GOULD ISLAND BUILDING DEMOLITION
CONCRETE ROADWAY REMOVAL - ADDENDUM NO. 5

GOULD ISLAND
NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

Contract No. N62472-99-D-0032
Contract Task Order No. 29

Issued:
June 8, 2001

Prepared for:

ENGINEERING FIELD ACTIVITY - NORTHEAST
NAVAL FACILITIES ENGINEERING COMMAND
10 Industrial Highway
Lester, PA 19113

Prepared by:

FOSTER WHEELER ENVIRONMENTAL CORPORATION
2300 Lincoln Highway
One Oxford Valley, Suite 200
Langhorne, Pennsylvania 19047

1210

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WORKPLAN2001/01WP0039

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1.0 INTRODUCTION

The Engineering Field Activity - Northeast contracted Foster Wheeler Environmental Corporation (Foster Wheeler) to provide Demolition of Selected Buildings on Gould Island located in Newport, Rhode Island. As part of the contract, Foster Wheeler prepared a work plan for the project entitled, "Work Plan for Gould Island Demolition of Selected Buildings - Phases I, II, & III," (the "Work Plan"). This addendum has been prepared to focus on removal of the concrete roadways located adjacent to the building floor slabs.

1.1 Project Overview

Gould Island is located in Narragansett Bay approximately 1.5 miles from Naval Station, Newport. As described in the Work Plan, Foster Wheeler performed asbestos abatement (Section 4.3 of the Work Plan), hazardous waste removal activities (Section 4.4 of the Work Plan), demolition of designated buildings (Section 4.5 of the Work Plan), and removal of designated building slabs and foundations (Section 5.0 of the Work Plan and Work Plan Addendum No. 3) on Gould Island. Refer to Appendix A (Drawing 1 of 3) for a Gould Island Site Plan. Foster Wheeler is performing this work in three phases.

Phases I and II included asbestos abatement, hazardous waste removals, and demolition of the buildings to the slab elevation only. Phase I and II have been completed with the exception of Building 35. Building 35 was demolished, in the Fall of 2000, to the point where the concrete roof and structural steel remained. The completion of Building 35 demolition occurred in May 2001. Phase III activities included the removal and crushing of the concrete slabs and foundations associated with the selected building demolition. Foster Wheeler is removing and disposing of concrete and soil associated with the PCB contaminated transformer vaults under Contract Task Order No. 47. Refer to Appendix B (Drawing 2 of 3) for building details / sample locations and Appendix C for analytical results associated with these transformer vaults.

1.2 Current Conditions/Sampling Results

Foster Wheeler has removed and stockpiled concrete roadway material from the south end of Building 32 and 33. Foster Wheeler also removed and stockpiled the concrete slab associated with Building 70 (Quonset Hut). Refer to Appendix D (Drawing 3 of 3) for existing and removed concrete roadway locations. Two composite concrete chip samples were collected for RCRA 8 Metals analysis on April 4, 2001. One composite sample was collected from the concrete stockpile and one composite sample was collected from insitu concrete roadway along the westside of Building 32 and south/west side of Building 33. A third composite concrete chip sample was collected from the remaining insitu concrete roadway on April 25, 2001. The analytical results for all three samples show an exceedence of the Rhode Island Direct Exposure Criteria (RIDEC) Residential Standard for Arsenic. Refer to Appendix E for analytical results. On May 16, 2001, two composite concrete chip samples were collected (one from each concrete stockpile) for waste characterization analysis which includes PCB's, Pesticides, SVOC's, VOC's, Reactivity, Corrosivity, RCRA 8 Metals, and TCLP Metals. Analytical results for the waste characterization can be found as Appendix F.

