

**FINAL
COMPLETION REPORT
FOR
UNDERGROUND INJECTION CONTROL (UIC)
FOR
SUMP CLOSURE AT FORMER BUILDING 59
AT
Naval Station Newport
GOULD ISLAND
NEWPORT, RHODE ISLAND**

Prepared For:

**ENGINEERING FIELD ACTIVITY – NORTHEAST
NAVAL FACILITIES ENGINEERING COMMAND
10 INDUSTRIAL HIGHWAY
LESTER, PENNSYLVANIA 19113**

**Contract No. N62472-99-D-0032
Contract Task Order No. 069**

February 13, 2003

Prepared by:



**FOSTER WHEELER ENVIRONMENTAL CORPORATION
One Oxford Valley, Suite 200
LANGHORNE, PA 19047-1829**

Revision
0

Date
February 13, 2003

Prepared by
A. Boudreau

Approved by
R. Woodworth

Pages Affected
All

**FINAL
 COMPLETION REPORT
 FOR
 UNDERGROUND INJECTION CONTROL (UIC)
 FOR
 SUMP CLOSURE AT FORMER BUILDING 59
 AT
 NAVAL STATION NEWPORT
 GOULD ISLAND
 NEWPORT, RHODE ISLAND**

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1.0 INTRODUCTION

Foster Wheeler Environmental Corporation (FWENC) was contracted by the U.S. Navy Engineering Field Activity Northeast (EFANE) to close the sump located within Building 59 in accordance with the RIDEM Underground Injection Control (UIC) program at the Gould Island Site located in Newport, Rhode Island. Building 59 was divided into a transformer vault side and a switch house side. The sump was located below the switch house side of the building. This Completion Report has been prepared to satisfy the requirements of the Remedial Action Contract (RAC) No. N62472-99-D-0032, Contract Task Order (CTO) 069.

2.0 SITE DESCRIPTION

Gould Island is located in Narragansett Bay approximately 1.5 miles from Naval Station Newport. As described in previous Work Plans, FWENC performed asbestos abatement, hazardous waste removal activities, demolition of designated buildings, and removal of designated building slabs and foundations on Gould Island. A Site Location Map is included on Figure 2-1.

During the summer of 2001, demolition of various buildings on Gould Island was initiated. Upon removal of the steel floor decking which covered the concrete floor slab for the Switch House side of Building 59, a basement area was discovered. Upon removal of the concrete floor slab, the basement area was observed to have a concrete floor with a sump area which contained an 18-inch by 18-inch opening to the gravel below which may have been used as a drywell.

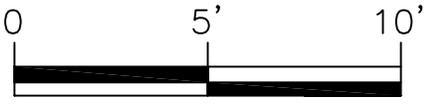
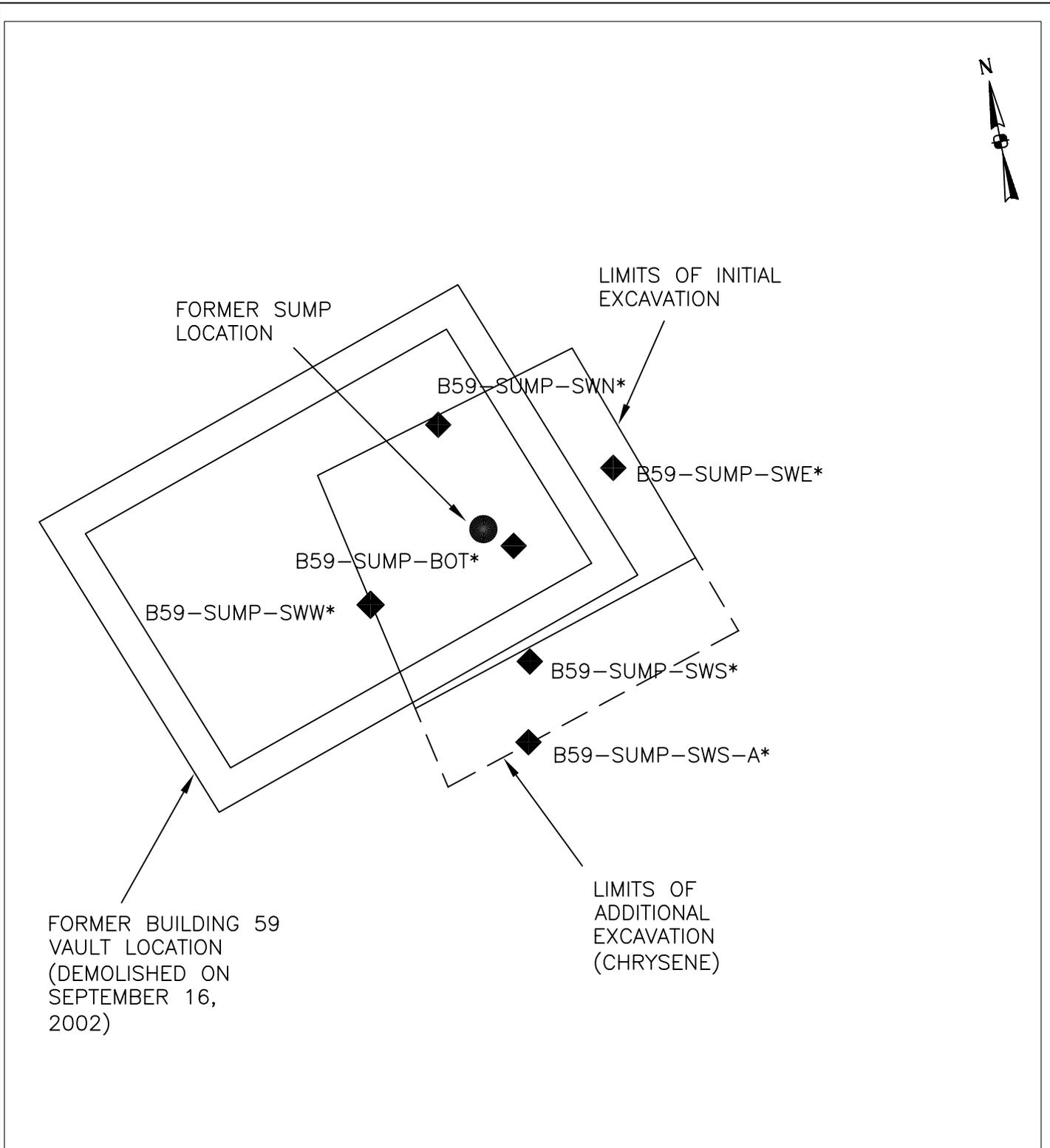
3.0 SITE WORK

The UIC closure began on September 16, 2002 in accordance with the Closure Application Form submitted to the UIC program on August 9, 2002. A copy of the Closure Application is included in Appendix A.

3.1 UIC Closure

Based upon the results of the Phase I Sampling and data from previous remedial actions at Building 59, it was determined that it would be necessary to remove the existing foundation as contaminated waste as part of the August, 2002 Work Plan for Phase II – PCB Contaminated Soils and Concrete Remediation. Prior to the removal of the existing foundation, FWENC initiated closure of the sump located below the switch house side of the building in accordance with the RIDEM UIC program. The closure of the UIC was conducted so as to allow for regulatory oversight by RIDEM's UIC program.

Initially, FWENC surveyed the current location of the sump opening using a Rhode Island Licensed professional surveyor to document the exact location. FWENC then demolished the existing Building 59 foundation and basement floor slab on September 16, 2002 prior to any UIC closure activities. The debris was sent off-site for proper disposal under the on-going scope of work with the Navy. Once the foundation and basement floor slab had been removed, the surveyor relocated the drywell position. The location of the UIC closure is shown on Figure 3-1. Prior to any excavation of the sump, the Navy notified RIDEM. A RIDEM representative as on-site during the UIC closure and observed the removal.



SCALE IN FEET

- ◆ Confirmatory Sample Location
- * Confirmatory Results can be found in Appendix B

NAVAL UNDERWATER SYSTEMS CENTER
 GOULD ISLAND
 NEWPORT, RHODE ISLAND

Figure 3-1
 Confirmatory Sample Locations



FWENC excavated a 10-foot x 10-foot x 3-foot area (approximately 17 tons) around the former drywell location and placed the material in a sealed roll-off for off-site disposal. Following excavation, FWENC performed confirmation sampling of the excavation for Total Petroleum Hydrocarbons (TPH), Volatile Organic Compounds (VOCs) and Semi-Volatile Compounds (SVOCs). FWENC sampled the four sidewalls at the vertical midpoint and the center of the base of the excavation. The confirmatory results were received on September 23, 2002 and are included in Appendix B.

Based upon the confirmatory results, one compound, Chrysene, was detected above the State of Rhode Island Residential Direct Exposure Criteria. The State of Rhode Island Residential Direct Exposure Criteria is included in Appendix C. At the location of the elevated level of Chrysene, FWENC re-excavated on September 25, 2002. Following re-excavation, confirmatory sampling for Chrysene was performed and the results did not exceed the State of Rhode Island Residential Direct Exposure Criteria. The confirmatory results were received on September 26, 2002 and are included in Appendix B.

During the excavation, a pipe was encountered on the south side of the sump that appeared to be flowing (dripping) water. FWENC traced the pipe on October 2, 2002 using the on-site excavator. The entire length of pipe was exposed beginning at the Building 59 excavation and terminating at the former Deep Well House (Building 58). FWENC did confirm the location of the pipe by accessing the basement of the Deep Well House to visually observe the same pipe from the Building 59 excavation. A photographic log of this event is included in Appendix D.

4.0 WASTE STREAMS

All material excavated from the UIC closure was removed and placed in two sealed roll-offs. The roll-offs were transported and disposed of at Chemical Waste Management (CWM) in Model City, New York on October 16, 2002 and October 18, 2002. A total of 22.11 tons of soil was disposed of at CWM. The waste manifests for the disposal material is included in Appendix E.

Appendix A

UIC Closure Application Form

CONTRACT NO. N62472-99-D-0032	CONTRACT TASK ORDER NO. 0069	ACTIVITY LOCATION Gould Island - Newport, RI
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PROJECT TITLE:
PCB Characterization and Removal - Gould Island

FROM: Foster Wheeler Environmental Corp.: Program QC Manager Thomas Kelly	DATE August 9, 2002
TO: C. Davis (E-Copy and Hard Copy)	DATE August 9, 2002

- THE CONTRACTOR SUBMITTALS LISTED BELOW ARE FORWARDED FOR YOUR REVIEW AND RECOMMENDATIONS.
 - APPLY APPROPRIATE STAMP IMPRINT TO EACH SUBMITTAL AND INDICATE REVIEW COMMENTS, AS REQUIRED.
 - RETAIN ONE (1) COPY OF THIS TRANSMITTAL FORM AND RETURN REMAINING COPIES WITH REVIEWED SUBMITTALS TO ROICC.
- THESE SUBMITTALS SHOULD BE RETURNED TO THIS OFFICE BY _____
- _____

E-COPY TO: NSNPT: M. Griffin
 HARD COPY TO: NSNPT: M. Griffin (2 Copies)

ROICC RPM CSO

Thomas Kelly AUGUST 9, 2002
 SIGNATURE AND DATE

FROM: DESIGNER	DATE
TO: ROICC	DATE

- THE SUBMITTALS LISTED BELOW HAVE BEEN REVIEWED AND ARE RETURNED, WITH ACTION TAKEN AS INDICATED.
- _____

COPY TO:
 ROICC DESIGNER

SIGNATURE AND DATE

FROM: ROICC	DATE
TO: CONTRACTOR	DATE

- THE SUBMITTALS LISTED BELOW HAVE BEEN REVIEWED AND ARE APPROVED/DISAPPROVED AS SHOWN BELOW AND ON EACH STAMP IMPRINT.

COPY TO:
 ROICC OTHER

FOR COMMANDING OFFICER, ENGINEERING FIELD DATE
 ACTIVITY NORTHEAST - NAVAL FACILITIES ENGINEERING
 COMMAND

ITEM NO.	SUBMITTAL DESCRIPTION	PREPARED/SUBMITTED BY	APPROVED	DISAPPROVED	REMARKS
1	SD-08, Statements; UIC Permit Application for Sump Closure at Former Building 59	Thomas Kelly			

**RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
UNDERGROUND INJECTION CONTROL PROGRAM
235 PROMENADE STREET
PROVIDENCE, RI 02908-5767
(401) 222-6820**

PERMANENT CLOSURE APPLICATION FOR SHALLOW INJECTION WELL FACILITIES

A: Date of application: _____ UIC Facility I.D. NONE

B: Proposed date of shallow injection well closure: September 16, 2002

C: Facility Name: Former Building 59

Street Address: Gould Island

City/State: Newport, RI 02841 Attn: R.A. Cooper, USN, Commanding Officer (401) 841-3715

D: Facility Owner: Former Building 59

Street Address: Gould Island

City/State: Newport, RI 02841 Attn: R.A. Cooper, USN, Commanding Officer (401) 841-3715

E: Facility Operator: NONE. Facility has been abandoned since early 1970's

Street Address: _____

City/Town/State: _____

F: **FIRM/CONTRACTOR TO PERFORM SHALLOW INJECTION WELL CLOSURE WORK**

Name: Foster Wheeler Environmental Corporation

Address: One Oxford Valley, Suite 200, Langhorne, PA. 19047

Contact Person/Phone Number: Rick Woodworth (215) 702-4049

G: **FIRM/CONSULTANT TO PERFORM WELL CLOSURE ACTIVITIES (check one)**

Professional Engineer Certified Professional Geologist

Other; A statement of qualifications must be submitted with this application.

