrin or any of its derivatives to toxicity in fish.

F.3.4.3 Endrin/Endrin Aldehyde/Endrin Ketone Toxicity to Small Mammals

No studies were found linking whole body levels of endrin or any of its derivatives to toxicity in small mammals.

F.3.5 Heptachlor/Heptachlor Epoxide

F.3.5.1 Heptachlor/Heptachlor Epoxide Toxicity to Crayfish

No studies were found linking whole body levels of heptachlor or heptachlor epoxide to toxicity in aquatic macroinvertebrates.

F.3.5.2 Heptachlor/Heptachlor Epoxide Toxicity to Fish

No studies were found linking fish fillet or whole body levels of heptachlor or heptachlor epoxide to toxicity in fish.

F.3.5.3 Heptachlor/Heptachlor Epoxide Toxicity to Small Mammals

No studies were found linking whole body levels of heptachlor or heptachlor epoxide to toxicity in small mammals

F.3.6 DDT/DDD/DDE

F.3.6.1 DDT/DDD/DDE Toxicity to Crayfish

No studies were found linking whole body levels of DDT or any of its derivatives to toxicity in aquatic macroinvertebrates

F.3.6.2 DDT/DDD/DDE Toxicity to Fish

No studies were found linking fish fillet or whole body levels of DDT or any of its derivatives to toxicity in fish

F.3.6.3 DDT/DDD/DDE Toxicity to Small Mammals

No studies were found linking whole body levels of DDT or any of its derivatives to toxicity in small mammals.

F.3.7 PCBs

F.3.7.1 PCB Toxicity to Crayfish

Although no studies were located in which whole body PCB concentrations were linked to toxicity in crayfish, a variety of studies have been performed in which whole body concentrations of PCBs were linked to toxicity in other macroinvertebrates. These studies are summarized in Beyer et al. (1996). In summary the lowest whole body concentration considered by Beyer et al. (1996) to adversely affect macroinvertebrate survival, growth, or reproduction is 25 mg/kg, wet weight. For the purposes of this risk assessment, a whole body concentration of 25 mg/kg, ww, will be used as a threshold concentration to assess the effects of PCBs on crayfish.

F.3.7.2 PCB Toxicity to Fish

A variety of studies have been performed in which whole body concentrations of PCBs in fish were linked to toxicity in fish. These studies are summarized in Beyer et al. (1996). In summary the lowest whole body concentration considered by Beyer et al. (1996) to adversely affect fish survival, growth, or reproduction is 50 mg/kg, wet weight. This concentration will be used in this risk assessment to assess the effects of PCBs on fish.

F.3.7.3 PCB Toxicity to Small Mammals

No studies were found linking whole body PCB levels to toxicity in small mammals.

F.3.8 Arsenic

F.3.8.1 Arsenic Toxicity to Crayfish

No studies were found linking whole body arsenic levels to toxicity in aquatic macroinvertebrates

F.3.8.2 Arsenic Toxicity to Fish

No studies were found linking whole body arseniclevels to toxicity in fish

F.3.8.3 Arsenic Toxicity to Small Mammals

No studies were found linking whole body arsenic levels to toxicity in small mammals.

F 3.9 Cadmium

F 3.9.1 Cadmium Toxicity to Crayfish

No studies were found linking whole body cadmium levels to toxicity in aquatic macroinvertebrates

F 3.9.2 Cadmium Toxicity to Fish

No studies were found linking whole body cadmium levels to toxicity in fish

F 3.9.3 Cadmium Toxicity to Small Mammals

No studies were found linking whole body cadmium levels to toxicity in small mammals

F 3 10 Lead

F 3 10 1 Lead Toxicity to Crayfish

No studies were found linking whole body lead levels to toxicity in aquatic macroinvertebrates

F 3.10.2 Lead Toxicity to Fish

No studies were found linking whole body lead levels to toxicity in fish

F 3.10 3 Lead Toxicity to Small Mammals

No studies were found linking whole body lead levels to toxicity in small mammals

F 3.11 Mercury

F 3 11 1 Mercury Toxicity to Crayfish

No studies were found linking whole body mercury levels to toxicity in aquatic macroinvertebrates

F 3.11 2 Mercury Toxicity to Fish

A variety of studies were identified in which whole body concentrations of mercury were linked to toxicity in fish These studies are summarized by Beyer et al (1996) In summary, whole body concentrations of about 5 mg/kg, wet weight, or greater are associated with toxic effects in brook trout, and in rainbow trout, whole body concentrations of about 10 mg/kg, wet weight, and above seem to be associated with toxic effects Therefore, a whole body concentration of 5 mg/kg, wet weight, in fish will be used as the threshold concentration to assess the effects of mercury on fish for this risk assessment

F 3.11 3 Mercury Toxicity to Small Mammals

No literature was found linking whole body mercury levels to toxicity in small mammals

F.3.12 Selenium

F.3.12.1 Selenium Toxicity to Crayfish

No studies were found linking whole body selenium levels to toxicity in aquatic macroinvertebrates

F.3.12.2 Selenium Toxicity to Fish

A variety of studies were identified in which whole body concentrations of selenium were linked to toxicity in fish. These studies are summarized by Beyer et al. (1996). In summary, the lowest whole body concentration that was linked to either mortality or reproductive failure in fish was a concentration of 4 mg/kg, dry weight. To convert this to a wet weight concentration, the residue level of 4 mg/kg was multiplied by the average percent solids concentration (21 %) measured in the fish fillets collected for this risk assessment, and divided by 100. The percent solids for fish fillets were used to make this conversion because percent solids data for whole body fish was not available. The resulting concentration, 0.84 mg/kg, wet weight, will be used as a threshold whole body concentration to assess the effects of selenium on fish for this risk assessment

F.3.12.3 Selenium Toxicity to Small Mammals

No studies were found linking whole body selenium levels to toxicity in small mammals

REFERENCES

Anderson, D.W., J.J. Hickey, R.W. Risebrough, D.F. Hughes, and R.E. Christensen. 1969. "Significance of Chlorinated Hydrocarbon Residues to Breeding Pelicans and Cormorants." *Can. Field Nat.* 83:91-112 *in* Brown, A.W.A. 1978. Ecology of Pesticides. n.p.

ATSDR (Agency for Toxic Substances and Disease Registry). 1993. *Toxicological Profile for Mercury*. Report prepared by the Research Triangle Institute for the U.S. Department of Health and Human Service, Agency for Toxic Substances and Disease Registry, Atlanta, GA.

Aulerich, R.J., R.K. Pinger, and S. Iwamoto. 1974. "Effects of dietary mercury on mink." *Arch. Environ. Contam. Toxicol.* 2(1) 43-51.

Aulerich, R.J. and R.K. Ringer. 1977. "Current Status of PCB Toxicity to Mink, and Effect on Their Reproduction." *Arch. Environ. Contam. Toxicol.*, 6:279-292.

Azar, A., H.J. Trochimowicz, and M.E. Maxwell. 1973. Review of lead studies in animals carried out at Haskell Laboratory: two-year feeding study and response to hemorrhage study. pp, 199-210. In: Environmental Health Aspects of Lead: International Symposium. D. Barth et al. (eds). Commission of European Communities.

Banerjee, B.D., A. Ray, and S.I. Pasha. 1996. "A Comparative Evaluation of Immunotoxicity of DDT and its Metabolites in Rats." *Indian J. Exper. Biol.* 34(6):517-522 *in* BIOSIS.

Beyer, W.N., J.W. Spann, L. Sileo, and J.C. Franson. 1988. "Lead poisoning in six captive avian species." *Arch. Environ. Contam. Toxicol.* 17:121-130.

Beyer, W.N., G.H. Heinz, and A.W. Redmond-Norwood. 1996. Environmental Contaminants in Wildlife, Interpreting Tissue Concentrations. Lewis Publishers, Boca Raton, FL. 494pp.

Bird, D.M., P.H. Tucker, G.A. Fox, and P.C. Lague. 1983. "Synergistic Effects of Aroclor 1254 and Mirex on the Semen Characteristics of American Kestrels." *Arch. Environ. Contam. Toxicol.*, 12:633-640.

Blackmore, D.K. 1963. "The Toxicity of Some Chlorinated Hydrocarbon Insecticides to British Wild Foxes (*Vulpes vulpes*)." *J. Comp. Path.* 73:391-409.

Blus, L.J. 1982. Further interpretation of the relation of organochlorine residues in brown pelican eggs to reproductive success, *Environmental Pollution,* (Series A), 28:15-33.

Borg, K., K. Erne, E. Hanko, and H. Wanntorp. 1970. "Experimental Secondary Methylmercury Poisoning in the Goshawk (*Accipiter g. gentilis* L.)." *Environ. Pollut.* 1:91-104.

Cain, B.W., L. Sileo, J.C. Franson, and J. Moore. 1983. "Effects of Dietary Cadmium on Mallard Ducklings." *Environ. Res.*, 32:286-297.