2.0 CONCRETE ROADWAY REMOVAL

2.1 Introduction

Foster Wheeler conducted roadway removal activities on April 3-5, 2001. Concrete roadway material was removed and stockpiled from the southern end of the Building 32 floor slab as follows: south end (240 feet long by 36 feet wide), east side (160 feet long by 12 feet wide), west side (90 feet long by 24 feet wide). Concrete roadway material was removed and stockpiled from the southern end of the Building 33 floor slab as follows: south side (50 feet long by 12 feet wide), west side (80 feet long by 24 feet wide). Foster Wheeler also removed and stockpiled the concrete slab associated with Building 70 (Quonset Hut) and Building 52 (Riggers Storage) on May 1, 2001. Refer to Appendix D (Drawing 3 of 3) for locations. One section of roadway approximately 12 feet wide was left in place along the southern end of the site to preserve the integrity of the chain link fence which delineates the boundary between the Navy and the State of Rhode Island properties. As directed by the Navy, each drainage manhole located within the roadway was delineated with an approximate five (5) foot buffer zone of concrete to remain in place. Foster Wheeler utilized a concrete saw to create the separation between concrete to remain and the concrete to be removed.

2.2 Concrete Roadway Removal

Prior to concrete roadway removal in the vicinity of each Transformer Vault, Foster Wheeler will collect chip samples of the perimeter concrete at a distance of approximately 1.5 meters from the foundation wall using the 1.5-meter grid spacing. Foster Wheeler will perform a minimum of two lines of sampling beyond the vault to confirm that contamination does not exist. This analytical will be used to determine the limits of non-PCB contaminated concrete removal around each vault. Concrete with detectable levels of PCB contamination will be left in place. On December 20, 2000, concrete chip samples were collected from the perimeter concrete around Transformer Vault 60 to determine the extent of PCB contamination beyond the building slab. Refer to Appendix E for analytical results.

Foster Wheeler will begin by removing the existing chain link fence that traverses across the southern edge of the site. The remaining approximately 12-foot wide concrete roadway, also located along the southern edge of the site, will then be removed, processed and stockpiled for disposal. Concrete slab/roadway associated with Building 36 (Range Maintenance) and the Ferry Slip will remain in place for erosion control purposes.

Foster Wheeler will remove concrete roadway proceeding in a northerly direction along the eastside of the Building 32 floor slab, the south and west side of the Building 33 floor slab (including the remaining slab area associated with Building 70) and between the Building 32 and 33 floor slabs. Foster Wheeler will continue with roadway removal in a northerly direction from the north end of the Building 32 floor slab to the barge landing ramp. The diesel fuel tank,

located in this area, will be relocated to facilitate roadway removal. Foster Wheeler will complete the roadway removal with the relocation/demobilization of the Foster Wheeler office trailer and subsequent removal of the concrete roadway in this area. In each area, manholes will be left intact with a five (5) foot buffer zone of concrete. All concrete removed will be processed and stockpiled on the Building 32 floor slab prior to disposal.

2.3 Restoration

Foster Wheeler will place 10-mil polyethylene sheeting over the soil in all roadway areas prior to backfill. Foster Wheeler will not perform any soil sampling prior to the placement of poly and gravel. This will function as a visible delineation between the existing soil and the backfill. The roadways will be backfilled with six inches of 3" minus clean gravel.

Foster Wheeler will install approximately 800 feet of new chain link fence with barbed wire equivalent to the fence that was removed. This fence will traverse the island in a generally east to west direction along the southern boundary of the site.

2.4 Storage, Transportation and Disposal

All concrete roadway material will be stockpiled on the Building 32 floor slab. Upon completion of waste characterization analysis this material will be loaded into the appropriate containers (tri-axles, roll-offs) for off-site disposal at a Foster Wheeler approved disposal facility.

3.0 SAMPLING AND ANALYSIS

3.1 Sample Locations/Frequency

Foster Wheeler will collect chip samples of the perimeter concrete of each Transformer Vault at a distance of approximately 1.5 meters from the foundation wall using the 1.5-meter grid spacing.

Composite chip samples will be collected from the stockpiled concrete on a frequency of one sample for every 500 cubic yards for disposal purposes.