Name: Foster Wheeler Environmental Corporation

Address: 133 Federal Street, 6th Floor, Boston, MA 02110

Contact Person/ Phone Number: Susan Leach (617) 457-8240

H: DESCRIPTION OF SHALLOW INJECTION WELL SYSTEM TO BE CLOSED

1. Type of shallow injection well (drywell, galley, septic system, etc.):

Drywell

2. Size of shallow injection well system (dimension and capacity, if applicable):

18" x 18" with gravel base

3. Nature of all past and present fluids discharged to the shallow injection well:

During operation of the facility, between the early 1940's to the early 1970's, the nature of any fluids discharged to the sump is unknown. It is believed that nothing has been discharged to the sump since the early 1970's

4. Type of water supply at the facility (public well, private well, municipal, etc.):

NONE (a well is present, but not in use)

5. Date of shallow injection well construction: 1940's time frame

6. Average/maximum volume of wastewater discharged to the shallow injection well per day:

UNKNOWN

7. Describe any proposed test(s) or measurement(s) to be made: VOC 8260,

SVOC 8270 AND TPH 8100 M

8. Nature and approximate quantity of backfill material to be used in closure:

Clean 3" Minus Bank Run Gravel

I. In addition to the above description the following must be submitted:

1. An outline of the closure procedure and activities to be undertaken (i.e., field screening, sampling, contaminated soil disposal, etc.);

The Gould Island complex of facilities was constructed in the early 1940's for the production and testing of torpedoes. The majority of the complex was abandoned in the early 1970s. During the summer of 2001, demolition of various buildings on Gould Island was initiated. Upon removal of the steel floor decking which covered the floor slab for the Switch House side of Building 59, a basement area was discovered. Upon removal of the concrete floor slab, the basement area was observed to have a concrete floor with a sump area which an 18" by 18" opening to the gravel below.

Foster Wheeler (FWENC) will first survey the current location of the sump opening using a Rhode Island Licensed professional surveyor to document the exact location. FWENC will then demolish the existing Building 59 foundation and basement floor slab, the debris will be sent off site for proper disposal under the ongoing scope of work with the Navy. Once the building has been removed, the surveyor will relocate the drywell position. Prior to any excavation, the Navy

will notify RIDEM, such that they may choose to be present during the proposed removal actions. FWENC will excavate a 10' x 10' x 3' area (approximately 17 tons) around the former drywell location, place the material in a sealed roll off for waste characterization sampling and eventual off site disposal. FWENC will then perform post-x sampling of the excavation for TPH, VOC's and SVOC'S. FWENC will sample the four sidewalls at the vertical midpoint and the center of the base of the excavation. If the results are below the RIDEM guidelines, FWENC will backfill the excavation with clean bank run gravel. If elevated post-x results are received, the excavation will be extended until the results are below the clean up criteria.

2. A site plan of the facility with the following:

SEE ATTACHED DRAWING

- (a) location of buildings, property lines, and abutting street with nearest utility pole number;

SEE ATTACHED DRAWING

- (b) location of shallow injection well(s) and all drains, drain lines, drywells, cesspools, or septic systems at the facility;

NOT APPLICABLE

- (c) location of drinking water well(s) on the property, and any neighboring drinking water wells of public water supplies within 500 feet of the shallow injection well;

NOT APPLICABLE

- (d) plat and lot number (from local tax assessor record maps);

NOT APPLICABLE (GOVERNMENT PROPERTY)

- (e) location of monitoring wells (if applicable); and

Monitoring wells do exist (SEE ATTACHED DRAWING), although they pertain to another removal action on the Island.

- (f) a locus map with a north arrow;

SEE ATTACHED DRAWING

3. Proposal for an acceptable alternative for disposal of waste fluids, if the discharge process is to continue. The alternative must comply with all state or federal regulations such that no violation or future violation of the groundwater quality standards, in accordance with the Rules and Regulations for Groundwater Quality, August 1996 and amendments thereto, will result;

NONE; NO LONGER IN USE

4. A written copy of the analytical data from a sample of soil or sludge from the final discharge point of the shallow injection well, tested for the appropriate parameters, as required by the Department (for closure in-place);

NO DATA PRESENT

5. Identification of the sample location on the lab reporting form (if applicable);

Excavation limits and post-x sample locations will be surveyed and provided once the removal actions are complete. Analytics Environmental Laboratory of Portsmouth, NH will perform all sample analysis.

6. Any proposed remediation activities (if applicable);

SEE SECTION I, No. 1 RESPONSE

7. A written copy of the analytical test results of any manifested liquid and/or sludge from the shallow injection well.

NO DATA PRESENT

J. Have these shallow injection wells ever been used to dispose of hazardous materials?

_____ YES _____ NO X UNKNOWN

If yes, provide data (attach information if necessary):

K. After the closure(s) have been completed on the well(s) listed, will there be any shallow

Injection wells remaining in existence at this facility? _____ YES X NO

L. Will any new shallow injection well(s) be installed on the site? _____ YES X NO

NOTE:

A UIC Closure Report summarizing all activities performed to complete closure of the shallow injection well system(s) must be submitted to the UIC Program within 30 days of the actual date of closure. The UIC Closure Report must also include analytical testing results from closure confirmatory sampling and any manifests/bills of lading for the disposal of all contaminated soil, sludge, and wastewater generated by UIC closure activities.

CERTIFICATION BY FACILITY OWNER

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME OF OWNER: (please print) R.A. Cooper, United States Navy

SIGNATURE: _____ TITLE: Commanding Officer

ADDRESS: Newport, RI 02841 TELEPHONE: (401) 841 - 3715

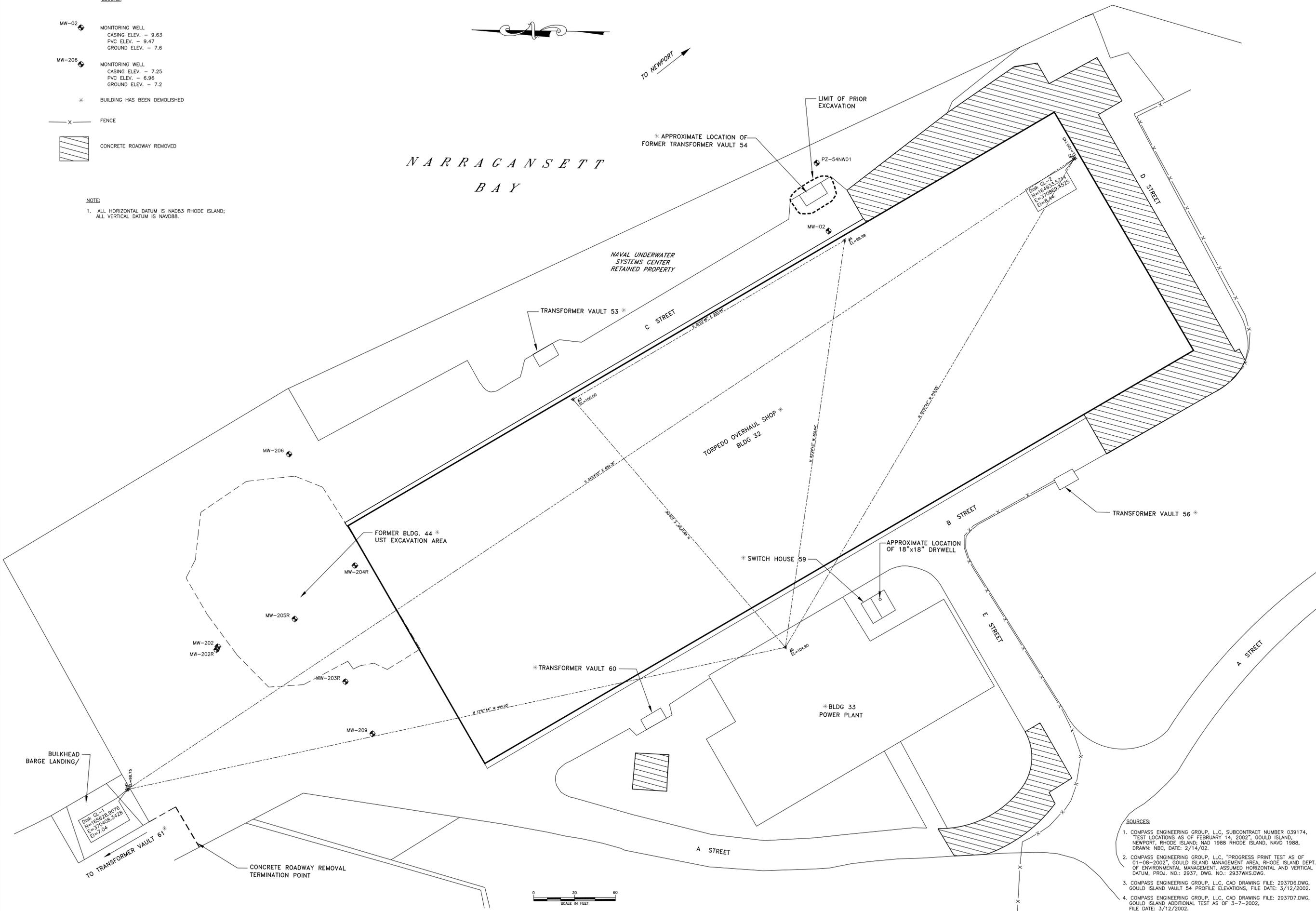
LEGEND:

- MW-02 MONITORING WELL
CASING ELEV. - 9.63
PVC ELEV. - 9.47
GROUND ELEV. - 7.6
- MW-206 MONITORING WELL
CASING ELEV. - 7.25
PVC ELEV. - 6.96
GROUND ELEV. - 7.2
- * BUILDING HAS BEEN DEMOLISHED
- X- FENCE
- CONCRETE ROADWAY REMOVED

NOTE:

1. ALL HORIZONTAL DATUM IS NAD83 RHODE ISLAND;
ALL VERTICAL DATUM IS NAVD88.

NARRAGANSETT BAY



- SOURCES:
1. COMPASS ENGINEERING GROUP, LLC, SUBCONTRACT NUMBER 039174, "TEST LOCATIONS AS OF FEBRUARY 14, 2002", GOULD ISLAND, NEWPORT, RHODE ISLAND; NAD 1988 RHODE ISLAND, NAVD 1988, DRAWN: NBC, DATE: 2/14/02.
 2. COMPASS ENGINEERING GROUP, LLC, "PROGRESS PRINT TEST AS OF 01-08-2002", GOULD ISLAND MANAGEMENT AREA, RHODE ISLAND DEPT. OF ENVIRONMENTAL MANAGEMENT, ASSUMED HORIZONTAL AND VERTICAL DATUM, PROJ. NO.: 2937, DWG. NO.: 2937WKS.DWG.
 3. COMPASS ENGINEERING GROUP, LLC, CAD DRAWING FILE: 2937D6.DWG, GOULD ISLAND VAULT 54 PROFILE ELEVATIONS, FILE DATE: 3/12/2002.
 4. COMPASS ENGINEERING GROUP, LLC, CAD DRAWING FILE: 2937D7.DWG, GOULD ISLAND ADDITIONAL TEST AS OF 3-7-2002, FILE DATE: 3/12/2002.
 5. COMPASS ENGINEERING GROUP, LLC, CAD DRAWING FILE: 2937D8.DWG, GOULD ISLAND BUILDING AND VAULTS, FILE DATE: 3/13/2002.