Custer, T.W. and G.H. Heinz. 1980. "Reproductive success and nest attentiveness of mallard ducks fed Aroclor 1254." *Environ. Pollut.* 21:313-318.

Dahlgren, J.H., and R.L. Linder. 1974. Effects of dieldrin in penned pheasants through the third generation, *J. Wildlife Mgmt.*, 38:320-330.

Dieter, M.P. and M.J. Finley. 1978. "Erythrocyte d-aminolevulinic acid dehydratase activity in mallard ducks: duration of inhibition after lead shot dosage." *J. Wildl. Manag.* 42:621-625.

Di Giulio, R. and P.F. Scanlon. 1984. "Sublethal Effects of Cadmium Ingestion on Mallard Ducks." *Arch. Environ. Contam. Toxicol.*, 13:765-771.

Edens, F.W., E. Benton, S.J. Bursian, and G.W. Morgan. 1976. Effect of dietary lead on reproductive performance in Japanese quail, *Caturnix colurnix japonica*. Toxicol. App. Pharmarcol, 38:307-314.

Eisler, R. 1985. "Selenium Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish and Wildlife Service Biological Report, 85(1.5). 57 p.

Eisler, R. 1990. "Chlordane Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish Wild. Serv. Biol. Rep, 85(1.21). 49p.

ESE Inc. 1989. "Biota Remedial Investigation, Final Report (Version 3.2), Volume II." Environmental Science and Engineering, Inc. Prepared for Office of the Program Manager, Rocky Mountain Arsenal Contamination Cleanup, Contract No. DAAK11-84-D0016.

Gaines, T.B. 1969. "Acute Toxicity of Pesticides." *Toxicol. Appl. Pharmacol.* 14:515-534 *in* WHO. 1979. Environmental Health Criteria 9, DDT and its Derivatives. World Health Organization, Geneva.

Galley, R.A.E. 1952. "Problems Arising from the Use of Chemicals in Food." *Chemistry and Industry* April 19:342-344.

Genelly, R.E., and R.L. Rudd. 1956. The effects of DDT, toxaphene, and dieldrin on pheasant reproduction, *Auk*, 73:529.

Graves J. B., F. L. Bonner, W. F. McKnight, A. B. Watts, and E. A. Epps. 1969. Residues in eggs, preening glands, liver, and muscle from feeding dieldrin-contaminated rice bran to hens and its effect of egg production, egg batch, and chick survival, *Bull. Env. Cont. & Toxicol*, 4:375.

Harr, J. R., R. R. Claeys, and N. Benedict. 1970. Dieldrin toxicosis in rats: long term study of brain and vascular effects, *Am. J. Vet. Res.* 32:1853.

Hayes, W. J. and E.R. Laws, Jr. n.d. Handbook of Pesticide Toxicology, Volume 2, Classes of Pesticides. Academic Press, San Diego.

Heath, R.G., J.W. Spann, E.F. Hill, and J.F. Kreitzer. 1972. Comparative Dietary Toxicities of Pesticides to Birds. U.S. Fish and Wildl. Service, Special Scientific Report - Wildlife No. 152. Washington, D.C.

Heaton, S.N., S.J. Bursian, J.P. Giesy, D.E. Tillitt, J.A. Render, P.D. Jones, D.A. Verbrugge, I.J. Kubiak, and R.J. Aulerich. 1995. "Dietary Exposure of Mink to Carp from Saginaw Bay, Michigan. 1. Effects on Reproduction and Survival, and the Potential Risks to Wild Mink Populations." *Arch. Environ. Contam. Toxicol.*, 28:334-343.

Heinz, G.H., D.M. Swineford, and D.E. Katsma. 1984. "High PCB Residues in Birds From the Sheboygan River, WI." *Environ. Monitor. Assess.*, 4:155-161.

Hill, E.F., R.G. Heath, J.W. Spann, and J.S. Williams. 1975. "Lethal Dietary Toxicities of Environmental Pollutants to Birds." U.S. Fish and Wildl. Service., Spec. Sci. Rep. - Wildl. 191. 61pp *in* Eisler, R. 1990. "Chlordane Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish and Wildl. Serv. Biological Report 85(1.21).

Hill, E.F. and C.S. Shaffner. 1976. Sexual maturation and productivity of Japanese quail fed graded concentrations of mercury chloride. Poult. Sci. 55,1449-1459.

Hill, E.F. and M.B. Camardese, 1986. Lethal Dietary Toxicities of Environmental Contaminants and Pesticides to Coturnix. U.S. Fish and Wildl. Service, Technical Report No. 2. Washington, D.C.

Hoffman, D.J., J.C. Franson, O.H. Pattee, C.M. Bunck, and A. Anderson. 1985. "Survival, growth, and accumulation of ingested lead in nestling American kestrels (*Falco sparverius*)." *Arch. Environ. Contam. Toxicol.* 14:89-94.

Hudson, R.H., R.K. Tucker, and M.A. Haegele. 1984. "Handbook of Toxicity of Pesticides to Wildlife." U.S. Fish and Wildl. Serv., Resour. Publ. 153. 90pp.

Jefferies, D.J. 1971. "Some sublethal effects of pp'-DDT and its metabolite pp'-DDE on breeding passerine birds." *Meded. Fakult. Landbouwwetenschappen Gent* 36:34-42.

Jernelov, A., A.H. Johansson, L. Sorenson and A. Svenson. 1976. "Methyl Mercury Degradation in Mink." *Toxicology*, 6:315-321.

Kendall, R.J. and P.F. Scanlon. 1985. "Histology and ultrastructure of kidney tissue from ringed turtle doves that ingested lead." *J. Environ. Pathol. Toxicol. Oncol.* 6:85-96.

Khera, K.S. 1979. "Teratogenic and Genetic Effects of Mercury Toxicity." Pages 501-518 in J.O. Nriagu (ed.) *The Biogeochemistry of Mercury in the Environment*. Elsevier/North-Holland Biomedical Press, New York.

Komissarenko, V.P., A.S. Mikosha, and E.P. Polovko. 1997. "Action of o,p'-DDE on the ATPase of the Adrenal Cortex." *Problemy Endokrinologii* 24(2):85-89 *in* BIOSIS.

Kornbrust, D , B Gillis, B Collins, I Goehl, B Gupta, and B Schwetz 1997 "Effects of DDE on Lactation in Rats." *J Toxicol Environ Health* 17(1):23-36 *in* BIOSIS

Lawler, E M , G E Duke, and P I Redig 1991 "Effect of Sublethal Lead Exposure on Gastric Motility of Red-Tailed Hawks." *Arch Environ Contam Toxicol*, 21:78-83

Leach, R M , Jr , K W Wang, and D E Baker 1979 "Cadmium and the Food Chain: The Effect of Dietary Cadmium on Tissue Composition in Chicks and Laying Hens." *J Nutr*, 109:437-443

Lehman, A J 1965 Summaries of Pesticide Toxicity Topeka, Ks, Association of Food and Drug Officials of the United States *in* WHO 1979 Environmental Health Criteria 9, DDT and its Derivatives World Health Organization, Geneva

Lincer, J L 1975 "DDE-Induced Eggshell-Thinning in the American Kestral: A Comparison of the Field Situation and Laboratory Results." *J Appl Ecol* 12:781-793

Longcore, J R and F B Samson 1973 "Eggshell Breakage by Incubating Black Ducks Fed DDE." *J Wildl Manage* 37(3):390-394

Longcore, J R , L N Locke, B E Bagley, and R Andrews 1974a "Significance of lead residues in mallard tissues." U S Fish Wildl Serv Spec Sci Rep - Wildl 182 24 pp

Longcore, J R , R Andrews, L N Locke, G E Bagley, and L I Young 1974b "Toxicity of lead and proposed substitute shot to mallards " U S Fish Wildl Serv Spec Sci Rep - Wildl 183 23 pp

Lowe, P I and R C Stendell 1991 "Eggshell Modifications in Captive American Kestrels Resulting from Aroclor 1248 in the Diet." *Arch Environ Contam Toxicol*, 20:519-522

Mason, C F and S M MacDonald 1986 "Levels of Cadmium, Mercury and Lead in Otter and Mink Feces from the United Kingdom " *Sci Total Environ*, 53:139-146

Montz, W E , W C Card, and R L Kirkpatrick 1982 "Effects of polychlorinated biphenyls and nutritional restriction on barbituate-induced sleeping times and selected blood characteristics in raccoons (*Procyon lotor*)." *Bull Environ Contam Toxicol* 28:578-583

NAS (National Academy of Sciences) 1979 *Arsenic* United States National Academy of Sciences, National Research Council, Subcommittee on Zinc University Park Press, Baltimore, MD

NCI/DHEW 1978 Bioassays of DDT, TDE, & p,p-DDE for Possible Carcinogenicity Report #TR-131 Dhew Publication No 78-1386 *in* BIOSIS

Neill, D D , J V Schutze, and H D Mulier 1969 The influence of feeding dieldrin and parathion to the Hungarian partridge on reproduction, Abst 58th Ann Meeting Poultry Sci Assn , Ft Collins, CO

Nelson, A A and G Woodard 1949 "Severe adrenal cortical atrophy (cytotoxic) and hepatic damage produced in dogs by feeding 2,2-bis-(parachlorophenyl)-1,1-dichloroethane (DDD or TDE) " *Arch Pathol* 48:387-394

Nicholson, J K and D Osborn 1984 "Kidney Lesions in Juvenile Starlings *Sturnus vulgaris* Fed on a Mercury-contaminated Synthetic Diet " *Environ Pollut* 33A:195-206

NRCC 1978 "Effects of arsenic in the Canadian environment " Natl Res Counc Canada Publ No NRCC 15391 349p

Neff, J.M. 1982. "Polycyclic aromatic hydrocarbons in the aquatic environment and cancer risk to aquatic organisms and man." In: *Symposium Carcinogenic polynuclear aromatic hydrocarbons in the marine environment* Pages 385-409, N.L. Richards and B.L. Jackson (eds.) U.S. EPA report 600/9-82-013.

