

**Waste Management Division
PO Box 95, 29 Hazen Drive
Concord, NH 03302**

Type of Submittal (Check One-Most Applicable)

<input type="checkbox"/> Work Scope <input type="checkbox"/> Reimbursement Request	<input type="checkbox"/> Remedial Action <ul style="list-style-type: none"> Remedial Action Plan Bid Plans and Specifications Remedial Action Implementation Report
<input type="checkbox"/> UST Facility Report <input type="checkbox"/> AST Facility Report	<input type="checkbox"/> Treatment System and POE O&M <input type="checkbox"/> Activity and Use Restriction
<input type="checkbox"/> Emergency/Initial Response Action <input type="checkbox"/> Groundwater Quality Assessment	<input type="checkbox"/> Temporary Surface Water Discharge Permit
<input type="checkbox"/> Initial Site Characterization <input type="checkbox"/> Site Investigation <ul style="list-style-type: none"> Site Investigation Report Supplemental Site Investigation Report GMZ Delineation Source Area Investigation Data Submittal Annual Summary Report <input checked="" type="checkbox"/> Unsolicited Phase II Environmental Site Assessment <input type="checkbox"/> Closure Documentation	<input type="checkbox"/> Groundwater Management Permit <ul style="list-style-type: none"> Permit Application Renewal Application Deed Recordation Documentation Abutter Notification Documentation Release of Recordation <input type="checkbox"/> Data Submittal <input type="checkbox"/> Annual Summary Report

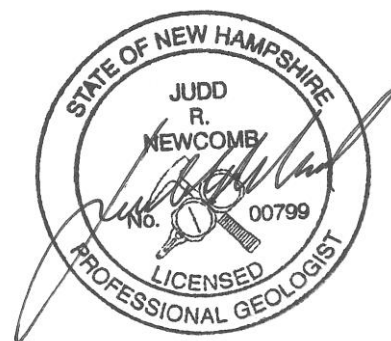
**AMENDMENT TO SUPPLEMENTAL PHASE II
ENVIRONMENTAL SITE ASSESSMENT**

Dagostino Rose Farm
Oak Street Extension
Exeter, New Hampshire
NHDES Site #201203003

Prepared For:
Rockingham Planning Commission
156 Water Street
Exeter, New Hampshire 03833
Phone: (603) 778-0885
Contact: Ms. Theresa Walker

Prepared By:
CREDERE ASSOCIATES, LLC
776 Main Street
Westbrook, ME 04902
Phone: (207) 828-1272 ext. 16
Contact: Judd Newcomb, CG, PG

September 30, 2016



Recommended Risk Category (check one)

<input type="checkbox"/> 1. Immediate Human Health Risk (Impacted water supply well, etc.) <input type="checkbox"/> 2. Potential Human Health Risk (Water supply well within 1,000' or Site within SWPA) <input type="checkbox"/> 3. Free Product or Source Hazard	<input type="checkbox"/> 4. Surface Water Impact <input type="checkbox"/> 5. No Alternate Water Available/No Existing Wells in Area <input type="checkbox"/> 6. Alternate Water Available/High Level Groundwater Contamination (>1,000 X AGQS)	<input type="checkbox"/> 7. Alternate Water Available/Low Level Groundwater Contamination (<1,000 X AGQS) <input type="checkbox"/> 8. No AGQS Violation/No Source Remaining <input type="checkbox"/> Closure Recommended
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CREDERE ASSOCIATES, LLC

776 Main Street
Westbrook, Maine 04092
Phone: 207-828-1272
Fax: 207-887-1051

September 30, 2016

Theresa Walker
Rockingham Planning Commission
156 Water Street
Exeter, NH 03833

**Subject: Amendment to Supplemental Phase II Environmental Site Assessment
Dagostino Rose Farm, NHDES #201203003
Oak Street Extension, Exeter, New Hampshire**

Dear Ms. Walker,

Credere Associates, LLC (Credere) completed a Supplemental Phase II Environmental Site Assessment for the Dagostino Rose Farm property located off Oak Street Extension in Exeter, New Hampshire (the Site), on July 29, 2016. The location of the Site is depicted on **Figure 1**. The Supplemental Phase II ESA recommended additional investigation to further evaluate potential impacts from a newly discovered drainage culvert. Per the July 18, 2016, email request of the New Hampshire Department of Environmental Services (NHDES), Credere prepared a brief work plan in an electronic mail to NHDES who approved the proposed additional investigation work on September 21, 2016. Credere prepared this Amendment to the Supplemental Phase II ESA to document the additional investigation of the culvert and to provide a previously omitted groundwater flow plan.