CAD FILE: NAVYRAC\GOULD ISLAND\GOULD_UIC.DWG

DEPARTMENT OF THE NAVY	NAVAL FACILITIES ENGINEERING COMMAND	ENGINEERING FIELD ACTIVITY - NORTHEAST	GOULD ISLAND, NEWPORT, RHODE ISLAND	SITE PLAN		DATE	
SEAL AREA	LESTER	NAVY	NAVY	NAVY	NAVY	NAVY	NAVY
SAT TO	DATE	CODE ID. NO.	SCALE :	AS SHOWN	80091		
		CONSTR. CONTR. NO.	N62472-99-D-0032				
		NAVYAC DRAWING NO.					
SHEET	1	OF	10				
SIZE:	D	DIS. SH. NO.	FIGURE 1				
DATE CREATED LATEST CHANGE							

Appendix B

Confirmatory Sample Results

September 30, 2002

Mr. Rick Woodworth
Foster Wheeler Environmental Corporation
One Oxford Valley Suite 200
2300 Lincoln Highway
Langhorne, PA 19047-1829

**RE: Analytical Results Case Narrative
Analytics # 48288
Navy - EFA-NE RAC II
FWEC Project # N62472-99-D-0032
Gould Island PCB Remediation
Naval Station Newport
Middletown, RI**

Dear Mr. Woodworth;

Enclosed please find the analytical results for samples submitted for the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

The samples were analyzed for PCBs by EPA Method 8082, VOCs by EPA Method 8260, SVOCs by EPA Method 8270 and TPH by EPA Method 8100M according to the guidelines established in the Sampling Plan for the Characterization of PCB Contaminated Soils and Concrete, Nov. 21, 2001.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level 3 data package has been assembled in the following order:

- Case Narrative/Non-Conformance Summary
- Sample Log Sheet - Cover Page
- PCB Form 1 Data Sheet for Samples and Blanks
- PCB Form 10 Confirmation Results Form (if required)
- PCB Form 2 Surrogate Recoveries
- PCB Form 3 MS/MSD (LCS) Recoveries
- PCB Form 4 Method Blank Summary (equiv.) GC/MS Logbook Sheets
- PCB Form 6 Initial Calibration Data
- PCB Form 7 Continuing Calibration Check
- PCB Form 8 System Monitoring Compound RT Summary
- VOC Form I Data Sheet for Samples and Blanks
- VOC Form 2 Surrogate Recoveries
- VOC Form 3 MS/MSD (LCS) Recoveries
- VOC Form 4 Method Blank Summary (equiv.) GC/MS Logbook Sheets
- VOC Form 5 BFB Tune Summary
- VOC Form 6 Initial Calibration Data
- VOC Form 7 Continuing Calibration Check
- VOC Form 8 Internal Standard Area and RT Summary

SVOC Form I Data Sheet for Samples and Blanks
SVOC Form 2 Surrogate Recoveries
SVOC Form 3 MS/MSD (LCS) Recoveries
SVOC Form 4 Method Blank Summary (equiv.) GC/MS Logbook Sheets
SVOC Form 5 DFTPP Tune Summary
SVOC Form 6 Initial Calibration Data
SVOC Form 7 Continuing Calibration Check
SVOC Form 8 Internal Standard Area and RT Summary
TPH Form I Data Sheet for Samples and Blanks
Chromatograms
TPH Form 2 Surrogate Recoveries
TPH Form 3 MS/MSD (LCS) Recoveries
TPH Form 4 Method Blank Summary (equiv.) GC/MS Logbook Sheets
TPH Form 6 Initial Calibration Data
TPH Form 7 Continuing Calibration Check

Chain of Custody (COC) Forms and Sample Receipt Checklist

QC NON CONFORMANCE SUMMARY

Sample Receipt:

No QC deviations

PCBs by EPA Method 8082:

No QC deviations.

VOCs by EPA Method 8260:

Dichlorodifluoromethane was outside the control limits of 60-140% recovery in the LCS/LCSD analyzed 09/18/02 at 59% and 58% respectively (see Form 3). Fifty-nine compounds were outside the control limits for % recovery and 65 RPD's were outside the control limits. (see Form 3). The MSD was collected in a non AEL container and some methanol evaporation is suspected. The samples in this SDG did not have any compounds detected and the results were reported without qualification.

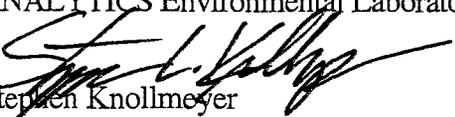
SVOCs by EPA Method 8270:

Benzidine was above the control limits in the LCS/LCSD and MS/MSD analyzed on sample 48288-4 (see Form 3). Several RPDs were also above the control limits. Some samples in this SDG had PAH's detected and the LCS/LCSD were in control for these compounds.

TPH by EPA Method 8100M:

No QC deviations.

Sincerely,
ANALYTICS Environmental Laboratory, LLC


Stephen Knollmeyer
Laboratory Director



environmental
laboratory LLC

195 Commerce Way Suite E
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906
analytics@analyticlab.com

Mr. Rick Woodworth
Foster Wheeler Environmental Corp.
2300 Lincoln Highway East One Oxford
Valley, Suite 200
Langhorne PA 19047

Report Number: 48288

Revision: Rev. 0

Re: Gould Island PCB Remediation

CTO 69

Enclosed are the results of the analyses on your sample(s). Samples were received on 17 September 2002 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

<u>Lab Number</u>	<u>Sample Date</u>	<u>Station Location</u>	<u>Analysis</u>	<u>Comments</u>
48288-1	09/17/02	GIPII-B59-SUMP-SWN	EPA 8082 (PCBs only)	
	09/17/02	GIPII-B59-SUMP-SWN	EPA 8100 - TPH	
	09/17/02	GIPII-B59-SUMP-SWN	EPA 8260 Volatile Organics	
	09/17/02	GIPII-B59-SUMP-SWN	EPA 8270 Acid/Base Neutrals	
48288-2	09/17/02	GIPII-B59-SUMP-SWE	EPA 8082 (PCBs only)	
	09/17/02	GIPII-B59-SUMP-SWE	EPA 8100 - TPH	
	09/17/02	GIPII-B59-SUMP-SWE	EPA 8260 Volatile Organics	
	09/17/02	GIPII-B59-SUMP-SWE	EPA 8270 Acid/Base Neutrals	
48288-3	09/17/02	GIPII-B59-SUMP-SWS	EPA 8082 (PCBs only)	
	09/17/02	GIPII-B59-SUMP-SWS	EPA 8100 - TPH	
	09/17/02	GIPII-B59-SUMP-SWS	EPA 8260 Volatile Organics	
	09/17/02	GIPII-B59-SUMP-SWS	EPA 8270 Acid/Base Neutrals	
48288-4	09/17/02	GIPII-B59-SUMP-SWW	EPA 8082 (PCBs only)	
	09/17/02	GIPII-B59-SUMP-SWW	EPA 8100 - TPH	
	09/17/02	GIPII-B59-SUMP-SWW	EPA 8260 Volatile Organics	
	09/17/02	GIPII-B59-SUMP-SWW	EPA 8270 Acid/Base Neutrals	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature *Stephen L. Knollmeyer*
Stephen L. Knollmeyer Lab. Director

Date 09/22/02

This report shall not be reproduced, except in full, without the written consent of Analytics Environmental Laboratory, LLC.

Mr. Rick Woodworth
Foster Wheeler Environmental Corp.
2300 Lincoln Highway East One Oxford
Valley, Suite 200
Langhorne PA 19047

Report Number: 48288

Revision: Rev. 0

Re: Gould Island PCB Remediation

CTO 69

Enclosed are the results of the analyses on your sample(s). Samples were received on 17 September 2002 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

<u>Lab Number</u>	<u>Sample Date</u>	<u>Station Location</u>	<u>Analysis</u>	<u>Comments</u>
48288-5	09/17/02	GIPII-B59-SUMP-BOT	Electronic Data Deliverable	
	09/17/02	GIPII-B59-SUMP-BOT	EPA 8082 (PCBs only)	
	09/17/02	GIPII-B59-SUMP-BOT	EPA 8100 - TPH	
	09/17/02	GIPII-B59-SUMP-BOT	EPA 8260 Volatile Organics	
	09/17/02	GIPII-B59-SUMP-BOT	EPA 8270 Acid/Base Neutrals	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature

Stephen L. Knollmeyer
Stephen L. Knollmeyer Lab. Director

Date

09/22/02

This report shall not be reproduced, except in full, without the written consent of Analytics Environmental Laboratory, LLC.

Mr. Rick Woodworth
Foster Wheeler Environmental Corp.
2300 Lincoln Highway East One Oxford Valley,
Suite 200
Langhorne PA 19047

September 19, 2002

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-SWN

Lab Sample ID: 48288-1
Matrix: Solid
Percent Solid: 83
Dilution Factor: 23
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Extraction Date: 09/17/02
Analysis Date: 09/19/02

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g}/\text{kg}$	Results $\mu\text{g}/\text{kg}$
PCB-1016	350	U
PCB-1221	350	U
PCB-1232	350	U
PCB-1242	350	U
PCB-1248	350	U
PCB-1254	350	U
PCB-1260	350	6040

<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	*	%
Decachlorobiphenyl	*	%

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3545.

COMMENTS: Results are expressed on a dry weight basis. * The surrogates were diluted out.

Melina A. Galli

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September 22, 2002

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-SWN

Lab Sample ID: 48288-1
Matrix: Solid
Percent Solid: 83
Dilution Factor: 87
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Analysis Date: 09/19/02

ANALYTICAL RESULTS VOLATILE ORGANICS					
COMPOUND	Quantitation Limit µg/kg	Result µg/kg	COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Benzene	87	U	1,3-Dichloropropane	87	U
Bromobenzene	87	U	cis-1,3-Dichloropropene	87	U
Bromochloromethane	87	U	trans-1,3-Dichloropropene	87	U
Bromodichloromethane	65	U	2,2-Dichloropropane	87	U
Bromoform	65	U	1,1-Dichloropropene	87	U
Bromomethane	87	U	Ethylbenzene	87	U
n-butylbenzene	87	U	Hexachlorobutadiene	87	U
sec-butylbenzene	87	U	Isopropylbenzene	87	U
tert-butylbenzene	87	U	p-isopropyltoluene	87	U
Carbon Tetrachloride	87	U	Methylene Chloride	430	U
Chlorobenzene	87	U	Methyl-tert-butyl ether	87	U
Chloroethane	87	U	Naphthalene	87	U
Chloroform	65	U	n-Propylbenzene	87	U
Chloromethane	87	U	Styrene	87	U
2-Chlorotoluene	87	U	1,1,1,2-Tetrachloroethane	87	U
4-Chlorotoluene	87	U	1,1,2,2-Tetrachloroethane	65	U
Dibromochloromethane	65	U	Tetrachloroethene	87	U
1,2-Dibromo-3-chloropropane	87	U	Toluene	87	U
1,2-Dibromoethane	65	U	1,2,3-Trichlorobenzene	87	U
Dibromomethane	87	U	1,2,4-Trichlorobenzene	87	U
1,2-Dichlorobenzene	87	U	1,1,1-Trichloroethane	87	U
1,3-Dichlorobenzene	87	U	1,1,2-Trichloroethane	65	U
1,4-Dichlorobenzene	87	U	Trichloroethene	87	U
Dichlorodifluoromethane	87	U	Trichlorofluoromethane	87	U
1,1-Dichloroethane	87	U	1,2,3-Trichloropropane	87	U
1,2-Dichloroethane	65	U	1,2,4-Trimethylbenzene	87	U
1,1-Dichloroethene	65	U	1,3,5-Trimethylbenzene	87	U
cis-1,2-Dichloroethene	87	U	Vinyl Chloride	87	U
trans-1,2-Dichloroethene	87	U	o-Xylene	87	U
1,2-Dichloropropane	65	U	m,p-Xylene	87	U
Acetone	870	U	Diethyl ether	87	U
Carbon Disulfide	87	U	2-Hexanone	870	U
Tetrahydrofuran	430	U	Methyl isobutyl ketone	870	U
Methyl ethyl ketone	870	U	Di-isopropyl ether	87	U
t-Butyl alcohol	3500	U	Ethyl t-butyl ether	87	U
t-Amyl methyl ether	87	U			
Surrogate Standard Recovery					
d4-1,2-Dichloroethane	103 %	d8-Toluene	106 %	Bromofluorobenzene	106 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS: Results are expressed on a dry weight basis.

Sample collection and analysis in accordance with SW-846 method 5035. Sample did not meet method acceptance criteria for 1:1 soil to methanol ratio.