Neff, J.M. 1985. "Polycyclic Aromatic Hydrocarbons." In: *Fundamentals of Aquatic Toxicology*. Pages 416-454, G.M. Rand and S.R. Petrocelli (eds.) Hemisphere Publ. Corp., New York

Newman, M.C. and A.W. McIntosh, Eds. 1991. Metal Ecotoxicology: Concepts and Applications. Lewis Publishers, Chelsea, Michigan. 399 pp

Nomeir, A.A. and N.P. Hajjar. 1987. Metabolism of chlordane in mammals. *Rev. Environ. Cotam. Toxicol.* 100:1-22.

NRC. 1980. "Drinking Water and Health, Volume 3." National Research Council, National Academy Press, Washington, D.C.

OHM/TADS. 1997. Oil and Hazardous Materials/Technical Assistance Data System.

Olsson, P.E., M. Zafarullah, and I. Gedamu. 1989. "A Role of Metallothionein in Zinc Regulation after Oestradiol Induction of Vitellogenin Synthesis in Rainbow Trout, *Salmo gairdneri*. *Biochemical Journal* 257:555-559. In: Eisler, R. 1993. "Zinc Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish and Wildlife Service Report, No. 26. 106p

Peakall, D. 1993. *Animal Biomarkers as Pollution Indicators*. Ecotoxicology Series 1. Chapman and Hall, London, England.

Reiners, J.J., E. Brott and J.R.J. Sorenson. 1986. "Inhibition of Benzo(a)pyrene-dependant Mutagenesis and Cytochrome P-450 Reductase Activity by Copper Complexes." *Carcinogenesis*, 7:1729-1732

Romoser, G.L., W.A. Dudley, L.J. Machlin, and L. Loveless. 1960. "Toxicity of Vanadium and Chromium for the Growing Chick." *Environ Perf.* 1171-1173.

RTECS (Registry of Toxic Effects of Chemical Substances). 1997. National Institute for Occupational Safety and Health, Cincinnati, Ohio (CD-ROM version), MICROMEDEX, Inc., Englewood, Colorado (Edition expires [1999])

Safe, S. 1984. "Polycholorinated biphenyls (PCBs) and polybromated biphenyls (PBBs): Biochemistry, toxicology, and mechanisms of action." *CRC Crit. Rev. Toxicol.* 13:319-393.

Sanders, O.T. and R.L. Kirkpatrick. 1977. "Reproductive Characteristics and Corticoid Levels of Female White-Footed Mice Fed ad libitum and Restricted Diets Containing Polychlorinated Biphenyl." *Environ. Research*, 13:358-363

Schroeder, H.A. and J.J. Balassa. 1967. "Arsenic, germanium, tin and vanadium in mice: Effects on growth, survival and tissue levels." *J. Nutr.* 105:452-252

Schroeder, H.A., Mitchener, M., and Nasan, A.P. 1970. "Zirconium, niobium, antimony, vanadium, and lead in rats: Life term studies." *J. Nutr.* 100:59-68

Shacklette, H.T. and J.G. Boerngen. 1984. *Element Concentrations in Soils and other Surficial Materials of the Conterminous United States*. Alexandria, VA: USGS. 105p

Omer, V V. St. 1970. "Chronic and Acute Toxicity of the Chlorinated Hydrocarbon Insecticides in Mammals and Birds." *The Canadian Veterinary Journal* 11(11):215-226

Osborn, D., W.J. Eney, and K.R. Bull. 1983. "The Toxicity of Trialkyl Lead Compounds to Birds." *Environ. Pollut.* 31A:261-275

Pershagen, G. and M. Vahter. 1979. Arsenic--a toxicological and epidemiological appraisal. Naturvardsverket Rapp. SNV PM 1128, Liber Tryck, Stockholm. 265 pp.

Platanow, N.S. and L.H. Karstad. 1973. "Dietary Effects of Polychlorinated Biphenyls on Mink." *Can. J. Comp. Med,* 37:391-400

Pribble, H.J. and P.H. Weswig. 1973. "Effects of Aqueous and Dietary Cadmium on Rat Growth and Tissue Uptake." *Bull. Environ. Contam. Toxicol.* 9(5):271-275

Pritzl, M.C., Y.H. Lie, E.W. Kienholz, and C.E. Whiteman. 1974. "The Effect of Dietary Cadmium on Development of Young Chickens." *Poultry Sci.*, 53:2026-2029

Redig, P.T., et al. 1991. "Effects of Chronic Exposure to Sublethal Concentrations of Lead Acetate on Heme Synthesis and Immune Function in Red-Tailed Hawks." *Arch. Environ. Contam. Toxicol.*, 21:72-77

Reiser, M.H. and S.A. Temple. 1981. "Effects of Chronic Lead Ingestion on Birds of Prey." *In: Recent Advances in the Study of Raptor Diseases.* Pages 21-25, J.E. Cooper and A.G. Greenwood (eds.). Chiron Publications Ltd., West Yorkshire, England.

Richardson, M.E., M.R.S. Fox, and B.E. Fry, Jr. 1974. "Pathological Changes Produced in Japanese Quail by Ingestion of Cadmium." *J. Nutr.*, 104:323-338.

Rossi, R., M. Ravera, G. Repetti, and L. Santi. 1977. "Long-term Administration of DDT or Phenobarbitol-Na in Wistar Rats." *Int. J. Cancer* 19:179-185 *in* WHO. 1979. Environmental Health Criteria 9, DDT and its Derivatives. World Health Organization, Geneva

RTECS (Registry of Toxic Effects of Chemical Substances) Database. 1997. Published by the National Institute for Occupational Safety and Health (NIOSH).

Scheuhammer, A.M. 1988. "Chronic Dietary Toxicity of Methylmercury in the Zebra Finch, *Poephila guttata*." *Bulletin of Environmental Contamination and Toxicology,* 40:123-130.

Schroeder, H.A. and M. Mitchener. 1971. "Toxic Effects of Trace Elements on the Reproduction of Mice and Rats." Arch. Environ. Health. 23:102-106

Sharma, R.P., D.S. Winn, and J.B. Low. 1976. Toxic, neurochemical, and behavioral effects of dieldrin exposure in mallard ducks, *Arch. Environ. Contam. Toxicol.*, 5:43.

Stanley, T.R., Jr., J.W. Spann, G.J. Smith, R. Rosscoe. 1994. "Main and interactive effects of arsenic and selenium on mallard reproduction and duckling growth and survival." *Arch. Environ. Contam. Toxicol.* 26:444-451

Stickel, L.F., W.H. Stickel, R.D. McArthur, and D.L. Hughes. 1979. "Chlordane in Birds: A Study of Lethal Residues and Loss Rates." Pages 387-396 *in* W.B. Deichmann, ed. Toxicology and Occupational Medecine. Elsevier/North Holland, New York *in* Eisler, R. 1990. "Chlordane Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review." U.S. Fish and Wildl. Serv. Biological Report 85(1.21)

Stickel, W H., L F Stickel, R A Dyrland, and D L Hughes 1984 "Aroclor 1254 residues in birds: lethal levels and loss rates" *Arch Environ Contam Toxicol* 13:7-13

Sutou, S., K Yamamoto, H Sendota, and M Sugiyama 1980 "Toxicity, fertility, teratogenicity, and dominant lethal tests in rats administered cadmium subchronically 2 Fertility, teratogenicity, and dominant lethal tests" *Ecotoxicol Environ Saf* 4:51-56

Torre, G M and T J Peterle 1983 "Effects of PCBs on Morning Dve Courtship Behavior" *Bull Environ Contam Toxicol*, 30:44-49