Culvert Investigation

Geophysical Survey and Inspection

On September 23, 2016, Credere visited the Site to further investigate the culvert that was identified behind the Packing House (see **Figure 2**). Digsmart of Maine (Digsmart) met Credere at the Site to perform electronic location of the culvert and any possible connected drain structures. Digsmart used an electronic transmitter and receiver, a metal detector, and ground-penetrating radar (GPR) to attempt to locate the culvert and pipe (**Photographs 1 and 2**). Based on Digsmart's interpretation, it appeared the culvert went beneath the Packing House and stopped.

Upon further inspection of the interior of the culvert, it appeared the culvert had been placed into the slope to protect a 4 to 6-inch suspected cast iron drain pipe so that additional fill could be placed on the slope and the pipe could still drain. The soil within the culvert appeared to have eroded from the separation between the drain pipe and culvert. Due to the dilapidated state of the Packing House and the amount of debris on the floor (i.e., the roof/ceiling is caving in), the



presence of drainage structures (e.g., floor drains, refrigeration equipment drains, etc.) could not be ascertained; however, no geophysical evidence of a pipe crossing the driveway toward the greenhouse area was observed.

Based on these Site observations, the drain likely originates within the Packing House; however, this should be confirmed during building demolition.

Soil Sampling

Concurrently with attempting to locate the culvert/pipe, one soil sample, CA-SS-105A (**Photograph 1**), was collected using hand tools from directly beneath the culvert/pipe discharge and former sample location CA-SS-105 previously collected from the material within the culvert. The sample was submitted for laboratory analysis of 4'-4'-DDT and total lead at Absolute Resource Associates (ARA) of Portsmouth, New Hampshire. Where the source of the culvert could not be located, Credere no other soil samples were warranted at this time.

4'-4'-DDT was below the laboratory reporting limit of 0.05 milligrams per kilogram (mg/kg) and, therefore, also below the NHDES Soil Remediation Standard (SRS) of 4 mg/kg. Lead was detected in the sample at a concentration of 38 mg/kg, which is also below its SRS of 400 mg/kg. The laboratory analytical report is included as **Attachment B**.

Site Survey and Groundwater Flow

Due to the size of the Site, the location of the monitoring well network with respect to buildings and vegetation, assumed approximate flow direction toward Norris Brook, and the lack of contaminants in groundwater, Credere previously did not survey the Site monitoring wells' elevations to infer groundwater flow direction. However, to satisfy the project's work plan and the NHDES' requirements, Credere surveyed the elevation of monitoring wells on the Site using a rod and level to the nearest 0.01 foot and performed a synoptic round of groundwater level gauging. Where no known benchmark is located on or in the vicinity of the Site, the elevation of monitoring well MW-5 was temporarily used as an arbitrary benchmark of 100 feet above mean sea level. Credere subsequently calculated groundwater elevations and interpreted the flow directions as depicted on **Figure 2**. **Table 1** also summarized groundwater monitoring well construction and gauging details that were generated. Based on the elevation calculations, groundwater appears to locally flow southwest toward Norris Brook along Oak Street Extension, but also to the southeast toward the Squamscott River (and parallel to Norris Brook) in the larger part of the Site.

Summary and Recommendations

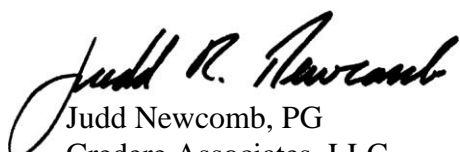
Based on the results of this additional investigation, there is no clear evidence of the source of the culvert/drain pipe that was identified to the west of the Packing House; however, it appears the pipe may originate from the Packing House itself as no underground anomalies were detected beneath Oak Street Extension. Due to this unknown condition and in agreement with the NHDES, it is recommended that during future demolition of the Packing House the drain line be



excavated to determine its source, and if any appreciable source material is observed (e.g., sediment in a drain structure), the material be sampled for laboratory analysis of 4'-4'-DDT and lead to ascertain if higher concentrations of these contaminants may be present in a specific source location. In addition, where 4'-4'-DDT has been detected in other areas of the Site, it is recommended that any other drainage structures identified within the former greenhouse area during redevelopment also be assessed for the presence of potential pesticide containing materials.