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September 20, 2002

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-SWN

Lab Sample ID: 48288-1
Matrix: Solid
Percent Solid: 83
Dilution Factor: 1.2
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Extraction Date: 09/17/02
Analysis Date: 09/18/02

PAGE ONE

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS					
ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg	ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg
2-Chlorophenol	290	U	Pentachlorophenol	290	U
4-Chloro-3-methylphenol	290	U	Phenol	290	U
2,4-Dichlorophenol	290	U	2,4,5-Trichlorophenol	290	U
2,4-Dimethylphenol	290	U	2,4,6-Trichlorophenol	290	U
2,4-dinitrophenol	290	U	Benzoic Acid	290	U
4,6-Dinitro-2-methylphenol	290	U	2-Methylphenol	290	U
2-Nitrophenol	290	U	3+4-Methylphenol	290	U
2,6-Dichlorophenol	290	U	Benzyl Alcohol	290	U
4-Nitrophenol	290	U	2,3,4,6-Tetrachlorophenol	290	U
Acid Surrogate Standard Recovery					
2-Fluorophenol	69 %	d5-Phenol	75 %	2,4,6-Tribromophenol	85 %
BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
1,2-Dichlorobenzene	290	U	Hexachlorobenzene	290	U
1,3-Dichlorobenzene	290	U	Benzidine	290	U
1,4-Dichlorobenzene	290	U	3,3'-Dichlorobenzidine	290	U
2,4-Dinitrotoluene	290	U	Azobenzene	290	U
2,6-Dinitrotoluene	290	U	Bis(2-chloroethoxy)methane	290	U
Nitrobenzene	290	U	bis(2-chloroethyl) ether	290	U
Hexachlorobutadiene	290	U	bis(2-chloroisopropyl)ether	290	U
Dimethyl Phthalate	290	U	4-bromophenyl phenyl ether	290	U
Di-n-butyl phthalate	290	U	Butyl benzyl phthalate	290	U
di-n-octyl-phthalate	290	U	4-Chlorophenyl phenyl ether	290	U
Bis (2-ethylhexyl) phthalate	290	U	Diethyl Phthalate	290	U
1,2,4-Trichlorobenzene	290	U	Hexachlorocyclopentadiene	290	U
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

Authorized signature



Mr. Rick Woodworth
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September 20, 2002

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: Gould Island PCB Remediation

Project Number: CTO 69

Field Sample ID: GIPII-B59-SUMP-SWN

Lab Sample ID: 48288-1

Matrix: Solid

Percent Solid: 83

Dilution Factor: 1.2

Collection Date: 09/17/02

Lab Receipt Date: 09/17/02

Extraction Date: 09/17/02

Analysis Date: 09/18/02

PAGE TWO

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS					
BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Acenaphthene	290	U	N-nitrosodimethylamine	290	U
Acenaphthylene	290	U	N-nitroso-di-n-propylamine	290	U
Anthracene	290	U	n-nitrosodiphenylamine	290	U
Benzo[a]anthracene	290	188 J	Pyridine	290	U
Benzo[a] pyrene	290	U	2-Methylnaphthalene	290	U
Benzo[b] fluoranthene	290	U	2-Chloronaphthalene	290	U
Benzo[k] fluoranthene	290	U	Naphthalene	290	U
Benzo(g,h,i) perylene	290	U	Phenanthrene	290	313
Chrysene	290	182 J	Dibenzofuran	290	U
Dibenz [a,h] anthracene.	290	U	Aniline	290	U
Fluoranthene	290	443	4-Chloroaniline	290	U
Fluorene	290	U	2-Nitroaniline	290	U
Indeno [1,2,3-cd] pyrene	290	U	3-Nitroaniline	290	U
Pyrene	290	335	4-Nitroaniline	290	U
Hexachloroethane	290	U	Carbazole	290	U
Isophorone	290	U			
Base Neutral Surrogate Standard Recovery					
2-Fluorobiphenyl	75 %	d5-nitrobenzene	71 %	d14-p-terphenyl	85 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

COMMENTS: Results are expressed on a dry weight basis.



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September 19, 2002

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-SWN

Lab Sample ID: 48288-1
Matrix: Solid
Percent Solid: 83
Dilution Factor: 1.2
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Extraction Date: 09/17/02
Analysis Date: 09/19/02

ANALYTICAL RESULTS DIESEL RANGE ORGANICS

Result	Units	Quantitation Limit
11	mg/kg	6
Surrogate Standard Recovery		
	m-Terphenyl	90 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Aqueous samples prepared by Separatory Funnel Liquid/Liquid Extraction, "Test Methods for Evaluating Solid Waste," Method 3510C; other matrices prepared by Pressurized Fluid Extraction, "Test Methods for Evaluating Solid Waste," Method 3545.

All matrices analyzed according to "Test Methods for Evaluating Solid Waste, SW-846 Method 8100"

COMMENTS: Results are expressed on a dry weight basis.

Authorized signature Melissa C. Kelly

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September 19, 2002

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: Gould Island PCB Remediation

Project Number: CTO 69

Field Sample ID: GIPII-B59-SUMP-SWE

Lab Sample ID: 48288-2

Matrix: Solid

Percent Solid: 83

Dilution Factor: 1.2

Collection Date: 09/17/02

Lab Receipt Date: 09/17/02

Extraction Date: 09/17/02

Analysis Date: 09/18/02

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	18	U
PCB-1221	18	U
PCB-1232	18	U
PCB-1242	18	U
PCB-1248	18	U
PCB-1254	18	U
PCB-1260	18	29

<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	92	%
Decachlorobiphenyl	97	%

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3545.

COMMENTS: Results are expressed on a dry weight basis.



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September 19, 2002

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-SWE

Lab Sample ID: 48288-2
Matrix: Solid
Percent Solid: 83
Dilution Factor: 103
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Analysis Date: 09/19/02

ANALYTICAL RESULTS VOLATILE ORGANICS					
COMPOUND	Quantitation Limit µg/kg	Result µg/kg	COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Benzene	100	U	1,3-Dichloropropane	100	U
Bromobenzene	100	U	cis-1,3-Dichloropropene	100	U
Bromochloromethane	100	U	trans-1,3-Dichloropropene	100	U
Bromodichloromethane	77	U	2,2-Dichloropropane	100	U
Bromoform	77	U	1,1-Dichloropropene	100	U
Bromomethane	100	U	Ethylbenzene	100	U
n-butylbenzene	100	U	Hexachlorobutadiene	100	U
sec-butylbenzene	100	U	Isopropylbenzene	100	U
tert-butylbenzene	100	U	p-isopropyltoluene	100	U
Carbon Tetrachloride	100	U	Methylene Chloride	520	U
Chlorobenzene	100	U	Methyl-tert-butyl ether	100	U
Chloroethane	100	U	Naphthalene	100	U
Chloroform	77	U	n-Propylbenzene	100	U
Chloromethane	100	U	Styrene	100	U
2-Chlorotoluene	100	U	1,1,1,2-Tetrachloroethane	100	U
4-Chlorotoluene	100	U	1,1,2,2-Tetrachloroethane	77	U
Dibromochloromethane	77	U	Tetrachloroethene	100	U
1,2-Dibromo-3-chloropropane	100	U	Toluene	100	U
1,2-Dibromoethane	77	U	1,2,3-Trichlorobenzene	100	U
Dibromomethane	100	U	1,2,4-Trichlorobenzene	100	U
1,2-Dichlorobenzene	100	U	1,1,1-Trichloroethane	100	U
1,3-Dichlorobenzene	100	U	1,1,2-Trichloroethane	77	U
1,4-Dichlorobenzene	100	U	Trichloroethene	100	U
Dichlorodifluoromethane	100	U	Trichlorofluoromethane	100	U
1,1-Dichloroethane	100	U	1,2,3-Trichloropropane	100	U
1,2-Dichloroethane	77	U	1,2,4-Trimethylbenzene	100	U
1,1-Dichloroethene	77	U	1,3,5-Trimethylbenzene	100	U
cis-1,2-Dichloroethene	100	U	Vinyl Chloride	100	U
trans-1,2-Dichloroethene	100	U	o-Xylene	100	U
1,2-Dichloropropane	77	U	m,p-Xylene	100	U
Acetone	1000	U	Diethyl ether	100	U
Carbon Disulfide	100	U	2-Hexanone	1000	U
Tetrahydrofuran	520	U	Methyl isobutyl ketone	1000	U
Methyl ethyl ketone	1000	U	Di-isopropyl ether	100	U
t-Butyl alcohol	4100	U	Ethyl t-butyl ether	100	U
t-Amyl methyl ether	100	U			
Surrogate Standard Recovery					
d4-1,2-Dichloroethane	100 %	d8-Toluene	103 %	Bromofluorobenzene	102 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS: Results are expressed on a dry weight basis.

Sample collection and analysis in accordance with SW-846 method 5035.

Authorized signature 

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September 20, 2002

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-SWE

Lab Sample ID: 48288-2
Matrix: Solid
Percent Solid: 83
Dilution Factor: 1.2
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Extraction Date: 09/17/02
Analysis Date: 09/18/02

PAGE ONE

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS					
ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg	ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg
2-Chlorophenol	300	U	Pentachlorophenol	300	U
4-Chloro-3-methylphenol	300	U	Phenol	300	U
2,4-Dichlorophenol	300	U	2,4,5-Trichlorophenol	300	U
2,4-Dimethylphenol	300	U	2,4,6-Trichlorophenol	300	U
2,4-dinitrophenol	300	U	Benzoic Acid	300	U
4,6-Dinitro-2-methylphenol	300	U	2-Methylphenol	300	U
2-Nitrophenol	300	U	3+4-Methylphenol	300	U
2,6-Dichlorophenol	300	U	Benzyl Alcohol	300	U
4-Nitrophenol	300	U	2,3,4,6-Tetrachlorophenol	300	U
Acid Surrogate Standard Recovery					
2-Fluorophenol	61 %	d5-Phenol	67 %	2,4,6-Tribromophenol	80 %
BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
1,2-Dichlorobenzene	300	U	Hexachlorobenzene	300	U
1,3-Dichlorobenzene	300	U	Benzidine	300	U
1,4-Dichlorobenzene	300	U	3,3'-Dichlorobenzidine	300	U
2,4-Dinitrotoluene	300	U	Azobenzene	300	U
2,6-Dinitrotoluene	300	U	Bis(2-chloroethoxy)methane	300	U
Nitrobenzene	300	U	bis(2-chloroethyl) ether	300	U
Hexachlorobutadiene	300	U	bis(2-chloroisopropyl)ether	300	U
Dimethyl Phthalate	300	U	4-bromophenyl phenyl ether	300	U
Di-n-butyl phthalate	300	U	Butyl benzyl phthalate	300	U
di-n-octyl-phthalate	300	U	4-Chlorophenyl phenyl ether	300	U
Bis (2-ethylhexyl) phthalate	300	U	Diethyl Phthalate	300	U
1,2,4-Trichlorobenzene	300	U	Hexachlorocyclopentadiene	300	U
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

Authorized signature



Mr. Rick Woodworth
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 Valley, Suite 200

September 20, 2002
SAMPLE DATA

CLIENT SAMPLE ID
Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-SWE

Lab Sample ID: 48288-2
Matrix: Solid
Percent Solid: 83
Dilution Factor: 1.2
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Extraction Date: 09/17/02
Analysis Date: 09/18/02

PAGE TWO

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS					
BASE NEUTRAL COMPOUND	Quantitation Limit $\mu\text{g}/\text{kg}$	Result $\mu\text{g}/\text{kg}$	BASE NEUTRAL COMPOUND	Quantitation Limit $\mu\text{g}/\text{kg}$	Result $\mu\text{g}/\text{kg}$
Acenaphthene	300	U	N-nitrosodimethylamine	300	U
Acenaphthylene	300	U	N-nitroso-di-n-propylamine	300	U
Anthracene	300	U	n-nitrosodiphenylamine	300	U
Benzo[a]anthracene	300	U	Pyridine	300	U
Benzo[a] pyrene	300	U	2-Methylnaphthalene	300	U
Benzo[b] fluoranthene	300	U	2-Chloronaphthalene	300	U
Benzo[k] fluoranthene	300	U	Naphthalene	300	U
Benzo(g,h,i) perylene	300	U	Phenanthrene	300	U
Chrysene	300	U	Dibenzofuran	300	U
Dibenz [a,h] anthracene	300	U	Aniline	300	U
Fluoranthene	300	U	4-Chloroaniline	300	U
Fluorene	300	U	2-Nitroaniline	300	U
Indeno [1,2,3-cd] pyrene	300	U	3-Nitroaniline	300	U
Pyrene	300	U	4-Nitroaniline	300	U
Hexachloroethane	300	U	Carbazole	300	U
Isophorone	300	U			
Base Neutral Surrogate Standard Recovery					
2-Fluorobiphenyl	67 %	d5-nitrobenzene	64 %	d14-p-terphenyl	77 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

COMMENTS: Results are expressed on a dry weight basis.

Authorized signature Melina Artelli

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September 19, 2002

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-SWE

Lab Sample ID: 48288-2
Matrix: Solid
Percent Solid: 83
Dilution Factor: 1.2
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Extraction Date: 09/17/02
Analysis Date: 09/19/02

ANALYTICAL RESULTS DIESEL RANGE ORGANICS

Result	Units	Quantitation Limit
U	mg/kg	6

Surrogate Standard Recovery

m-Terphenyl 91 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Aqueous samples prepared by Separatory Funnel Liquid/Liquid Extraction, "Test Methods for Evaluating Solid Waste," Method 3510C; other matrices prepared by Pressurized Fluid Extraction, "Test Methods for Evaluating Solid Waste," Method 3545.

All matrices analyzed according to "Test Methods for Evaluating Solid Waste, SW-846 Method 8100"

COMMENTS: Results are expressed on a dry weight basis.