Treon, J F and F P Cleveland 1955 "Toxicity of Certain Chlorinated Hydrocarbon Insecticides for Laboratory Animals with Special Reference to Aldrin and Dieldrin" *J Agric Food Chem* 3:402-408 *in* WHO 1979 Environmental Health Criteria 9, DDT and its Derivatives World Health Organization, Geneva

U S EPA 1991 Health Effects Assessment Summary Tables United States Environmental Protection Agency FY-1991 Annual OERR 9200 6-303(91-1)

U S EPA 1993 "Wildlife Exposure Factors Handbook, Volume I of II" United States Environmental Protection Agency, Office of Research and Development, Washington, D C EPA/600/R-93/187a

Walker, A I T, E Thorp, and D E Stevenson 1972 The toxicology of dieldrin; Long term studies in mice, *Food Cosmet Toxicol*, 11:415

White, D H and M T Finley 1978 "Uptake and Retention of Dietary Cadmium in Mallard Ducks" *Environ Res*, 17:53-59

WHO 1984 Chlordane, Environmental Health Criteria 34 World Health Organization, Geneva, Switzerland 82pp *in* Eisler, R 1990 "Chlordane Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review" U S Fish and Wildl Serv Biological Report 85(1 21)

Wiemeyer, S N, and R D Porter 1970 DDE thins eggshells of captive American kestrels *Nature* 227:737-738

Wobeser, G, N O Nielsen, and B Schiefer 1975 "Mercury and Mink II Experimental Methyl Mercury Intoxication" *Can J Comp Med* 40:34-45

Wren, C D, D B Hunter, J F Leatherland, and P M Stokes 1987a "The Effects of Polychlorinated Biphenyls and Methylmercury, Singly and in Combination on Mink I: Uptake and Toxic Responses" *Arch Environ Contam Toxicol*, 16:441-447

Wren, C D., D B Hunter, J F Leatherland, and P M Stokes 1987b "The Effects of Polychlorinated Biphenyls and Methylmercury, Singly and in Combination on Mink II: Reproduction and Kit Development" *Arch Environ Contam Toxicol*, 16:449-454

Zitco, V 1978 "Nonachlor and Chlordane in Aquatic Fauna" *Chemosphere* 1:3-7 *in* Eisler, R 1990 "Chlordane Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review" U S Fish and Wildl Serv Biological Report 85(1 21)

APPENDIX G

Life Histories
Cornell-Dubilier Site
South Plainfield, NJ
April 1998

APPENDIX G

LIFE HISTORIES

G.1 *Hyalella azteca* as Representative of Benthic Invertebrates

Justification of *Hyalella azteca* as Representative of Benthic Invertebrates

Hyalella azteca were selected as representative benthic invertebrates because they are in direct contact with sediment for a significant portion of their life cycle, they are widely distributed in aquatic systems, they are an important food item for aquatic invertebrate consumers, and they are easy to use in laboratory toxicity evaluations

Life History (*Hyalella azteca*)

The amphipod, *Hyalella azteca*, is commonly found in freshwater lakes, streams, ponds, and rivers throughout North and South America. In preferred habitats, they are known to reach densities in excess of 10,000 per square meter. They may also be found in sloughs, marshes, and ditches, but generally in lower numbers (U.S. EPA 1994).

Hyalella are epibenthic detritivores that feed on coarse particulate organic material. They typically burrow into surface sediment, and avoid bright light. Because of their feeding and behavioral characteristics, they are ideal test organisms for toxicological evaluation of freshwater sediments. Avoidance of light by movement into the sediment keeps these organisms almost constantly in contact with sediment contaminants (U.S. EPA 1994).

Reproduction in this crustacean is sexual. Males are larger than females and have larger front gnathopods that are presumably used for holding the female during amplexus and copulation. During amplexus, the male and female feed together for a period of up to one week. The pair separates temporarily while the female goes through a molting period. Immediately after the molt, the two rejoin and copulation begins. During copulation, the male releases sperm near the female's marsupium. The female sweeps the sperm into her marsupium, and simultaneously releases eggs from her oviducts into the marsupium where fertilization takes place. The average brood size for female *Hyalella* is 18 eggs per brood, but this number can vary with environmental conditions and physiological stress (U.S. EPA 1994).

Developing embryos and hatched young are kept inside the female's marsupium until she undergoes a second molt. At that time, the juvenile *Hyalella* are released into the surrounding environment. Under favorable conditions, each female produces approximately one brood during every ten day time period (U.S. EPA 1994).

Hyalella have a minimum of 9 instars, with 5 to 8 pre-reproductive stages. The first five stages are juvenile stages; instars 6 and 7 form the adolescent stages; and stages 8 and higher are considered adult (fully reproductive) stages (U.S. EPA 1994).

Exposure Profile for *Hyalella azteca*

Since direct contact with and ingestion of contaminated sediment are the primary routes of exposure for *H azteca* in the toxicity test, the results of this test were used to indicate both routes of exposure in the risk assessment

G 2 Red-winged Blackbird as Representative of Insectivorous Birds

Justification for the Selection of the Red-winged Blackbird as Representative of Insectivorous Birds

The red-winged blackbird was selected as representative of insectivorous birds because of its dietary composition, abundance in North America, and preference for moist areas

Life History

The habitat of the red-winged blackbird is marshes, swamps, wet and dry meadows, and sometimes pastures. Although it is primarily a marsh bird, it will nest near virtually any body of water and occasionally breeds in upland pastures. It breeds from Alaska to Newfoundland south to Florida, the Gulf Coast, and central Mexico It winters north to Pennsylvania and British Columbia and can often be found in large flocks in the winter (Bull and Farrand 1977; National Geographic Society 1987).

Males generally migrate north prior to females to compete for breeding territory. Those with the best territories attract harems of up to 15 females (Gill 1990). Nests are well-made cups built from marsh grasses or reeds attached to growing marsh vegetation or built in a bush in a marsh Each pair raises two or three broods a season, building a new nest for each clutch. Each clutch consists of an average of 3 to 5 young (Bull and Farrand 1977). One study found that a Red-winged chick spent 12 days in the egg and 10 more as a nestling (Daniel 1957). Young males do not attain adult male plumage until one year (Gill 1990)

Exposure Profile

An average adult male blackbird weighs 63 6 g, while an average adult female weighs 41 5 g (Clench and Leberman 1978). Based on year-round observations, the diet is composed of 73 percent vegetable matter and 27 percent animal matter (Bent 1965). However, during the breeding season the adult diet is primarily aquatic insects (Orians 1980), and food delivered to nestlings is 97 8 percent animal matter (Snelling 1968)

No ingestion rates were located for red-winged blackbirds; however, an ingestion rate of 8.4 g per day was cited for European blackbirds (Kenaga 1973). For the purposes of this risk assessment, this ingestion rate will be used to represent the ingestion rate of the red-winged blackbird

Reported territory sizes range from 0 17 acres (Case and Hewitt 1963) to 0 74 acres (Nero 1956) Therefore, it was assumed that a red-winged blackbird could obtain 100 percent of its diet from the contaminated area (area use factor of 1), since the area comprising the on-site sampling locations was approximately 20 acres

Based on feeding habits, it was assumed that incidental soil/sediment ingestion by red-winged blackbirds would be negligible A daily water ingestion rate of 7 mL per day was calculated using the following allometric equation derived by Calder and Braun (1983) for water intake by avian species:

$$\text{Water Intake (L/day)} = 0.059 \times \text{Weight (kg)}^{0.67}$$

For this risk assessment, it was assumed that 100 percent of their diet was comprised of insects However, insects were not available in sufficient quantities for collection and analysis Crayfish, however, were available in greater quantities than originally anticipated Therefore, crayfsh were used to represent insects for the purposes of this risk assessment

G.3 Mallard duck (*Anas platyrhynchos*) as Representative of Omnivorous Birds

Justification for the Selection of the Mallard Duck as Representative of Omnivorous Birds

The mallard duck was selected as representative of omnivorous birds because of its dietary composition, abundance in North America, and preference for moist areas.

Life History

The mallard duck is a common surface-feeding duck that is widespread throughout most of the United States. They often interbreed with domestic ducks as well as with black ducks (*Anas rubripes*). The males are generally heavier than the females.

Wintering mallards tend to prefer natural wetlands and rivers over reservoirs and farm ponds. The primary habitat requirement for nesting appears to be dense grassy vegetation at least a half a meter high. Nests are usually located within a few miles of water (U.S. EPA 1993).

In winter, mallards feed primarily on seeds but also on invertebrates, mast, agricultural grains, and, to a lesser extent on leaves, buds, stems, rootlets, and tubers. In spring, the females shift from a largely herbivorous diet to primarily invertebrates in order to obtain enough protein for their molt and subsequent egg production. The animal diet continues throughout the summer as females produce new clutches to replace those that have been destroyed. Ducklings also consume aquatic invertebrates almost exclusively (U.S. EPA 1993).