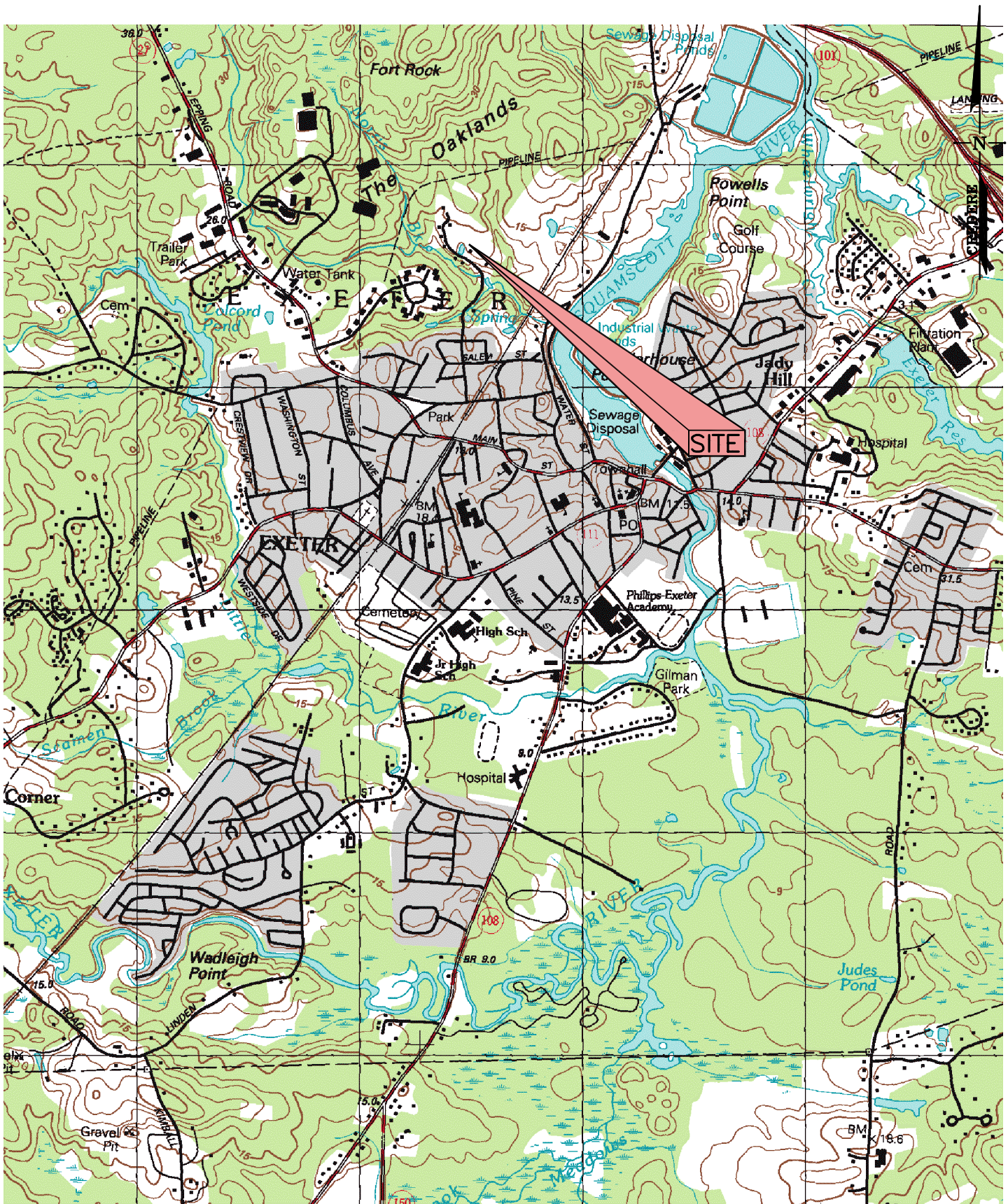
Please do not hesitate to contact us at (207) 828-1272 ext. 16 if you have any questions, comments, or concerns regarding this amendment.