Authorized signature Melina Artelle

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 Langhorne PA 19047

September 19, 2002

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-SWS

Lab Sample ID: 48288-3
Matrix: Solid
Percent Solid: 83
Dilution Factor: 1.2
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Extraction Date: 09/17/02
Analysis Date: 09/18/02

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	18	U
PCB-1221	18	U
PCB-1232	18	U
PCB-1242	18	U
PCB-1248	18	U
PCB-1254	18	U
PCB-1260	18	30

<u>Surrogate Standard Recovery</u>		
2,4,5,6-Tetrachloro-m-xylene	89	%
Decachlorobiphenyl	95	%

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3545.

COMMENTS: Results are expressed on a dry weight basis.



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September 19, 2002

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-SWS

Lab Sample ID: 48288-3
Matrix: Solid
Percent Solid: 83
Dilution Factor: 103
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Analysis Date: 09/19/02

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/kg	Result µg/kg	COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Benzene	100	U	1,3-Dichloropropane	100	U
Bromobenzene	100	U	cis-1,3-Dichloropropene	100	U
Bromochloromethane	100	U	trans-1,3-Dichloropropene	100	U
Bromodichloromethane	77	U	2,2-Dichloropropane	100	U
Bromoform	77	U	1,1-Dichloropropene	100	U
Bromomethane	100	U	Ethylbenzene	100	U
n-butylbenzene	100	U	Hexachlorobutadiene	100	U
sec-butylbenzene	100	U	Isopropylbenzene	100	U
tert-butylbenzene	100	U	p-isopropyltoluene	100	U
Carbon Tetrachloride	100	U	Methylene Chloride	520	U
Chlorobenzene	100	U	Methyl-tert-butyl ether	100	U
Chloroethane	100	U	Naphthalene	100	U
Chloroform	77	U	n-Propylbenzene	100	U
Chloromethane	100	U	Styrene	100	U
2-Chlorotoluene	100	U	1,1,1,2-Tetrachloroethane	100	U
4-Chlorotoluene	100	U	1,1,2,2-Tetrachloroethane	77	U
Dibromochloromethane	77	U	Tetrachloroethene	100	U
1,2-Dibromo-3-chloropropane	100	U	Toluene	100	U
1,2-Dibromoethane	77	U	1,2,3-Trichlorobenzene	100	U
Dibromomethane	100	U	1,2,4-Trichlorobenzene	100	U
1,2-Dichlorobenzene	100	U	1,1,1-Trichloroethane	100	U
1,3-Dichlorobenzene	100	U	1,1,2-Trichloroethane	77	U
1,4-Dichlorobenzene	100	U	Trichloroethene	100	U
Dichlorodifluoromethane	100	U	Trichlorofluoromethane	100	U
1,1-Dichloroethane	100	U	1,2,3-Trichloropropane	100	U
1,2-Dichloroethane	77	U	1,2,4-Trimethylbenzene	100	U
1,1-Dichloroethene	77	U	1,3,5-Trimethylbenzene	100	U
cis-1,2-Dichloroethene	100	U	Vinyl Chloride	100	U
trans-1,2-Dichloroethene	100	U	o-Xylene	100	U
1,2-Dichloropropane	77	U	m,p-Xylene	100	U
Acetone	1000	U	Diethyl ether	100	U
Carbon Disulfide	100	U	2-Hexanone	1000	U
Tetrahydrofuran	520	U	Methyl isobutyl ketone	1000	U
Methyl ethyl ketone	1000	U	Di-isopropyl ether	100	U
t-Butyl alcohol	4100	U	Ethyl t-butyl ether	100	U
t-Amyl methyl ether	100	U			
Surrogate Standard Recovery					
d4-1,2-Dichloroethane	98 %	d8-Toluene	99 %	Bromofluorobenzene	98 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS: Results are expressed on a dry weight basis.

Sample collection and analysis in accordance with SW-846 method 5035.



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September 20, 2002

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: Gould Island PCB Remediation

Project Number: CTO 69

Field Sample ID: GIPII-B59-SUMP-SWS

Lab Sample ID: 48288-3

Matrix: Solid

Percent Solid: 83

Dilution Factor: 1.2

Collection Date: 09/17/02

Lab Receipt Date: 09/17/02

Extraction Date: 09/17/02

Analysis Date: 09/19/02

PAGE ONE

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS					
ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg	ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg
2-Chlorophenol	300	U	Pentachlorophenol	300	U
4-Chloro-3-methylphenol	300	U	Phenol	300	U
2,4-Dichlorophenol	300	U	2,4,5-Trichlorophenol	300	U
2,4-Dimethylphenol	300	U	2,4,6-Trichlorophenol	300	U
2,4-dinitrophenol	300	U	Benzoic Acid	300	U
4,6-Dinitro-2-methylphenol	300	U	2-Methylphenol	300	U
2-Nitrophenol	300	U	3+4-Methylphenol	300	U
2,6-Dichlorophenol	300	U	Benzyl Alcohol	300	U
4-Nitrophenol	300	U	2,3,4,6-Tetrachlorophenol	300	U
Acid Surrogate Standard Recovery					
2-Fluorophenol	71 %	d5-Phenol	77 %	2,4,6-Tribromophenol	99 %
BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
1,2-Dichlorobenzene	300	U	Hexachlorobenzene	300	U
1,3-Dichlorobenzene	300	U	Benzidine	300	U
1,4-Dichlorobenzene	300	U	3,3'-Dichlorobenzidine	300	U
2,4-Dinitrotoluene	300	U	Azobenzene	300	U
2,6-Dinitrotoluene	300	U	Bis(2-chloroethoxy)methane	300	U
Nitrobenzene	300	U	bis(2-chloroethyl) ether	300	U
Hexachlorobutadiene	300	U	bis(2-chloroisopropyl) ether	300	U
Dimethyl Phthalate	300	U	4-bromophenyl phenyl ether	300	U
Di-n-butyl phthalate	300	U	Butyl benzyl phthalate	300	U
di-n-octyl-phthalate	300	U	4-Chlorophenyl phenyl ether	300	U
Bis (2-ethylhexyl) phthalate	300	U	Diethyl Phthalate	300	U
1,2,4-Trichlorobenzene	300	U	Hexachlorocyclopentadiene	300	U
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

Authorized signature



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September 20, 2002

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: Gould Island PCB Remediation

Project Number: CTO 69

Field Sample ID: GIPII-B59-SUMP-SWS

Lab Sample ID: 48288-3

Matrix: Solid

Percent Solid: 83

Dilution Factor: 1.2

Collection Date: 09/17/02

Lab Receipt Date: 09/17/02

Extraction Date: 09/17/02

Analysis Date: 09/19/02

PAGE TWO

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS					
BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Acenaphthene	300	U	N-nitrosodimethylamine	300	U
Acenaphthylene	300	U	N-nitroso-di-n-propylamine	300	U
Anthracene	300	U	n-nitrosodiphenylamine	300	U
Benzo[a]anthracene	300	451	Pyridine	300	U
Benzo[a] pyrene	300	343	2-Methylnaphthalene	300	U
Benzo[b] fluoranthene	300	345	2-Chloronaphthalene	300	U
Benzo[k] fluoranthene	300	312	Naphthalene	300	U
Benzo(g,h,i) perylene	300	214 J	Phenanthrene	300	290 J
Chrysene	300	440	Dibenzofuran	300	U
Dibenz [a,h] anthracene	300	U	Aniline	300	U
Fluoranthene	300	721	4-Chloroaniline	300	U
Fluorene	300	U	2-Nitroaniline	300	U
Indeno [1,2,3-cd] pyrene	300	246 J	3-Nitroaniline	300	U
Pyrene	300	588	4-Nitroaniline	300	U
Hexachloroethane	300	U	Carbazole	300	U
Isophorone	300	U			

Base Neutral Surrogate Standard Recovery					
2-Fluorobiphenyl	78	%	d5-nitrobenzene	73	%
			d14-p-terphenyl	89	%

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

COMMENTS: Results are expressed on a dry weight basis.

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September 19, 2002

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: Gould Island PCB
Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-SWS

Lab Sample ID: 48288-3
Matrix: Solid
Percent Solid: 83
Dilution Factor: 1.2
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Extraction Date: 09/17/02
Analysis Date: 09/19/02

ANALYTICAL RESULTS DIESEL RANGE ORGANICS

Result	Units	Quantitation Limit
12	mg/kg	6
Surrogate Standard Recovery		
	m-Terphenyl	95 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Aqueous samples prepared by Separatory Funnel Liquid/Liquid Extraction, "Test Methods for Evaluating Solid Waste," Method 3510C; other matrices prepared by Pressurized Fluid Extraction, "Test Methods for Evaluating Solid Waste," Method 3545.

All matrices analyzed according to "Test Methods for Evaluating Solid Waste, SW-846 Method 8100"

COMMENTS: Results are expressed on a dry weight basis.

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September 19, 2002

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIP11-B59-SUMP-SWW

Lab Sample ID: 48288-4
Matrix: Solid
Percent Solid: 82
Dilution Factor: 1.2
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Extraction Date: 09/17/02
Analysis Date: 09/18/02

PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit $\mu\text{g}/\text{kg}$	Results $\mu\text{g}/\text{kg}$
PCB-1016	18	U
PCB-1221	18	U
PCB-1232	18	U
PCB-1242	18	U
PCB-1248	18	U
PCB-1254	18	U
PCB-1260	18	541

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene 77 %
 Decachlorobiphenyl 88 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3545.

COMMENTS: Results are expressed on a dry weight basis.

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September 19, 2002

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-SWW

Lab Sample ID: 48288-4
Matrix: Solid
Percent Solid: 82
Dilution Factor: 110
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Analysis Date: 09/19/02

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/kg	Result µg/kg	COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Benzene	110	U	1,3-Dichloropropane	110	U
Bromobenzene	110	U	cis-1,3-Dichloropropene	110	U
Bromochloromethane	110	U	trans-1,3-Dichloropropene	110	U
Bromodichloromethane	82	U	2,2-Dichloropropane	110	U
Bromoform	82	U	1,1-Dichloropropene	110	U
Bromomethane	110	U	Ethylbenzene	110	U
n-butylbenzene	110	U	Hexachlorobutadiene	110	U
sec-butylbenzene	110	U	Isopropylbenzene	110	U
tert-butylbenzene	110	U	p-isopropyltoluene	110	U
Carbon Tetrachloride	110	U	Methylene Chloride	550	U
Chlorobenzene	110	U	Methyl-tert-butyl ether	110	U
Chloroethane	110	U	Naphthalene	110	U
Chloroform	82	U	n-Propylbenzene	110	U
Chloromethane	110	U	Styrene	110	U
2-Chlorotoluene	110	U	1,1,1,2-Tetrachloroethane	110	U
4-Chlorotoluene	110	U	1,1,2,2-Tetrachloroethane	82	U
Dibromochloromethane	82	U	Tetrachloroethene	110	U
1,2-Dibromo-3-chloropropane	110	U	Toluene	110	U
1,2-Dibromoethane	82	U	1,2,3-Trichlorobenzene	110	U
Dibromomethane	110	U	1,2,4-Trichlorobenzene	110	U
1,2-Dichlorobenzene	110	U	1,1,1-Trichloroethane	110	U
1,3-Dichlorobenzene	110	U	1,1,2-Trichloroethane	82	U
1,4-Dichlorobenzene	110	U	Trichloroethene	110	U
Dichlorodifluoromethane	110	U	Trichlorofluoromethane	110	U
1,1-Dichloroethane	110	U	1,2,3-Trichloropropane	110	U
1,2-Dichloroethane	82	U	1,2,4-Trimethylbenzene	110	U
1,1-Dichloroethene	82	U	1,3,5-Trimethylbenzene	110	U
cis-1,2-Dichloroethene	110	U	Vinyl Chloride	110	U
trans-1,2-Dichloroethene	110	U	o-Xylene	110	U
1,2-Dichloropropane	82	U	m,p-Xylene	110	U
Acetone	1100	U	Diethyl ether	110	U
Carbon Disulfide	110	U	2-Hexanone	1100	U
Tetrahydrofuran	550	U	Methyl isobutyl ketone	1100	U
Methyl ethyl ketone	1100	U	Di-isopropyl ether	110	U
t-Butyl alcohol	4400	U	Ethyl t-butyl ether	110	U
t-Amyl methyl ether	110	U			
Surrogate Standard Recovery					
d4-1,2-Dichloroethane	117 %	d8-Toluene	112 %	Bromofluorobenzene	110 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS: Results are expressed on a dry weight basis.

Sample collection and analysis in accordance with SW-846 method 5035.