The mallard winters in all four of the waterfowl flyways of North America (Pacific, Central, Mississippi, and Atlantic); the Mississippi flyway contains the highest numbers. They arrive at their wintering grounds in the Mississippi Valley in mid-September through early November and depart for their northern breeding grounds in March. Adult females that breed successfully are likely to return to the same nesting ground the following year. Each pair of mallards uses a home range. The drake usually establishes a territory which he defends (U.S. EPA 1993).

Nest failure is an important factor affecting mallard populations. Mammalian predation is the main cause of failure, followed by human disturbance. Juvenile survival depends mainly on food and habitat availability. Adult females suffer great natural mortality rates than do males. By fall, there is usually a higher proportion of males than females in most populations. Adult mortality rates are also higher in areas with greater hunting pressure.

Exposure Profile

The lowest reported mean body weight for the mallard duck was 1,225 g for males and 1,043 g for females (U.S. EPA 1993). A food ingestion rate of 0.25 kg/day with a dietary composition of 90 percent plant matter and 5 percent fish was reported for this species (Newell et al. 1987).

A water ingestion rate of 0.055 to 0.058 g/g BW/day (U.S. EPA 1993) was multiplied by the lowest reported mean body weight (1,043 g) to yield a water ingestion rate of 57 to 60 g/day. A sediment ingestion rate of 3.3 percent of the total diet (Beyer et al. 1994) was multiplied by the food ingestion rate (0.25 kg/day) to yield a sediment ingestion rate of 0.008 kg/day.

The home range of this species vary from 111 hectares (274 acres) for a laying female to 620 hectares (1,532 acres) for an adult male (U.S. EPA 1993).

For the purposes of this risk assessment, it was assumed that mallard ducks consume 100% crayfish, since crayfish were collected from the site and analyzed for the COPCs.

G.4 Green Heron as Representative of Piscivorous Birds

Justification for the Selection of the Green Heron as Representative of Piscivorous Birds

The green heron was selected as representative of piscivorous birds because of its dietary composition, abundance in North America, and preference for moist areas.

Life History

The green heron is generally a solitary bird and prefers streams, ponds, and marshes with woodland trees, where it can often be found perching (National Geographic Society 1987). Its range includes British Columbia, Minnesota, and New Brunswick south to southern South America. It winters north to South Carolina, the Gulf Coast, and California (Bull and Farrand 1977).

The green heron builds its nests in thick bushes or trees near water and searches for prey in the soft muddy borders of waterbodies. The structures of their nests are flimsy saucers of sticks and twigs, and 3 to 6 eggs are produced per clutch. The green heron occasionally breeds in colonies (Bull and Farrand 1977).

Exposure Profile

The average body weight of a green heron was reported to be 0.25 kg (Newell et al. 1987). A dietary ingestion rate of 0.047 kg/day was estimated using a regression equation for wading birds ($\log y = 0.966 \log x - 0.640$), where x is weight in grams and y is ingestion rate (Kushlan 1978). The diet of the green heron reportedly consists of 44% fish, 21% insects, 24% spiders and miscellaneous invertebrates, and 1% crustaceans (Palmer 1962).

A territorial size of < 2 ha (< 4.9 acres) was reported by Palmer (1962) for the green heron. This was estimated using an average breeding area. The 2 ha area was an average of four group breeding areas ranging in size from 1 to 3.3 ha and containing 8 to 70 breeding pairs. The size of the individual territories were within the group breeding area and varied with habitat and stage of breeding cycle. Therefore, it was assumed that a green heron could obtain 100 percent of its diet from the contaminated area (area use factor of 1), since the area comprising the on-site sampling locations was approximately 20 acres.

Calder and Braun (1983) estimated a water ingestion rate for the green heron of 0.023 L/day based on the allometric equation (water ingestion rate = $0.059\ Wt^{0.67}$, where Wt is average body weight of the species in kilograms).

An incidental sediment ingestion rate could not be found in the literature. Therefore, to evaluate this exposure pathway, a model was developed that predicted the amount of sediment which may be entrained in the digestive system of bluegill (*Lepomis machrochirus*) and crayfish (*Orconectes* sp.). Fish and crayfish were assumed to be the only food source for the green heron to complete this derivation.

Bluegills commonly reach a size of 12 ounces (Pflieger 1975). From this, the amount of sediment entrained in fish 12 ounces (340 g) in weight was predicted. A study evaluating the stomach contents of 153 bluegills reported an average content of detritus and sediment to be 9.6 percent of the total diet (Kolehmainen 1974). A daily food ingestion rate of 1.75 percent of the body weight per day has been reported for the bluegill (Kolehmainen 1974). This provides a predicted intake rate of 5.95 g of food per day for a 340 g fish. If a conservative assumption is made that 9.6 percent of the food ingested is entirely sediment, it can be predicted that a fish of this size may contain 0.5712 g of sediment in its digestive system.

For the purpose of this model, it was assumed that the level of sediment contained in the digestive system of a fish remains constant over time. This value (0.5712 g) was divided by the predicted fish body weight (340 g) to express sediment entrained in fish digestive systems in units of grams of sediment per gram of fish body weight. This provided a value of 0.00168 g sediment/g body weight. When this value is multiplied by the food ingestion rate of the green heron (48 g/day), the predicted sediment ingestion rate for the green heron through the consumption of fish is approximately 0.08 g/day.

As with the bluegill, life history information for the crayfish (*Orconectes* sp.) was used in predicting the incidental sediment ingestion rate for the green heron via consumption of freshwater invertebrates. Adult *O. virilis* weigh from 5 to over 20 g and consume 0.3 to 1 percent of its total body weight per day (Kim 1994; Tack 1941; Vannote 1963). To express the food ingestion rate in units of g/day, the highest reported food ingestion rate of 1 percent of the total body weight per day was multiplied by the lowest reported body weight of 5 g to yield a food ingestion rate of 0.05 g/day. *Orconectes* spp. detritus ingestion rates range from 10 percent of the total diet per day in young-of-the-year *Orconectes immunis* (Vannote 1963) to 11 percent of the total diet per day in *O. virilis* (Tack 1941). For this risk assessment, it will be assumed that these values represent the percentage of sediment in the diet of a crayfish. The food ingestion rate of 0.05 g/day was multiplied by the incidental sediment ingestion rate of 11 percent of the total diet per day to yield an incidental sediment ingestion rate of 0.0055 g/day.

For the purpose of this model, it was assumed that the level of sediment contained in the digestive system of crayfish remains constant over time. Therefore, to express the amount of sediment entrained in a crayfish's digestive system in units of gram of sediment per gram of crayfish body weight, the sediment ingestion rate of 0.0055 g/day was divided by the lowest adult crayfish body weight of 5 g to yield a sediment ingestion rate of 0.0011 g sediment/g BW of crayfish/day. When this value is multiplied by the food ingestion rate of the green heron (48 g/day), the predicted incidental sediment ingestion rate for the green heron via consumption of crayfish is 0.05 g/day.

For the purposes of the calculation of the incidental sediment ingestion rate for the green heron, the diet will be assumed to consist of 44% fish and 46% crayfish, based on the diet described by Palmer (1962) and assuming that crayfish represent insects, spiders, crustaceans, and miscellaneous invertebrates. Given this dietary ratio, the green heron is estimated to ingest a total of 0.058 g/day of sediment.

For the purposes of the food chain model in this risk assessment, it was assumed that the green heron consumes 100% fish, since fish were collected from the site and analyzed for the COPCs.

G.5 Raccoon (*Procyon lotor*) as Representative of Omnivorous Mammals

Justification for using raccoon as an omnivorous mammal

The raccoon was chosen as an omnivorous mammal based on its opportunistic feeding strategies, its abundance in North America, and the likelihood of its occurrence at the site.

Life History

Raccoons are common and mostly nocturnal mammals inhabiting wooded areas near water, marshes, suburban areas, or virtually any area that can provide food, a den, and permanent water (Hoffmeister 1989; Jones and Birney 1988). Their dens are usually within 1,200 feet from a water supply but are situated in an area where the den can remain dry (Hoffmeister 1989). These dens may be in hollow trees, burrows, caves, crevices in rock, haystacks, chimneys, or under logs (Hoffmeister 1989; Schwartz and Schwartz 1981). During periods of heavy snow or ice, raccoons will den together for several days (Schwartz and Schwartz 1981), otherwise, they are normally solitary and remain active throughout the year (Jones and Birney 1988).

Raccoons are opportunistic omnivores consuming various food items such as berries, fruit, nuts, corn, seeds, aquatic and terrestrial invertebrates, eggs, frogs, snakes, fish, muskrats, and young waterfowl (Jones and Birney 1988; Schwartz and Schwartz 1981). Seasonal and local food availability appears to dictate dietary composition, although as a general rule, plant matter comprises a greater portion of the diet than does animal matter (Barbour and Davis 1974).