3.2 Sample Tracking

Each sample will be designated by an alphanumeric code that will identify the vault, location, and sequential sample number. The site code for Gould Island is GI. Concrete chip samples will designated C29-CONC (GI-C29-CONC-1)

3.3 Sampling Procedures

Concrete chip samples will be collected and processed into small chips/dust using a hammer and/or hammer drill. Care will be taken to prevent cross-contamination during the collection process. The chips/dust will be placed in laboratory provided bottleware, packed in coolers with ice and shipped for laboratory analysis.

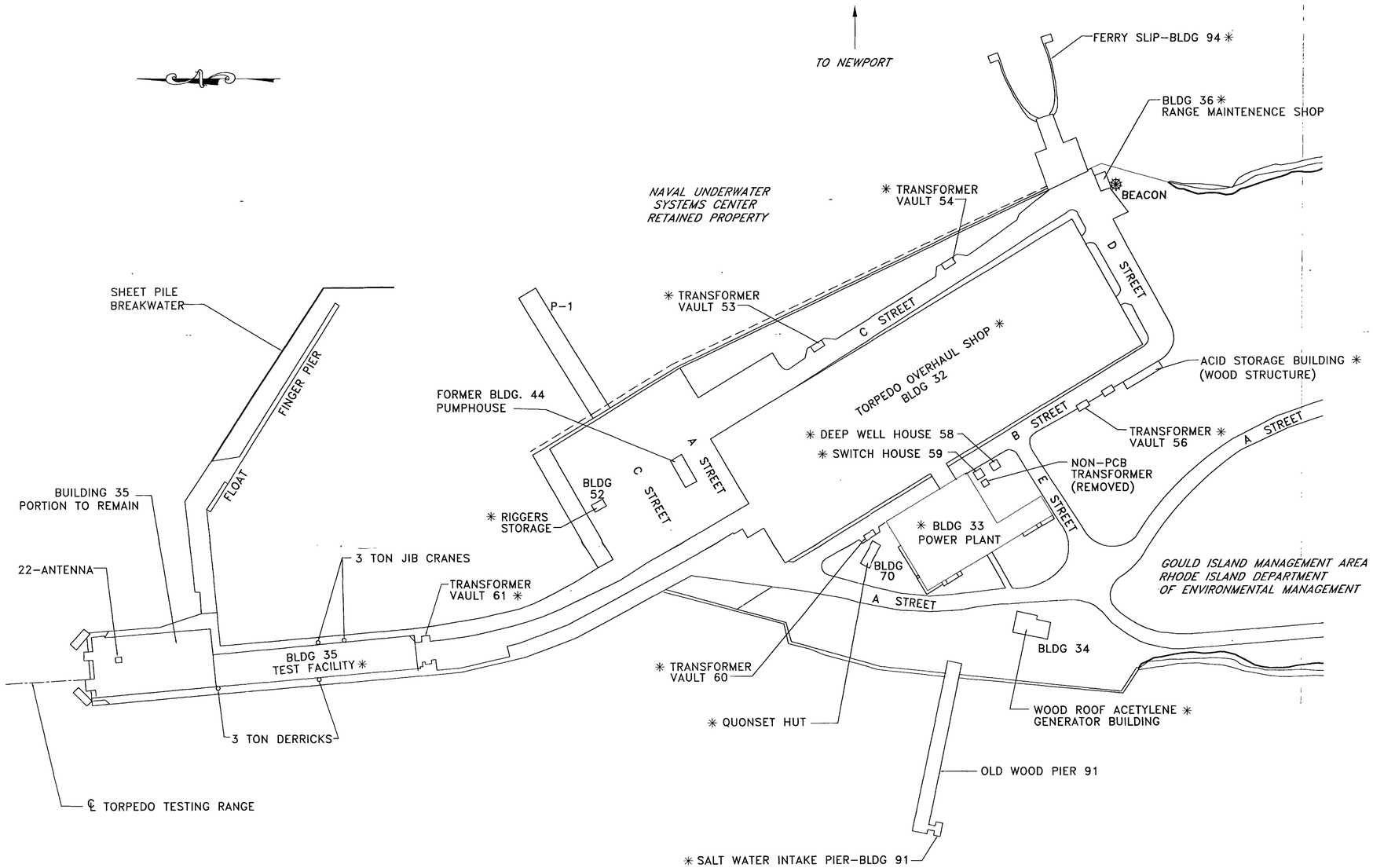
3.4 Analysis

Concrete chip samples from the perimeter of the Transformer Vaults will go to a laboratory for PCB analysis.