Melissa A. Halli

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September 20, 2002

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-SWW

Lab Sample ID: 48288-4
Matrix: Solid
Percent Solid: 82
Dilution Factor: 1.2
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Extraction Date: 09/17/02
Analysis Date: 09/19/02

PAGE ONE

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS					
ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg	ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg
2-Chlorophenol	300	U	Pentachlorophenol	300	U
4-Chloro-3-methylphenol	300	U	Phenol	300	U
2,4-Dichlorophenol	300	U	2,4,5-Trichlorophenol	300	U
2,4-Dimethylphenol	300	U	2,4,6-Trichlorophenol	300	U
2,4-dinitrophenol	300	U	Benzoic Acid	300	U
4,6-Dinitro-2-methylphenol	300	U	2-Methylphenol	300	U
2-Nitrophenol	300	U	3+4-Methylphenol	300	U
2,6-Dichlorophenol	300	U	Benzyl Alcohol	300	U
4-Nitrophenol	300	U	2,3,4,6-Tetrachlorophenol	300	U
Acid Surrogate Standard Recovery					
2-Fluorophenol	71 %	d5-Phenol	78 %	2,4,6-Tribromophenol	94 %
BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
1,2-Dichlorobenzene	300	U	Hexachlorobenzene	300	U
1,3-Dichlorobenzene	300	U	Benzidine	300	U
1,4-Dichlorobenzene	300	U	3,3'-Dichlorobenzidine	300	U
2,4-Dinitrotoluene	300	U	Azobenzene	300	U
2,6-Dinitrotoluene	300	U	Bis(2-chloroethoxy)methane	300	U
Nitrobenzene	300	U	bis(2-chloroethyl) ether	300	U
Hexachlorobutadiene	300	U	bis(2-chloroisopropyl)ether	300	U
Dimethyl Phthalate	300	U	4-bromophenyl phenyl ether	300	U
Di-n-butyl phthalate	300	U	Butyl benzyl phthalate	300	U
di-n-octyl-phthalate	300	U	4-Chlorophenyl phenyl ether	300	U
Bis (2-ethylhexyl) phthalate	300	U	Diethyl Phthalate	300	U
1,2,4-Trichlorobenzene	300	U	Hexachlorocyclopentadiene	300	U
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

Authorized signature 

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September 20, 2002

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-SWW

Lab Sample ID: 48288-4
Matrix: Solid
Percent Solid: 82
Dilution Factor: 1.2
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Extraction Date: 09/17/02
Analysis Date: 09/19/02

PAGE TWO

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS					
BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Acenaphthene	300	U	N-nitrosodimethylamine	300	U
Acenaphthylene	300	U	N-nitroso-di-n-propylamine	300	U
Anthracene	300	U	n-nitrosodiphenylamine	300	U
Benzo[a]anthracene	300	U	Pyridine	300	U
Benzo[a] pyrene	300	U	2-Methylnaphthalene	300	U
Benzo[b] fluoranthene	300	U	2-Chloronaphthalene	300	U
Benzo[k] fluoranthene	300	U	Naphthalene	300	U
Benzo(g,h,i) perylene	300	U	Phenanthrene	300	U
Chrysene	300	U	Dibenzofuran	300	U
Dibenz [a,h] anthracene	300	U	Aniline	300	U
Fluoranthene	300	U	4-Chloroaniline	300	U
Fluorene	300	U	2-Nitroaniline	300	U
Indeno [1,2,3-cd] pyrene	300	U	3-Nitroaniline	300	U
Pyrene	300	U	4-Nitroaniline	300	U
Hexachloroethane	300	U	Carbazole	300	U
Isophorone	300	U			
Base Neutral Surrogate Standard Recovery					
2-Fluorobiphenyl	77	%	d5-nitrobenzene	72	%
			d14-p-terphenyl	90	%
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

COMMENTS: Results are expressed on a dry weight basis.



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September 19, 2002

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: Gould Island PCB
 Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-SWW

Lab Sample ID: 48288-4
Matrix: Solid
Percent Solid: 82
Dilution Factor: 1.2
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Extraction Date: 09/17/02
Analysis Date: 09/19/02

ANALYTICAL RESULTS DIESEL RANGE ORGANICS

Result	Units	Quantitation Limit
10	mg/kg	6
Surrogate Standard Recovery		
	m-Terphenyl	90 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Aqueous samples prepared by Separatory Funnel Liquid/Liquid Extraction, "Test Methods for Evaluating Solid Waste," Method 3510C; other matrices prepared by Pressurized Fluid Extraction, "Test Methods for Evaluating Solid Waste," Method 3545.

All matrices analyzed according to "Test Methods for Evaluating Solid Waste, SW-846 Method 8100"

COMMENTS: Results are expressed on a dry weight basis.

Authorized signature Melina A. Kelli

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September 19, 2002

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-BOT

Lab Sample ID: 48288-5
Matrix: Solid
Percent Solid: 82
Dilution Factor: 1.2
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Extraction Date: 09/17/02
Analysis Date: 09/18/02

PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	18	U
PCB-1221	18	U
PCB-1232	18	U
PCB-1242	18	U
PCB-1248	18	U
PCB-1254	18	U
PCB-1260	18	37
Surrogate Standard Recovery		
	2,4,5,6-Tetrachloro-m-xylene	78 %
	Decachlorobiphenyl	93 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3545.

COMMENTS: Results are expressed on a dry weight basis.



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September 19, 2002

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-BOT

Lab Sample ID: 48288-5
Matrix: Solid
Percent Solid: 82
Dilution Factor: 109
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Analysis Date: 09/19/02

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/kg	Result µg/kg	COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Benzene	110	U	1,3-Dichloropropane	110	U
Bromobenzene	110	U	cis-1,3-Dichloropropene	110	U
Bromochloromethane	110	U	trans-1,3-Dichloropropene	110	U
Bromodichloromethane	82	U	2,2-Dichloropropane	110	U
Bromoform	82	U	1,1-Dichloropropene	110	U
Bromomethane	110	U	Ethylbenzene	110	U
n-butylbenzene	110	U	Hexachlorobutadiene	110	U
sec-butylbenzene	110	U	Isopropylbenzene	110	U
tert-butylbenzene	110	U	p-isopropyltoluene	110	U
Carbon Tetrachloride	110	U	Methylene Chloride	550	U
Chlorobenzene	110	U	Methyl-tert-butyl ether	110	U
Chloroethane	110	U	Naphthalene	110	U
Chloroform	82	U	n-Propylbenzene	110	U
Chloromethane	110	U	Styrene	110	U
2-Chlorotoluene	110	U	1,1,1,2-Tetrachloroethane	110	U
4-Chlorotoluene	110	U	1,1,2,2-Tetrachloroethane	82	U
Dibromochloromethane	82	U	Tetrachloroethene	110	U
1,2-Dibromo-3-chloropropane	110	U	Toluene	110	U
1,2-Dibromoethane	82	U	1,2,3-Trichlorobenzene	110	U
Dibromomethane	110	U	1,2,4-Trichlorobenzene	110	U
1,2-Dichlorobenzene	110	U	1,1,1-Trichloroethane	110	U
1,3-Dichlorobenzene	110	U	1,1,2-Trichloroethane	82	U
1,4-Dichlorobenzene	110	U	Trichloroethene	110	U
Dichlorodifluoromethane	110	U	Trichlorofluoromethane	110	U
1,1-Dichloroethane	110	U	1,2,3-Trichloropropane	110	U
1,2-Dichloroethane	82	U	1,2,4-Trimethylbenzene	110	U
1,1-Dichloroethene	82	U	1,3,5-Trimethylbenzene	110	U
cis-1,2-Dichloroethene	110	U	Vinyl Chloride	110	U
trans-1,2-Dichloroethene	110	U	o-Xylene	110	U
1,2-Dichloropropane	82	U	m,p-Xylene	110	U
Acetone	1100	U	Diethyl ether	110	U
Carbon Disulfide	110	U	2-Hexanone	1100	U
Tetrahydrofuran	550	U	Methyl isobutyl ketone	1100	U
Methyl ethyl ketone	1100	U	Di-isopropyl ether	110	U
t-Butyl alcohol	4400	U	Ethyl t-butyl ether	110	U
t-Amyl methyl ether	110	U			

Surrogate Standard Recovery

d4-1,2-Dichloroethane 113 % d8-Toluene 99 % Bromofluorobenzene 98 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8260B.

COMMENTS: Results are expressed on a dry weight basis.

Sample collection and analysis in accordance with SW-846 method 5035.

Melissa Artelli

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September 20, 2002

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-BOT

Lab Sample ID: 48288-5
Matrix: Solid
Percent Solid: 82
Dilution Factor: 1.2
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Extraction Date: 09/17/02
Analysis Date: 09/19/02

PAGE ONE

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS					
ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg	ACID COMPOUND	Quantitation Limit µg/kg	Result µg/kg
2-Chlorophenol	300	U	Pentachlorophenol	300	U
4-Chloro-3-methylphenol	300	U	Phenol	300	U
2,4-Dichlorophenol	300	U	2,4,5-Trichlorophenol	300	U
2,4-Dimethylphenol	300	U	2,4,6-Trichlorophenol	300	U
2,4-dinitrophenol	300	U	Benzoic Acid	300	U
4,6-Dinitro-2-methylphenol	300	U	2-Methylphenol	300	U
2-Nitrophenol	300	U	3+4-Methylphenol	300	U
2,6-Dichlorophenol	300	U	Benzyl Alcohol	300	U
4-Nitrophenol	300	U	2,3,4,6-Tetrachlorophenol	300	U
Acid Surrogate Standard Recovery					
2-Fluorophenol	72 %	d5-Phenol	81 %	2,4,6-Tribromophenol	93 %
BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
1,2-Dichlorobenzene	300	U	Hexachlorobenzene	300	U
1,3-Dichlorobenzene	300	U	Benzidine	300	U
1,4-Dichlorobenzene	300	U	3,3'-Dichlorobenzidine	300	U
2,4-Dinitrotoluene	300	U	Azobenzene	300	U
2,6-Dinitrotoluene	300	U	Bis(2-chloroethoxy)methane	300	U
Nitrobenzene	300	U	bis(2-chloroethyl) ether	300	U
Hexachlorobutadiene	300	U	bis(2-chloroisopropyl)ether	300	U
Dimethyl Phthalate	300	U	4-bromophenyl phenyl ether	300	U
Di-n-butyl phthalate	300	U	Butyl benzyl phthalate	300	U
di-n-octyl-phthalate	300	U	4-Chlorophenyl phenyl ether	300	U
Bis (2-ethylhexyl) phthalate	300	U	Diethyl Phthalate	300	U
1,2,4-Trichlorobenzene	300	U	Hexachlorocyclopentadiene	300	U
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank					

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

Authorized signature Melina A. Scully

Mr. Rick Woodworth
 Foster Wheeler Environmental Corp.
 2300 Lincoln Highway East One Oxford
 Valley, Suite 200

September 20, 2002

SAMPLE DATA

CLIENT SAMPLE ID
Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-BOT

Lab Sample ID: 48288-5
Matrix: Solid
Percent Solid: 82
Dilution Factor: 1.2
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Extraction Date: 09/17/02
Analysis Date: 09/19/02

PAGE TWO

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS					
BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Acenaphthene	300	U	N-nitrosodimethylamine	300	U
Acenaphthylene	300	U	N-nitroso-di-n-propylamine	300	U
Anthracene	300	U	n-nitrosodiphenylamine	300	U
Benzo[a]anthracene	300	U	Pyridine	300	U
Benzo[a] pyrene	300	U	2-Methylnaphthalene	300	U
Benzo[b] fluoranthene	300	U	2-Chloronaphthalene	300	U
Benzo[k] fluoranthene	300	U	Naphthalene	300	U
Benzo(g,h,i) perylene	300	U	Phenanthrene	300	U
Chrysene	300	U	Dibenzofuran	300	U
Dibenz [a,h] anthracene	300	U	Aniline	300	U
Fluoranthene	300	U	4-Chloroaniline	300	U
Fluorene	300	U	2-Nitroaniline	300	U
Indeno [1,2,3-cd] pyrene	300	U	3-Nitroaniline	300	U
Pyrene	300	U	4-Nitroaniline	300	U
Hexachloroethane	300	U	Carbazole	300	U
Isophorone	300	U			

Base Neutral Surrogate Standard Recovery					
2-Fluorobiphenyl	70	%	d5-nitrobenzene	71	%
					d14-p-terphenyl 88 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

COMMENTS: Results are expressed on a dry weight basis.

Authorized signature Melina A. Yulli

Mr. Rick Woodworth
 Foster Wheeler Environmental Corp.
 2300 Lincoln Highway East One Oxford Valley,
 Suite 200
 Langhorne PA 19047

September 19, 2002

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: Gould Island PCB Remediation
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-BOT

Lab Sample ID: 48288-5
Matrix: Solid
Percent Solid: 82
Dilution Factor: 1.2
Collection Date: 09/17/02
Lab Receipt Date: 09/17/02
Extraction Date: 09/17/02
Analysis Date: 09/19/02

ANALYTICAL RESULTS DIESEL RANGE ORGANICS

Result	Units	Quantitation Limit
U	mg/kg	6
Surrogate Standard Recovery		
	m-Terphenyl	84 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Aqueous samples prepared by Separatory Funnel Liquid/Liquid Extraction, "Test Methods for Evaluating Solid Waste," Method 3510C; other matrices prepared by Pressurized Fluid Extraction, "Test Methods for Evaluating Solid Waste," Method 3545.