Breeding may occur from December through July, although most breeding occurs from January to March (Schwartz and Schwartz 1981; Jones and Birney 1988). Gestation lasts for approximately 63 days with litter sizes ranging from two to seven young (Barbour and Davis 1974). The young are weaned at 10 to 12 weeks, forage with the female parent well into the autumn, and are ready to breed their first winter (Barbour and Davis 1974). Natural predators of the raccoon include owls, hawks, bobcats, coyotes (Merritt 1987; Schwartz and Schwartz 1981). Most raccoons live less than 5 years in the wild (Schwartz and Schwartz 1981).

Exposure Profile

Adult raccoons weigh from 3 to 15 kg (Merritt 1987; U.S. EPA 1993). The home range of this species varies from 12 to 12,350 acres (Merritt 1987).

The food ingestion rate for a raccoon is reported to be approximately 500 g/day (Newell 1987); the water ingestion rate is estimated to be approximately 0.083 g/g BW/day. To express the water ingestion rate in units of g/day, the water ingestion rate of 0.083 g/g BW/day was multiplied by the lowest reported body weight of 3 kg to yield a water ingestion rate of 24.9 g/day (24.9 ml/day).

A soil ingestion rate of 9.4 percent of the total diet has been reported for the raccoon (Beyer *et al.* 1994). To express this value in units of g/day, the soil ingestion rate of 9.4 percent was multiplied by the food ingestion rate of 500 g/day to yield a soil ingestion rate of 47 g/day.

For the purposes of this risk assessment, it was assumed that the raccoon consumes 50% crayfish and 50% fish, since these two types of organisms were collected from the site and analyzed for the COPCs. One exception is for location 6, where crayfish were not available for collection. For this site, it was assumed that 100% of the raccoon's diet is fish.

G.6 Red Fox (*Vulpes vulpes*) as Representative of Carnivorous Mammals

Justification for using red fox as a carnivorous mammal

The red fox was chosen as a carnivorous mammal based on its ingestion of small mammals and its abundance in North America.

Life History

Red fox inhabit open meadows, ditch banks, field and wood edges, fencerows, stream and lake borders, and farmlands (Hoffmeister 1989; Jones and Birney 1988; Merritt 1987). With the exception of the breeding season, red fox have no permanent home but sleep on the ground (Schwartz and Schwartz 1981). A den, usually modified from an existing woodchuck or fox den, is dug during the breeding season and exceptionally cold winters (Barbour and Davis 1974). These scent-marked dens have multiple rooms, entrances, and trails leading to and from hunting areas (Schwartz and Schwartz 1981). In addition to their dens, both males and females will defend their scent-marked hunting territory from intruders (Jones and Birney 1988).

The red fox is primarily an opportunistic carnivore, consuming food items such as rabbits, opossums, muskrats, skunks, rodents, birds, eggs, carrion, invertebrates, snakes, and frogs (Barbour and Davis 1974; Merritt 1987). Some vegetable matter such as fruits and nuts are also consumed when in season (Jones and Birney 1988). During times of abundant food supply, the red fox will bury surplus food to return to for consumption at a later time (Schwartz and Schwartz 1981).

Male and female foxes pair for life, remaining together from midwinter to summer. Females bear one litter per year usually between March and April (Merritt 1987). Gestation periods last from about 49 to 56 days, with most averaging 53 days (Schwartz and Schwartz 1981). The pups are weaned at about 60 days, leave the den in the autumn, and are sexually mature by their first winter (Merritt 1987). Natural predators of the red fox are few but include large hawks and owls, and possibly coyotes (Merritt 1987; Schwartz and Schwartz 1981). Red fox may live from six to ten years in the wild (Schwartz and Schwartz 1981).

Exposure Profile

Adult red fox weigh from 2.7 to 7 kg (Barbour and Davis 1974; Jones and Birney 1988). Home ranges vary from 245 to 1,235 acres (Merritt 1987).

The food ingestion rates of the red fox range from 0.069 g/g BW/day for a nonbreeding adult, to 0.16 g/g BW/day for a juvenile (U.S. EPA 1993). The water ingestion rate for an adult red fox is estimated to be approximately 0.086 g/g BW/day (U.S. EPA 1993). To express these values in units of g/day, the highest reported food ingestion rate of 0.16 g/g BW/day and the water ingestion rate of 0.086 g/g BW/day were multiplied by the lowest reported body weight of 2.7 kg (2,700 g) to yield a food ingestion rate of 432 g/day and a water ingestion rate of 232.2 g/day (232 2 ml/day).

A soil ingestion rate of 2.8 percent of the total diet has been reported (Beyer *et al.* 1994) for the red fox. To express this value in units of g/day, the soil ingestion rate of 2.8 percent was multiplied by the food ingestion rate of 432 g/day to yield a soil ingestion rate of 12.1 g/day

For the purposes of this risk assessment, it was assumed that the red fox consumes 100% small mammals (specifically white-footed mice), since white-footed mice were collected and analyzed for this risk assessment

REFERENCES

Barbour, R W. and W H. Davis. 1974. *Mammals of Kentucky*. Lexington, KY: University of Kentucky Press. 322p

Bent, A C. 1965. *Life histories of North American blackbirds, orioles, tanagers, and allies*. Dover Publications, Inc , New York, NY.

Beyer, W N., E E. Conner, and S. Gerould. 1994. "Estimates of Soil Ingestion by Wildlife." *J. Wildl. Manage.*, 58(2):375-382.

Bull, J. and J. Farrand, Jr. 1977. *The Audobon Society Field Guide to North American Birds: Eastern Region*. New York: Chanticleer Press, Inc. 784p

Calder, W.A. and E.J. Braun. 1983. "Scaling of osmotic regulation in mammals and birds." *Am. J. Physiol.* 244:R601-R606

Case and Hewitt. 1963. "Nesting and productivity of the red-winged blackbird in relation to habitat." In: *The Living Bird, Second Annual of the Cornell Laboratory of Ornithology*, pp. 7-20

Clench, M.H. and R.C. Leberman. 1978. "Weights of 151 species of Pennsylvania birds analyzed by month, age and sex." *Bull. Carnegie Mus. Nat. Hist.* 5. (as cited in Dunning 1993).

Daniel, J.C., Jr. 1957. "An Embryological Comparison of the Domestic Fowl and the Red-Winged Blackbird." *Auk.*, 74:340-358

Gill, F.B. 1990. *Ornithology*. New York: W.H. Freeman and Company. 660p.

Hoffmeister, D.F. 1989. *Mammals of Illinois*. Urbana, IL: University of Illinois Press. 348p.

Jones, Jr., J.K.J. and E.C. Birney. 1988. *Handbook of Mammals of the North Central States*. Minneapolis, MN: University of Minnesota Press. 346p

Kenaga, E.E. 1973. "Factors to be considered in the evaluation of the toxicity of pesticides to birds in their environment." In: Coulston, F. and F. Korte (eds.). *Environmental Quality and Safety. Global Aspects of Chemistry, Toxicology and Technology as Applied to the Environment. Vol. II*. Academic Press, Inc., New York. pp. 166-181

Kim, P. 1994. Ecological Risk Assessment, Cannelton Industries Site. Roy F. Weston, Inc. Final Report to the U.S. EPA/ERT. Contract No. 68-C4-0022.

Kolehmainen, S.E. 1974. "Daily Feeding Rates of Bluegill (*Lepomis machrochirus*) Determined by a Refined Radioisotope Method." *J. Fish. Res. Bd. Can.*, 31:67-74

Kushlan, J.A. 1978. "Feeding ecology of wading birds." In: A. Sprunt, J.C. Ogden and S. Winckler (eds.). *Wading Birds*. National Audubon Society Research Report No. 7. pp. 249-297

Merritt, J.F. 1987. *Guide to the Mammals of Pennsylvania*. Pittsburgh, PA. Univ. Pittsburgh Press.

National Geographic Society. 1987. Field Guide to the Birds of North America, Second Edition. National Geographic Society, Washington, D.C.

Nero, R.W. 1956. "A behavior study of the red-winged blackbird II. Territoriality." *Wilson Bull.* 68:129-150

Newell, A., D.W. Johnson, and L. Allen. 1987. "Niagra River Biota Contamination Project: Fish Flesh Criteria for Piscivorous Wildlife." NYS DEC Technical Report 87-3

Orians, G.H. 1980. *Some Adaptations of Marsh-nesting Birds*. Princeton University Press, Princeton, New Jersey

Palmer, R.S. 1962. *Handbook of North American birds. Vol. 1*. Yale University Press, New Haven, CT.

Pflieger, W.L. 1975. "The Fishes of Missouri." Missouri Dept. Conserv.

Schwartz, C.W. and E.R. Schwartz. 1981. *The Wild Mammals of Missouri, Revised Edition*. Columbia, MO: University of Missouri Press and Missouri Dept. Conserv. 356p

Snelling, J C 1968. "Overlap in feeding habits of red-winged blackbirds and common grackles nesting in a cattail marsh." *Auk* 85:560-585.