Sincerely,


Judd Newcomb, PG
Credere Associates, LLC

Enclosures: Figure 1 – Site Location Plan
Figure 2 – Sample Location and Groundwater Flow Plan
Table 1 – Monitoring Well Construction and Gauging Details
Attachment A – Photographic Log
Attachment B – Laboratory Analytical Report

Cc: Michael McCluskey, NHDES
Frank Dagostino, Site Owner



USGS QUADRANGE INFORMATION: EXETER, NEW HAMPSHIRE 7.5X15 MINUTE SERIES

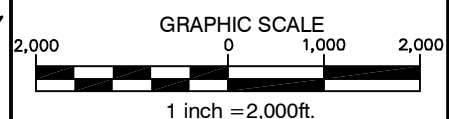
DRAWN BY: WTE DATE: 2/1/2013
 CHECKED BY: JSS/RSV PROJECT: 11001122

FIGURE 1 - SITE LOCATION PLAN



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 WESTBROOK, MAINE 04092
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 FAX: 207.887.1051
 WWW.CREDERELLC.COM

DAGOSTINO ROSE FARM PROPERTY
 OAK STREET EXTENSION
 EXETER, NEW HAMPSHIRE
 NHDES# 201203003



SITE

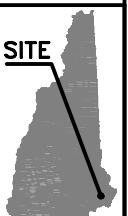


Table 1
Monitoring Well Construction and Gauging Details
Dagostino Rose Farm, NHDES Site #201203003
Oak Street Extension, Exeter, New Hampshire

Monitoring Well ID	Approx. Screened Interval^ (feet bgs)	Depth to Bottom (feet*)	Top of Riser Elevation (AMSL)	Gauging Date	Depth to Water* (feet)	Water Surface Elevation (feet AMSL)
CA-MW-1	17-27	27.41	92.01	9/23/2016	Dry	NA
CA-MW-2	10-20	19.96	86.76	9/23/2016	12.19	74.57
CA-MW-3	7-17	17.31	98.96	9/23/2016	12.88	86.08
CA-MW-4	17-27	27.18	93.14	9/23/2016	19.88	73.26
CA-MW-5	7-17	17.35	100.00	9/23/2016	13.50	86.50
CA-MW-100	5-15	14.35	101.63	9/23/2016	13.46	88.17
CA-MW-101	2-12	11.65	91.34	9/23/2016	6.33	85.01
CA-MW-102	5-15	14.45	94.60	9/23/2016	13.72	80.88
CA-MW-103	10-20	20.35	87.60	9/23/2016	14.37	73.23

*Depths measured from top of riser

^Depth inferred during well installation

bgs - below ground surface

AMSL - above mean sea level

MW-5- Arbitrary Bench Mark set to 100' AMSL

Attachment A Photographic Log



**Photographic Log
Dagostino Rose Farm
Oak Street Extension, Exeter, New Hampshire**



1. Location of culvert to west of Packing House.



2. View of interior of culvert. Note smaller diameter pipe inside.

Attachment B

Laboratory Analytical Report



Laboratory Report



Absolute Resource *associates*

124 Heritage Avenue Portsmouth NH 03801

Judd Newcomb
CREDERE Associates
776 Main Street
Westbrook, ME 04092

PO Number: None
Job ID: 37931
Date Received: 9/23/16

Project: Dagostino

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

A handwritten signature in black ink, appearing to read "Sue Sylvester" followed by "(for)".

Sue Sylvester
Principal, General Manager

Date of Approval: 10/4/2016
Total number of pages: 8

Absolute Resource Associates Certifications

New Hampshire 1732
Maine NH903

Massachusetts M-NH902

Project ID: Dagostino

Lab ID: 37931

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
CA-SS-105A	Solid	9/23/2016 9:38	37931-001	Pesticides in soil by 8081 Solid Digestion for ICP Analysis Lead in solids by 6020 Percent Dry Matter for Sample Calc by SM2540B,G

Project ID: Dagostino

Job ID: 37931

Sample#: 37931-001

Sample ID: CA-SS-105A

Matrix: Solid Percent Dry: 81.2% Results expressed on a dry weight basis.

Sampled: 9/23/16 9:38

Parameter	Result	Reporting	Units	Instr Dil'n	Analyst	Prep	Batch	Analysis		Reference
		Limit				Date		Date	Time	
4,4'-DDT	< 0.05	0.05	ug/g	1	JZL	9/28/16	9077	9/29/16	17:35	SW3546/8081B
Surrogate Recovery		Limits								
tetrachloro-m-xylene SUR	78	30-150	%	1	JZL	9/28/16	9077	9/29/16	17:35	SW3546/8081B
decachlorobiphenyl SUR	69	30-150	%	1	JZL	9/28/16	9077	9/29/16	17:35	SW3546/8081B

Sample#: 37931-001

Sample ID: CA-SS-105A

Matrix: Solid Percent Dry: 81.2% Results expressed on a dry weight basis.