All matrices analyzed according to "Test Methods for Evaluating Solid Waste, SW-846 Method 8100"

COMMENTS: Results are expressed on a dry weight basis.

Authorized signature *Melina Aralli*

October 7, 2002

Mr. Rick Woodworth
Foster Wheeler Environmental Corporation
One Oxford Valley Suite 200
2300 Lincoln Highway
Langhorne, PA 19047-1829

**RE: Analytical Results Case Narrative
Analytics # 48348
Navy - EFA-NE RAC II
FWEC Project # N62472-99-D-0032
Gould Island PCB Remediation
Naval Station Newport
Middletown, RI**

Dear Mr. Woodworth;

Enclosed please find the analytical results for samples submitted for the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

The sample was analyzed for Chrysene by EPA Method 8270 according to the guidelines established in the Sampling Plan for the Characterization of PCB Contaminated Soils and Concrete, Nov. 21, 2001.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level 3 data package has been assembled in the following order:

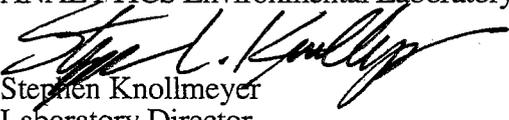
- Case Narrative/Non-Conformance Summary
- Sample Log Sheet - Cover Page
- SVOC Form I Data Sheet for Samples and Blanks
- SVOC Form 2 Surrogate Recoveries
- SVOC Form 3 MS/MSD (LCS) Recoveries
- SVOC Form 4 Method Blank Summary (equiv.) GC/MS Logbook Sheets
- SVOC Form 5 DFTPP Tune Summary
- SVOC Form 6 Initial Calibration Data
- SVOC Form 7 Continuing Calibration Check
- SVOC Form 8 Internal Standard Area and RT Summary
- Chain of Custody (COC) Forms and Sample Receipt Checklist

QC NON CONFORMANCE SUMMARY

Sample Receipt:
No QC deviations

Chrysene by EPA Method 8270:
No QC deviations

Sincerely,
ANALYTICS Environmental Laboratory, LLC


Stephen Knollmeyer
Laboratory Director

Mr. Rick Woodworth
Foster Wheeler Environmental Corp.
2300 Lincoln Highway East One Oxford
Valley, Suite 200
Langhorne PA 19047

Report Number: 48348

Revision: Rev. 0

**Re: GOULD ISLAND PCB
REMEDICATION**

CTO 69

Enclosed are the results of the analyses on your sample(s). Samples were received on 25 September 2002 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

<u>Lab Number</u>	<u>Sample Date</u>	<u>Station Location</u>	<u>Analysis</u>	<u>Comments</u>
48348-1	09/25/02	GIPII-B59-SUMP-SWSA	Electronic Data Deliverable	
	09/25/02	GIPII-B59-SUMP-SWSA	EPA 8270 (PAH only)	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, North Carolina and is validated by the U.S. Army Corps of Engineers (MRD) and U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature

Stephen L. Knollmeyer
Stephen L. Knollmeyer Lab. Director

Date

09/26/02

This report shall not be reproduced, except in full, without the written consent of Analytics Environmental Laboratory, LLC.

Mr. Rick Woodworth
 Foster Wheeler Environmental Corp.
 2300 Lincoln Highway East One Oxford
 Valley, Suite 200

September 26, 2002

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: GOULD ISLAND PCB
 REMEDIATION
Project Number: CTO 69
Field Sample ID: LABQC

Lab Sample ID: B09252AS
Matrix: Solid
Percent Solid: 100
Dilution Factor: 1.0
Collection Date:
Lab Receipt Date:
Extraction Date: 09/25/02
Analysis Date: 09/25/02

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Chrysene	250	U
Surrogate Standard Recovery		
d5-nitrobenzene 48 %	2-Fluorobiphenyl 56 %	d14-p-terphenyl 85 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analysis was conducted according to "Test Methods for Evaluating Solid Waste, SW-846 Method 8270c."

COMMENTS: Results are expressed on a dry weight basis.

Authorized signature Melina A. Stulli

Mr. Rick Woodworth
 Foster Wheeler Environmental Corp.
 2300 Lincoln Highway East One Oxford
 Valley, Suite 200

September 26, 2002

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: GOULD ISLAND PCB
 REMEDIATION
Project Number: CTO 69
Field Sample ID: GIPII-B59-SUMP-SWSA

Lab Sample ID: 48348-1
Matrix: Solid
Percent Solid: 88
Dilution Factor: 1.1
Collection Date: 09/25/02
Lab Receipt Date: 09/25/02
Extraction Date: 09/25/02
Analysis Date: 09/25/02

ANALYTICAL RESULTS SEMI-VOLATILE ORGANICS

COMPOUND	Quantitation Limit $\mu\text{g}/\text{kg}$	Result $\mu\text{g}/\text{kg}$
Chrysene	280	U
Surrogate Standard Recovery		
d5-nitrobenzene 57 %	2-Fluorobiphenyl 57 %	d14-p-terphenyl 78 %
U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Blank		

METHODOLOGY: Sample analysis was conducted according to: Test Methods for Evaluating Solid Waste, SW-846 Method 8270C.

COMMENTS: Results are expressed on a dry weight basis.

Authorized signature Melissa Artale

Appendix C

State of Rhode Island Residential Direct Exposure Criteria

State of Rhode Island and Providence Plantations

Department of Environmental Management

Office of Waste Management



Date: 31 March 1993

AS AMENDED
August 1996

**Rules and Regulations for the
Investigation and Remediation
of Hazardous Material Releases
Short Title: Remediation Regulations**

DEM-DSR-01-93

2. Method 3 may be used to develop soil objectives for the contaminated-site as described in Rule 8.04 (Method 3 Remedial Objectives).

For hazardous substances in soil that are determined by either the Department or the performing party to have a potential to significantly contribute to adverse effects to any environmentally sensitive area at or in the vicinity of the contaminated-site, a Method 3 Ecological Risk Assessment shall be performed in accordance with Rule 8.05 (Ecological Protection).

iv.

Soil Objectives for Total Petroleum Hydrocarbons (TPH):

Although not a single hazardous substance, TPH can be useful as an indicator of potential adverse impacts to human health from a release of hazardous materials. TPH Soil Objectives shall be applied to a contaminated-site for which jurisdiction has been established through the discovery of a release as described in Section 5 (NOTIFICATION). The Department will utilize these objectives for non-virgin petroleum/weathered petroleum situations as they occur at contaminated-sites.

Accordingly, the Department shall require that soil objectives for TPH as described in this Rule be applied to a contaminated-site in conjunction with soil objectives for the hazardous substances established pursuant to this Section. The Director shall approve the application of the functional equivalent of a direct exposure criterion and leachability criterion for TPH provided that the application of the criteria is consistent with Rule 8.01 (Remedial Objectives) and Rule 8.02.A (General Requirements for Soil Objectives). The performing party may apply the soil objectives for TPH described below or may develop soil objectives for TPH under Method 3, as described in Rule 8.04 (Method 3 Remedial Objectives).

1. The following shall be considered the Method 1 Direct Exposure Criteria for TPH, subject to the provided requirements:
 - a. The Method 1 Residential TPH Direct Exposure Criterion shall be 500 ppm; or
 - b. The Method 1 Residential TPH Direct Exposure Criterion may be 1000 ppm contingent upon field-verification by Department personnel to ensure that short-term risks are managed appropriately prior to approval as a final remedial objective; and

- c. The Method 1 Industrial/Commercial TPH Direct Exposure Criterion shall be 2500 ppm.
- 2. The following shall be considered the Method 1 Leachability Criteria for TPH, subject to the provided requirements:
 - a. The Method 1 GA TPH Leachability Criterion shall be 500 ppm; or
 - b. The Method 1 GA TPH Leachability Criterion may be 1000 ppm and may be field-verified at the discretion of the Department to ensure that short-term risks are managed appropriately prior to approval as a final remedial objective; and
 - c. The Method 1 GB TPH Leachability criterion shall be 2500 ppm.

For clarity, any reference to concentrations of hazardous substances in the following Rules shall be considered by the Department to be in addition to the appropriate concentrations of TPH as described herein: Rule 8.02 (Soil Objectives), Rule 8.04 (Method 3 Remedial Objectives), Rule 8.06 (Background Concentrations for Soils), Rule 8.08.A (Points of Compliance for Soils), Rule 8.09 (Institutional Controls) and Rule 8.10 (Compliance Sampling).

B. Method 1 Soil Objectives:

Unless otherwise prohibited by the Director, the Method 1 Soil Objectives specified in Tables 1 and 2 may be applied to a contaminated-site provided that the conditions set forth in Rule 8.01 (Remedial Objectives) and Rule 8.02.A (General Requirements for Soil Objectives) are met.

i. Method 1 Direct Exposure Criteria:

The Method 1 Direct Exposure Criteria are listed in Table 1.

ii. Method 1 Leachability Criteria:

The Method 1 Leachability Criteria are listed in Table 2.

With respect to the Method 1 Leachability Criteria for inorganic hazardous substances, the performing party shall conduct a laboratory test that demonstrates that the inorganic hazardous substance will not leach to groundwater at levels which exceed the applicable groundwater objective for

the inorganic hazardous substance. Accordingly, the resulting leachate concentration must not exceed the leachability criteria for the associated inorganic hazardous substance listed in Table 2.

The performing party may perform the Synthetic Precipitation Leaching Procedure (SPLP; EPA Method 1312), the Toxicity Characteristic Leaching Procedure (TCLP; EPA Method 1311) or other procedures pre-approved by the Department to estimate potential leaching of inorganic hazardous substances at the contaminated-site.

TABLE 1

DIRECT EXPOSURE CRITERIA		
Substance	Residential (mg/kg)	Industrial/Commercial (mg/kg)
Volatile Organics		
Acetone	7,800	10,000
Benzene	2.5	200
Bromodichloromethane	10	92
Bromoform	81	720
Bromomethane	0.8	2900
Carbon tetrachloride	1.5	44
Chlorobenzene	210	10,000
Chloroform	1.2	940
Dibromochloromethane	7.6	68
Dibromochloropropane (DBCP)	0.5	4.1
Dichloroethane (1,1-)	920	10,000
Dichloroethane (1,2-)	0.9	63
Dichloroethene (1,1-)	0.2	9.5
Dichloroethene (cis-1,2-)	630	10,000
Dichloroethene (trans-1,2-)	1,100	10,000
Dichloropropane (1,2)	1.9	84
Ethyl benzene	71	10,000
Ethylene dibromide (EDB)	0.01	0.07
Isopropyl benzene	27	10,000
Methyl ethyl ketone	10,000	10,000
Methyl isobutyl ketone	1200	10,000
Methyl-tert-butyl-ether (MTBE)	390	10,000
Methylene chloride	45	760
Styrene	13	190
Tetrachloroethane,1,1,1,2	2.2	220
Tetrachloroethane,1,1,2,2	1.3	29

TABLE 1

DIRECT EXPOSURE CRITERIA		
Substance	Residential (mg/kg)	Industrial/Commercial (mg/kg)
Tetrachloroethylene	12	110
Toluene	190	10,000
Trichloroethane, 1,1,1-	540	10,000
Trichloroethane, 1,1,2-	3.6	100
Trichloroethylene	13	520
Vinyl chloride	0.02	3.0
Xylenes (Total)	110	10,000
Semivolatiles		
Acenaphthene	43	10,000
Acenaphthylene	23	10,000
Anthracene	35	10,000
Benzo(a)anthracene	0.9	7.8
Benzo(a)pyrene ^a	0.4	0.8
Benzo(b)fluoranthene	0.9	7.8
Benzo(g,h,i)perylene	0.8	10,000
Benzo(k)fluoranthene	0.9	78
Biphenyl, 1,1-	0.8	10,000
Bis(2-ethylhexyl)phthalate	46	410
Bis(2-chloroethyl)ether	0.6	5.2
Bis(2-chloroisopropyl)ether	9.1	82
Chloroaniline, 4- (p-)	310	8200
Chlorophenol, 2-	50	10,000
Chrysene	0.4	780
Dibenzo(a,h)anthracene ^a	0.4	0.8
Dichlorobenzene, 1,2- (o-DCB)	510	10,000
Dichlorobenzene, 1,3- (m-DCB)	430	10,000
Dichlorobenzene, 1,4- (p-DCB)	27	240
Dichlorobenzidine, 3,3-	1.4	13