Tack, P I. 1941. "The Life History and Ecology of the Crayfish, *Cambarus immunis* Hagen." *Am. Midl. Nat.* 25:420-466.

U.S. EPA. 1993. *Wildlife Exposure Factors Handbook, Volume I of II.* United States Environmental Protection Agency, Office of Research and Development, Washington, D.C. EPA/600/R-93/187a

U S EPA. 1994. "Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates." United States Environmental Protection Agency, Office of Research and Development, Washington; D C. EPA/600/R-94/024.

Vannote, R L. 1963. "Community Productivity and Energy Flow in an Enriched Warm Water Stream." Ph.D Thesis, Michigan State Univer., E Lansing 156pp. In: Momot, W.T., H. Gowing, and P D. Jones. 1978. "The Dynamics of Crayfish and Their Role in Ecosystems." *Am. Midl. Nat.* 99:10-35.

APPENDIX H

Final Histopathological Evaluation Report
Cornell-Dubilier Site
South Plainfield, NJ
April 1998

13862643

AME/SPECIES: WESTON REAC, UNKNOWN
REQUESTING DR: 03347-142-001-2274-0
ANIMAL ID: ATTN: JOHN JOHNSTON
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2890 WOODBRIDGE AVE #209
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VETERINARY PATHOLOGY

CASE#: VR-97-001031

33 LIVER & KIDNEY
HISTOPATH
~~AUTEY~~
CORNELL DOBLIEL
TL S GROSSMAN

INFORMATION

Animal Reference Pathology
500 Chipeta Way
Salt Lake City, Utah 84108
800-426-2099

RESEARCH

VR-97-1031

WESTON REAC STUDY #03347-142-001-2274-01

SLIDE A- (B10401)
KIDNEY- The tissue is acutely congested and well preserved. Significant changes are not identified.

LIVER- This tissue is acutely congested with good preservation of the hepatocytes. No significant pathologic lesions are identified.

SLIDE B- (B10402)
KIDNEY- This tissue is acutely congested with normal architecture. The autolytic change is minimal.
LIVER- This tissue demonstrates multifocal collections of lymphocytes and plasma cells in the parenchyma with scattered aggregates of parasite eggs. These eggs have the appearance of Trematode eggs, and they are massive in numbers. There is some secondary inflammation in focal areas in the portal triad areas. The number of parasite eggs appears to be extreme throughout all sections of liver tissue.

SLIDE C- (B10403)
KIDNEY- This tissue is acutely congested with mild autolysis and no significant inflammation or degeneration.

LIVER- The liver tissue demonstrates multiple granulomata with parasite eggs. The parasite eggs appear to be Trematode eggs. There are areas of abscessation with necrosis and degeneration of the hepatic tissue. Trematode parasites are identified in one section of liver tissue. The fibrosis and pyogranulomatous inflammation correlates with invasion of the parasites through the liver, liver damage, and secondary bacterial infection. The number of parasite eggs and parasites are moderate to severe in this liver.

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SLIDE D- (B10404)
KIDNEY- This tissue is acutely congested and slightly autolyzed. There are multifocal collections of lymphocytes and plasma cells in the interstitial areas. Focal areas of hemorrhage support acute trauma or inflammation.
LIVER- The liver section includes small fragments of liver tissue with scattered parasites or parasite eggs. Minimal other hepatic change is present in the liver tissue. Mild congestion has occurred in the liver tissue present. Some of these parasites appear to be nematode parasites. Specific other change is not identified.

SLIDE E- (B10405)
KIDNEY- This renal tissue is acutely congested with mild autolysis. Minimal inflammatory cell accumulation has occurred in the interstitium.

LIVER- Multiple sections of liver are submitted with areas of fibrosis and degeneration. The fibrotic change is irregular. Eosinophils and epithelioid cells are part of the collection. Epithelioid cells, multinucleated giant cells and other inflammatory cells are part of the chronic inflammatory process in the portal triad areas. Fibrosis is limited to the portal triad areas with hemosiderin and eosinophilia. Some foreign material which is likely parasitic ova can be found in small granulomas. Eosinophilic microabscesses support parasitic invasion. Foci of hepatocytic necrosis suggests chronic passive congestion and secondary degeneration. Specific other inflammatory or degenerative change is not identified.

SLIDE F- (B10406)
KIDNEY- This section of kidney is acutely congested with minimal autolysis. Specific degeneration or change is not identified.

LIVER- The liver tissue demonstrates areas of nodular hyperplasia with multifocal collections of lymphocytes, neutrophils, and plasma cells. There are a few lymphocytes and neutrophils in portal areas with very thin layers of fibrous connective tissue stroma. Foci of cellular calcification and degeneration are present near the capsule, and suggest past parasitic migration sites.

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RESEARCH

SLIDE G- (B10407)
KIDNEY- This tissue is acutely congested with mild autolytic change. No significant lesions are identified.

LIVER- This tissue is acutely congested. There are very few collections of lymphocytes and plasma cells in the portal triad areas, but no other specific hepatocellular degeneration or inflammation.

SLIDE H- (B10408)
KIDNEY- This tissue is acutely congested with minimal autolysis. No specific inflammation is otherwise identified.

LIVER- The liver tissue demonstrates pyogranulomatous inflammation surrounding many ova. Multinucleated giant cells are part of the collection. The parasite eggs appear to be Trematode eggs. There are focal sites suggesting nematodes with chronic inflammation. Pyogranulomatous inflammation, fibrosis, and degeneration are secondary. Primary liver disease not associated with parasite eggs cannot be identified.

SLIDE I- (B10409)
KIDNEY- The renal tissue is acutely congested and slightly autolyzed. No specific inflammation is identified in the renal tissue.

LIVER- The liver demonstrates multifocal areas of marked fibrosis with chronic lymphocytic plasmacytic and eosinophilic infiltration including multiple granulomata surrounding many parasite eggs. The parasite eggs are similar to other parasites identified in this collection of animals. Some parasites support Trematode organisms as well as the eggs. In one or two sites, there are suggestions of nematode parasites as well.

SLIDE J- (B10410)
KIDNEY- The renal tissue is acutely congested with no evidence of autolysis. No specific inflammation or degeneration is identified.

LIVER- This tissue is acutely congested with focal areas of hemorrhage. The hemorrhage supports a degenerative process, and a traumatic process in the hepatic tissue. Other significant change or inflammation is not identified.

Continued on Next Page...

VETERINARY PATHOLOGY

CASE#: VR-97-001031

RESEARCH

Specific other primary liver disease is not identified.

SLIDE K- (B10411)
KIDNEY- This tissue is acutely congested with mild to moderate autolysis. Specific other change is not present in the renal tissue.

LIVER- This tissue is slightly autolyzed and very mildly congested. Specific inflammation or parasites are not identified. The degenerative process appears to be due to autolysis and not inflammation, infection or infestation of parasites.

SLIDE L- (B10412)
KIDNEY- This tissue is moderately to severely autolyzed with acute congestion. Specific inflammation or change is not identified.

LIVER- This tissue is moderately autolyzed and acutely congested. A very few inflammatory cells are present in the portal triad areas, but they are definitely minimal in numbers. Evidence of toxicity or parasitic change cannot be identified. Specific other change is not identified.

SLIDE M- (B10413)
KIDNEY- This renal tissue is acutely congested with minimal autolysis. Inflammation or degeneration is not readily identified.

LIVER- This tissue is acutely congested. Specific inflammation or other change cannot be identified in this tissue.

SLIDE N- (B10414)
KIDNEY- The renal tissue is acutely congested. This tissue is slightly autolyzed with no evidence of specific inflammation or degeneration.

LIVER- The liver tissue is very mildly autolyzed over the surface with acute congestion of much of the tissue. Specific other change is not identified.

SLIDE O- (B10415)

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VETERINARY PATHOLOGY

CASE#: VR-97-001031

RESEARCH

KIDNEY- The renal tissue is acutely congested with very mild autolysis. Almost no inflammation is identified.

LIVER- This tissue is acutely congested with very minimal autolysis. No evidence of specific degeneration or inflammation is identified. The cellularity is minimally identified.

SLIDE P- (B10416)
KIDNEY- This tissue is acutely congested with mild autolysis. The autolysis is not severe enough to interfere with interpretation. Specific other change is not identified.

LIVER- The liver tissue is acutely congested with focal autolysis where bile has touched the liver surface. A localized aggregate of parasites and parasite eggs is identified in one end of the liver tissue. The number of parasites is mild to moderate. The inflammatory infiltrate in the portal triad areas is very minimal.

SLIDE Q- (B10417)
KIDNEY- This tissue is acutely congested with no significant histologic change.

LIVER- This tissue is acutely congested with autolysis over the surface, but no evidence of any specific inflammation or change in the tissue. Parasites are not present.

SLIDE R- (B10418)
KIDNEY- The renal tissue is acutely congested with very mild autolytic change. No evidence of inflammation or other specific inflammation could be identified.