Sampled: 9/23/16 9:38

Parameter	Result	Reporting	Units	Instr Dil'n	Analyst	Prep	Batch	Analysis		Reference
		Limit				Date		Date	Time	
Lead	38	2.9	ug/g	5	AM	9/29/16	9079	9/29/16	20:43	SW3051A6020A

Quality Control Report



124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com



Case Narrative

Lab # 37931

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 3 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.

Calibration

No exceptions noted.

Method Blank

No exceptions noted.

Surrogate Recoveries

No exceptions noted.

Laboratory Control Sample Results

No exceptions noted.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

Reporting Limits: Dilutions performed during the analysis are noted on the result pages.

No other exceptions noted.

- QC Report -

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits	RPD	RPD Limit
SW3546/8081B	BLK9077	alpha-BHC	<	0.040	ug/g					
		beta-BHC	<	0.040	ug/g					
		delta-BHC	<	0.040	ug/g					
		gamma-BHC (Lindane)	<	0.040	ug/g					
		Heptachlor	<	0.040	ug/g					
		Aldrin	<	0.040	ug/g					
		Heptachlor Epoxide	<	0.040	ug/g					
		Endosulfan I	<	0.040	ug/g					
		Dieldrin	<	0.040	ug/g					
		4,4'-DDE	<	0.040	ug/g					
		Endrin	<	0.040	ug/g					
		Endosulfan II	<	0.040	ug/g					
		4,4'-DDD	<	0.040	ug/g					
		Endosulfan Sulfate	<	0.040	ug/g					
		4,4'-DDT	<	0.040	ug/g					
		Methoxychlor	<	0.040	ug/g					
		Endrin Ketone	<	0.040	ug/g					
		Endrin Aldehyde	<	0.040	ug/g					
		alpha-Chlordane	<	0.040	ug/g					
		gamma-Chlordane	<	0.040	ug/g					
		Toxaphene	<	0.40	ug/g					
		tetrachloro-m-xylene SUR		86	%			30	150	
		decachlorobiphenyl SUR		81	%			30	150	
SW3546/8081B	LCS9077	alpha-BHC		0.35	ug/g	0.4	89	40	140	
		beta-BHC		0.34	ug/g	0.4	86	40	140	
		delta-BHC		0.33	ug/g	0.4	83	40	140	
		gamma-BHC (Lindane)		0.35	ug/g	0.4	88	40	140	
		Heptachlor		0.32	ug/g	0.4	81	40	140	
		Aldrin		0.33	ug/g	0.4	82	40	140	
		Heptachlor Epoxide		0.36	ug/g	0.4	91	40	140	
		Endosulfan I		0.34	ug/g	0.4	86	40	140	
		Dieldrin		0.31	ug/g	0.4	77	40	140	
		4,4'-DDE		0.29	ug/g	0.4	74	40	140	
		Endrin		0.35	ug/g	0.4	87	40	140	
		Endosulfan II		0.31	ug/g	0.4	78	40	140	
		4,4'-DDD		0.30	ug/g	0.4	75	40	140	
		Endosulfan Sulfate		0.31	ug/g	0.4	77	40	140	
		4,4'-DDT		0.31	ug/g	0.4	78	40	140	
		Methoxychlor		0.30	ug/g	0.4	74	40	140	
		Endrin Ketone		0.32	ug/g	0.4	80	40	140	
		Endrin Aldehyde		0.28	ug/g	0.4	71	40	140	
		alpha-Chlordane		0.42	ug/g	0.4	105	40	140	
		gamma-Chlordane		0.31	ug/g	0.4	78	40	140	
		Toxaphene	<	0.40	ug/g					
		tetrachloro-m-xylene SUR		87	%			30	150	
		decachlorobiphenyl SUR		81	%			30	150	

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R	Limits	RPD	RPD Limit
SW3051A6020A	BLK9079	Lead		< 2.5	ug/g					
SW3051A6020A	CRM9079	Lead		4820	ug/g	5110		3750 6470		
SW3051A6020A	CRMD9079	Lead		4820	ug/g	5110		3750 6470	0	35
SW3051A6020A	DUP9079	Lead	37964-001	14	ug/g				10	20
SW3051A6020A	MS9079	Lead	37964-001	270	ug/g	282	89	75 125		