TABLE 1

DIRECT EXPOSURE CRITERIA		
Substance	Residential (mg/kg)	Industrial/Commercial (mg/kg)
Dichlorophenol, 2,4-	30	6,100
Diethyl phthalate	340	10,000
Dimethyl phenol, 2,4-	1,400	10,000
Dimethyl phthalate	1900	10,000
Dinitrophenol, 2,4-	160	4,100
Dinitrotoluene, 2,4-	0.9	8.4
Fluoranthene	20	10,000
Fluorene	28	10,000
Hexachlorobenzene	0.4	3.6
Hexachlorobutadiene	8.2	73
Hexachloroethane	46	410
Indeno(1,2,3-cd)pyrene	0.9	7.8
Methyl naphthalene, 2-	123	10,000
Naphthalene	54	10,000
Pentachlorophenol	5.3	48
Phenanthrene	40	10,000
Phenol	6,000	10,000
Pyrene	13	10,000
Trichlorobenzene, 1,2,4-	96	10,000
Trichlorophenol, 2,4,5-	330	10,000
Trichlorophenol, 2,4,6-	58	520
Pesticides/PCBs		
Chlordane	0.5	4.4
Dieldrin	0.04	0.4
Polychlorinated biphenyls (PCBs) ^b	10	10
Inorganics		
Antimony	10	820

TABLE 1

DIRECT EXPOSURE CRITERIA		
Substance	Residential (mg/kg)	Industrial/Commercial (mg/kg)
Arsenic ^c	1.7	3.8
Barium	5,500	10,000
Beryllium ^c	0.4	1.3
Cadmium	39	1,000
Chromium III (Trivalent)	1,400	10,000
Chromium VI (Hexavalent)	390	10,000
Copper	3,100	10,000
Cyanide	200	10,000
Lead ^d	150	500
Manganese	390	10,000
Mercury	23	610
Nickel	1,000	10,000
Selenium	390	10,000
Silver	200	10,000
Thallium	5.5	140
Vanadium	550	10,000
Zinc	6,000	10,000

^a Estimated quantitation limits

^b Direct exposure criteria for PCBs consistent with the Toxic Substance Control Act (TSCA)

^c Background Levels of Priority Pollutant Metals In Rhode Island Soils, T. O'Connor, RIDEM

^d Direct exposure criteria for Lead consistent with the Rhode Island Department of Health Rules and Regulations for Lead Poisoning Prevention [R23-24.6-PB], as amended

TABLE 2

Appendix D

Photographic Log



Completion of Building 59 Foundation Removal



Completed UIC Excavation



Water Pipe Exiting the UIC Excavation



Water Pipe Within Deep Well House (Building 58)

Appendix E

Waste Manifests for Disposal Material

NY39596142

DIVISION OF SOLID & HAZARDOUS MATERIALS
HAZARDOUS WASTE MANIFEST
P.O. Box 12820, Albany, New York 12212



(Hazardous Waste Manifest 500)

Please type or print. Do not staple.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA No. R I P 0 0 0 0 2 1 3 0 9 0 0 3 0 3		Manifest Doc. No. 00303		2. Page 1 of 1		Information within heavy bold line is not required by Federal Law.					
3. Generator's Name and Mailing Address NAVAL STATION NEWPORT (ENV. DEPT. NSN) 1 Simonpietri Drive Newport, RI 02841 4. Generator's Telephone Number (401) 841-1791						A. NY39596142							
5. Transporter 1 (Company Name) <i>America's Environmental Inc</i>						6. US EPA ID Number MER000500595		B. Generator's ID GOULD ISLAND NEWPORT RI 02841					
7. Transporter 2 (Company Name)						8. US EPA ID Number		C. State Transporter's ID A994374 MF					
9. Designated Facility Name and Site Address CWM CHEMICAL SERVICES, LLC. 1550 BALMER RD. MODEL CITY NY 14107						10. US EPA ID Number N Y D 0 4 9 8 3 6 6 7 9		D. Transporter's Telephone 607 451-7400					
								E. State Transporter's ID					
								F. Transporter's Telephone ()					
								G. State Facility ID					
								H. Facility Telephone (716) 754-8231					
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12. Containers Number		13. Total Quantity		14. Unit Wt/Vol		15. Waste No.	
a. RQ, POLYCHLORINATED BIPHENYLS, SOLID MIXTURE, 9, UN2315, III (Marine Pollutant)						0,0,1 CM		1,450.0		K		EPA STATE 8007	
b.												EPA STATE	
c.												EPA STATE	
d.												EPA STATE	
J. Additional Descriptions for Materials listed Above CR0831 (R007)						K. Handling Codes for Wastes Listed Above							
a.						L <input type="checkbox"/>		c. <input type="checkbox"/>					
b.						b. <input type="checkbox"/>		d. <input type="checkbox"/>					
15. Special Handling Instructions and Additional Information CHEMTREC Emergency Response Number (800)424-9300 WMI Contract ERG#171 PCB OOS DATE <i>10/15/02</i> SERVICE REQUEST # <i>658811</i> Can# <i>200470</i> <i>81566470</i>													
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations. If I am large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR if I am a smaller generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.													
Printed/Typed Name MARK J. RIELLY						Signature <i>M-J Rielly</i>		Mo. Day Year 10 11 02					
17. Transporter 1 Acknowledgement of Receipt of Materials													
Printed/Typed Name Carl M Schiavoni						Signature <i>Carl M Schiavoni</i>		Mo. Day Year 10 11 00					
18. Transporter 2 Acknowledgement of Receipt of Materials													
Printed/Typed Name						Signature		Mo. Day Year					
19. Discrepancy Indication Space PCB WASTE ID = PCB cont. Concrete/soil Act. Rec. 11358K Item 13 weight was estimated by generator. Resolved													
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.													
Printed/Typed Name Michelle Fiedl						Signature <i>Michelle Fiedl</i>		Mo. Day Year 10 11 02					

COPY 1-DISPOSER STATE - MAILED BY TSD FACILITY



CWM Chemical Services, Inc.
Model City, NY

(34)

2.1
Cubic Yards

8160470 A 494374 ME

Receipt # 65837 CR0831 ME 017
Trailer License Plate # and State

Service Reg. # 402 RT6 300470
Permit # 402 RT6 300470
Con #

Transporter Name AmeiTech Environmental
Tractor/Trailer/Roll-off # 122
Driver's Name Carl M. Schiavone Generator Newport News Station

08:53 86520 LB G 2
10/16/02
12:12 41480 LB G 1
10/16/02

25040P
11358K
12.52 TONS

Scheduled Arrival: _____
Actual Arrival: _____
Date _____ Time _____
Date _____ Time In _____ Time Out _____

Arrived during Blackout? Y / N Notified DEC? Y / N

- Leaker
- Permit Violation
- Placarding/Veh. I.D. Violation
- Other (specify _____)

Receiving: <u>MF</u>	_____
Initials	Comments

- Bulk to Landfill
- No wet line
- Flatbed
- Stabilization
- Drums
- Tanker
- Transformers

Laboratory
Time In _____ Time Out _____ Initials _____ Comments _____

Stabilization
Time In _____ Time Out _____ Initials _____ Gross Wt. _____ Comments _____

Landfill
Time In _____ Time Out _____ Initials _____ Comments _____

Other
Time In _____ Time Out _____ Initials _____ Comments _____

Aqueous Treatment
Time In _____ Time Out _____ Signature (NO Initials) _____ Comments _____

Facility Personnel (please initial)

- | | |
|--|--|
| _____ Smoking or eating in prohibited areas | _____ Leaving truck unattended |
| _____ Failure to obey instructions of facility personnel | _____ Failure to display overweight flag |
| _____ Failure to wear appropriate PPE | _____ Improper tarping or detarpin |
| _____ Unsafe driving practices | _____ Overweight upon arrival |
| _____ Other (specify _____) | |

Security Guard Initials: _____
(Indicating receipt of Wash Bay pass, if necessary)

Driver's Comments _____

NYB9596151

DIVISION OF SOLID & HAZARDOUS MATERIALS
HAZARDOUS WASTE MANIFEST
 P.O. Box 12820, Albany, New York 12212

(Hazardous Waste Manifest 500)

Please type or print. Do not staple.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA No. R I P 0 0 0 0 2 1 3 0 9		Manifest Doc. No. 00304		2. Page 1 of 1		Information within heavy bold line is not required by Federal Law.			
3. Generator's Name and Mailing Address NAVAL STATION NEWPORT (ENV. DEPT. N8N) 1 Simonpietri Drive Newport, RI 02841						A. NYB9596151					
4. Generator's Telephone Number (401) 841-1791						B. Generator's ID GOULD ISLAND NEWPORT, RI 02841					
5. Transporter 1 (Company Name) <i>AmeriTech Environment Inc</i>			8. US EPA ID Number <i>M.F.R.000800896</i>			C. State Transporter's ID <i>449437U ME</i>					
7. Transporter 2 (Company Name)			8. US EPA ID Number			D. Transporter's Telephone <i>2075421900</i>					
9. Designated Facility Name and Site Address CWM CHEMICAL SERVICES, LLC 1550 Balmer Road Model City, NY 14107						10. US EPA ID Number N Y D 0 4 9 8 3 6 6 7 9					
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						12. Containers Number Type		13. Total Quantity		14. Unit Wt/Vol	
a. RQ, POLYCHLORINATED BIPHENYLS, SOLID MIXTURE, 9, UN2315, III (Marine Pollutant)						0, 0, 1 CM		1,600.00		K	
b.										EPA STATE E007	
c.										EPA STATE	
d.										EPA STATE	
J. Additional Descriptions for Materials listed Above						K. Handling Codes for Wastes Listed Above					
a. CR0831 (R007)						a.		c.			
b.						b.		d.			
15. Special Handling Instructions and Additional Information CHEMTREC Emergency Response Number (800) 424-9300 WMI Contract ERG#171 PCB OOS DATE <u>10-17-02</u> SERVICE REQUEST # <u>658218</u> can # <u>200377</u> 81566609											
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations. If I am large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR if I am a smaller generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.											
Printed/Typed Name <i>Renee Lavoie</i>				Signature <i>Renee Lavoie</i>				Mo. Day Year <i>10/17/02</i>			
17. Transporter 1 Acknowledgement of Receipt of Materials											
Printed/Typed Name <i>Carl M Schiavone</i>				Signature <i>Carl M Schiavone</i>				Mo. Day Year <i>10/17/02</i>			
18. Transporter 2 Acknowledgement of Receipt of Materials											
Printed/Typed Name				Signature				Mo. Day Year			
19. Discrepancy Indication Space <i>PCB waste ID = concrete & soil</i> <i>Actual pack 8700K - Item 13 was estimated per generator</i> <i>Item 13 = 12</i>											
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19. <i>Resolved</i>											
Printed/Typed Name <i>SHELLEY ROOP</i>				Signature <i>Shelley Roop</i>				Mo. Day Year <i>10/18/02</i>			

In case of emergency or spill, immediately call the National Response Center (800) 424-9302 and the NYS Department of Environmental Conservation (914) 752-1000.



Transporter Log
CWM Chemical Services, Inc.
 Model City, NY

(7)

20
 Cubic Yards

81566609 Receipt #
 658218 Service Req. #
 AmeriTech Environmental Transporter Name
 MICHELY SCHROEDER Driver's Name

A494374 MF Trailer License Plate # and State
 CRO531 ME017 Profile # Permit #
 402 RT6 #200377 Tractor/Trailer/Roll-off #
 New port New ec. Station Generator

60720 LB G 2
 08:04
 10/18/02
 08:10 41540 LB G 1
 10/18/02

19180 P

9.59 TONS 8700 K

Scheduled Arrival: _____
 Actual Arrival: _____
 Date Time Date Time In Time Out

Arrived during Blackout? Y / N Notified DEC? Y / N

- Leaker
- Permit Violation
- Placarding/Veh. I.D. Violation
- Other (specify _____)

Receiving: Shu
 Initials Comments

- Bulk to Landfill
- No wet line
- Flatbed
- Stabilization
- Drums
- Tanker
- Transformers

Laboratory GS
 Time In Time Out Initials Comments

Stabilization
 Time In Time Out Initials Gross Wt. Comments

Landfill MI
 Time In Time Out Initials Comments

Other
 Time In Time Out Initials Comments

Aqueous Treatment
 Time In Time Out Signature (NO Initials) Comments

Facility Personnel (please initial)

- _____ Smoking or eating in prohibited areas
- _____ Leaving truck unattended
- _____ Failure to obey instructions of facility personnel
- _____ Failure to display overweight flag
- _____ Failure to wear appropriate PPE
- _____ Improper tarping or detarpin
- _____ Unsafe driving practices
- _____ Overweight upon arrival
- _____ Other (specify _____)

Security Guard Initials: _____
 (Indicating receipt of Wash Bay pass, if necessary)

Driver's Comments