LIVER- The liver tissue is acutely congested. There is mild autolysis, but no other specific reaction or change is identified.

SLIDE S- (B10419)
KIDNEY- The renal tissue is acutely congested with mild autolysis, but no other specific inflammation or change.

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VETERINARY PATHOLOGY

CASE#: VR-97-001031

RESEARCH

LIVER- This tissue is acutely congested with no significant inflammation or hepatocellular damage.

SLIDE T- (B10420)
KIDNEY- This tissue is acutely congested with mild autolysis. No other significant change is present.

LIVER- This tissue is acutely congested with mild autolysis. No specific inflammatory change or degenerative process is occurring in this liver tissue. There is some evidence of autolysis over the surface, particularly where the gall bladder is contacting the liver tissue.

SLIDE U- (B10421)
KIDNEY- This tissue is acutely congested with no significant histologic change in the renal parenchyma.

LIVER- This tissue is acutely congested with multifocal mild to moderate autolysis. There are foci of neutrophils and fibrinous exudation with necrosis in some parts of the liver parenchyma. Fibrinous exudation has occurred in several foci. The necrosis supports a bacterial infection at this site.

SLIDE V- (B10422)
KIDNEY- This renal tissue is acutely congested. No evidence of degeneration or inflammation is identified.

LIVER- The liver tissue is acutely congested. There is no evidence of specific degeneration or inflammation in any part of this liver tissue.

SLIDE W- (B10423)
KIDNEY- This tissue is acutely congested with no evidence of specific inflammation. Minimal autolysis is identified.

LIVER- The liver tissue is acutely congested. There are multifocal areas of parasite egg accumulation with epithelioid cells and granulation tissue. Mild lymphocytic plasmacytic inflammation has occurred in the portal triad areas.

Continued on Next Page...

VETERINARY PATHOLOGY

CASE#: VR-97-001031

RESEARCH

Fibrosis is part of the reactive process.

SLIDE X- (B10424)
KIDNEY- This tissue is acutely congested with mild autolysis and small foci of lymphocytes and plasma cells collecting in the interstitium. Specific other change is not present.

LIVER- This tissue is acutely congested with multifocal areas of inflammation in the portal triads. These areas of inflammation include lymphocytes and plasma cells. Specific other inflammation or change is not identified.

SLIDE Y- (B10425)
KIDNEY- This tissue is acutely congested with areas of autolysis in the pelvic tissue. Focal areas of mild lymphocytic plasmacytic inflammation have occurred in the renal parenchyma.

LIVER- This tissue is acutely congested. Specific inflammation is not identified. Specific degeneration is not part of the liver tissue.

SLIDE Z- (B10426)
KIDNEY- The renal tissue is acutely congested and slightly autolyzed. Specific inflammation is not identified.

LIVER- The liver tissue is acutely congested and very mildly autolyzed. Other specific inflammation is not present.

SLIDE AA- (B10427)
KIDNEY- This tissue is acutely congested with minimal autolysis. No other specific inflammation is present.

LIVER- This tissue demonstrates multifocal collections of parasite eggs with fibrosis and mild chronic inflammation around the parasite eggs. The parasites are the same type of trematodes as previously described in other animals. The inflammatory process is chronic.

SLIDE AB- (B10428)

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KIDNEY- This tissue is very mildly and acutely congested with no evidence of specific degeneration.

LIVER- The liver tissue is acutely and very mildly congested. Mild vacuolization of hepatocytes has occurred in the liver tissue. There are areas of autolysis over the capsule of the liver parenchyma. Other specific change is not identified.

SLIDE AC- (B10429)
KIDNEY- The renal tissue is acutely congested and demonstrates no specific autolysis. Minimal inflammation is identified.

LIVER- The liver tissue is acutely congested with no specific degenerative change of the hepatocytes. Mild autolysis has occurred over the liver capsule.

SLIDE AD- (B10430)
KIDNEY- The renal tissue is acutely congested and mildly autolyzed. Specific inflammation or degeneration is not identified.

LIVER- The liver tissue is acutely congested with multifocal areas of fibrosis with granulation tissue and collections of lymphocytes and plasma cells. Fibrotic change is irregular. The fibrotic change is limited to one area of the liver parenchyma. This site may be an area of past parasite migration. Parasite eggs are not identified at this site, but there is evidence of chronic inflammation.

SLIDE AE- (B10431)
KIDNEY- The renal tissue is acutely congested with no evidence of specific inflammation or alteration.

LIVER- The liver tissue is acutely congested with no evidence of specific change. There is some vacuolization of the hepatocytes, but this is secondary and nonspecific.

SLIDE AF- (B10432)

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VETERINARY PATHOLOGY

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RESEARCH

KIDNEY- This tissue is acutely congested. Mild autolysis has occurred in the renal parenchyma.

LIVER- The liver tissue is acutely congested with areas of autolysis over the surface. Specific inflammation or change or parasitic accumulation is not identified. The degenerative process is occurring secondarily on the surface of the liver.

SLIDE AG- (B10433)
KIDNEY- This tissue is acutely congested with mild autolysis and no evidence of specific other inflammation. Some tubules contain protein. The protein is accumulating secondarily to nonspecific changes in the renal tissue.

LIVER- The liver tissue is acutely congested with very mild autolysis. Minimal inflammation is identified in this tissue. No evidence of parasites is identified in this tissue.

PATHOLOGIST COMMENTS

The mice in this group demonstrate no evidence of specific uniform change. There are large numbers of parasites or parasite eggs in several parts of the liver tissue. The majority of the parasites appear to be Trematodes, although there are some cross sections that are nematodes. The parasites are probably due to a heavy environmental parasitic load in this area. The tissues were all preserved quite well. No evidence of specific inflammation, toxicity or neoplasia was identified in the tissues. Kidneys demonstrated essentially no change except for acute congestion.

07/16/97
(LDM/mdp) Verified by: L. D. McGill, D.V.M., Ph.D., DACVP
Veterinary Pathologist
electronic signature

For Histopathology Consultation Call: 1-800-426-2099

END OF CHART

(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2274-01
RFW Contact: JOHN JOHNSON Phone: (908) 321-4200

No: 05331

SHEET NO. 1 OF 2

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Histopathology			
	B10401	T1-14-2	T	17 JUNE 1997	1	~~40~~ 40ml GLASS / FORMALIN	✓			
	B10402	T1-14-9								
	B10403	T1-8-3								
	B10404	T1-10-6								
	B10405	T1-3-4								
	B10406	T1-14-10								
	B10407	T1-5-5								
	B10408	T1-13-10		18 JUNE 1997						
	B10409	T1-9-7		17 JUNE 1997						
	B10410	~~T1~~ T1-14-6								
	B10411	T2-12-8		18 June 1997						
	B10412	T2-4-5								
	B10413	T2-2-7		17 June 1997						
	B10414	T2-3-6								
	B10415	T2-12-3								
	B10416	T2-12-10								
	B10417	T2-2-1								
	B10418	T3-4-5								
	B10419	T3-4-2		18 June 1997						
	B10420	T3-1-8		17 June 1997						

Matrix:

-	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

T - Tissue (Peromyscus leucopus)

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ALL/ANALYSIS	[signature]	6/20/97									

FORM #4 8/94

REAC, Edison, NJ
(908) 321-4200
EPA Contract 68-C4-0022

CHAIN OF CUSTODY RECORD

Project Name: Cornell Dubilier
Project Number: 03347-142-001-2274-01
RFW Contact: JOHN JOHNSON Phone: (908) 321-4200

No: 05335

SHEET NO 2 OF 2

Sample Identification / Analyses Requested

REAC #	Sample No.	Sampling Location	Matrix	Date Collected	# of Bottles	Container/Preservative	Histopathology			
	B10421	T3-1-11	T	17 June 1997	1	40 ml glass/Formalin	✓			
	B10422	T3-4-20		↓						
	B10423	T3-4-1		18 June 1997						
	B10424	T3-3-15		17 June 1997						
	B10425	T3-1-5		↓						
	B10426	T4-23		18 June 1997						
	B10427	T4-1-1								
	B10428	T4-1-27								
	B10429	T4-5-3								
	B10430	T4-2-24		↓						
	B10431	T4-2-2		18 June 1997						
	B10432	T4-3-5		17 June 1997						
	B10433	T4-2-7	↓	↓	↓	↓	↓			

Matrix:

SD -	Sediment	PW -	Potable Water	S -	Soil
DS -	Drum Solids	GW -	Groundwater	W -	Water
DL -	Drum Liquids	SW -	Surface Water	O -	Oil
X -	Other	SL -	Sludge	A -	Air

Special Instructions:

T - Tissue (Paramyscus leucopus)

FOR SUBCONTRACTING USE ONLY

FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished By	Date	Received By	Date	Time	Items/Reason	Relinquished By	Date	Received By	Date	Time
ALL/ANALYSIS	[signature]	6/20/97									

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