Concrete chip samples from the stockpiles will go to a laboratory for waste characterization analysis. This analysis will include PCB's, Pesticides, SVOC's, VOC's, Reactivity, Corrosivity, RCRA 8 Metals, and TCLP Metals.

APPENDIX A

GOULD ISLAND SITE PLAN



LEGEND:

✳ BUILDING HAS BEEN DEMOLISHED

0 200 400

SCALE IN FEET

SOURCE:

BASE PLAN WAS DERIVED AND DIGITIZED FROM NUSC DWG 71–76, CODE ID NO. 80091 DATED JUNE 30, 1971 AND REVISED JULY 22, 1983, ENTITLED "ACTIVITY UTILIZATION – GOULD ISLAND".

CADDFILE: GOULD ISLAND\ADDENDUM5\SHEET1.DWG

DATE CREATED
LATEST CHANGE
CHANGED BY:

FOSTER WHEELER ENVIRONMENTAL

PREP BY DATE APPRVD

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
LESTER PENNSYLVANIA

ENGINEERING FIELD ACTIVITY – NORTHEAST

GOULD ISLAND
NEWPORT, RHODE ISLAND
SITE PLAN
DRAWING 1 OF 3

SEAL AREA

RA AND/OR PE SEAL

SAT TO DATE

CODE I D NO. 80091

SCALE :

SPEC. NO. 04–

CONSTRN CONTR. NO. N62472–

NAVFAC DRAWING NO.

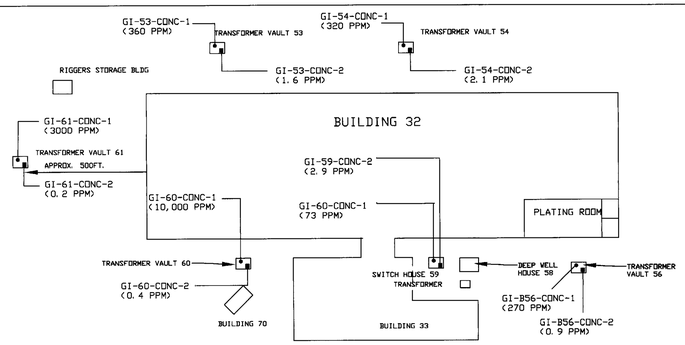
SHEET 1 OF 3

SIZE: D

DIS. SH NO.

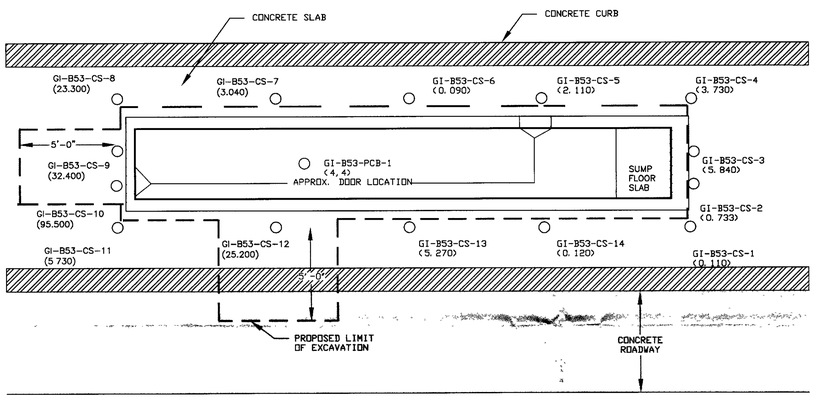
APPENDIX B

TRANSFORMER VAULT BUILDING DETAILS



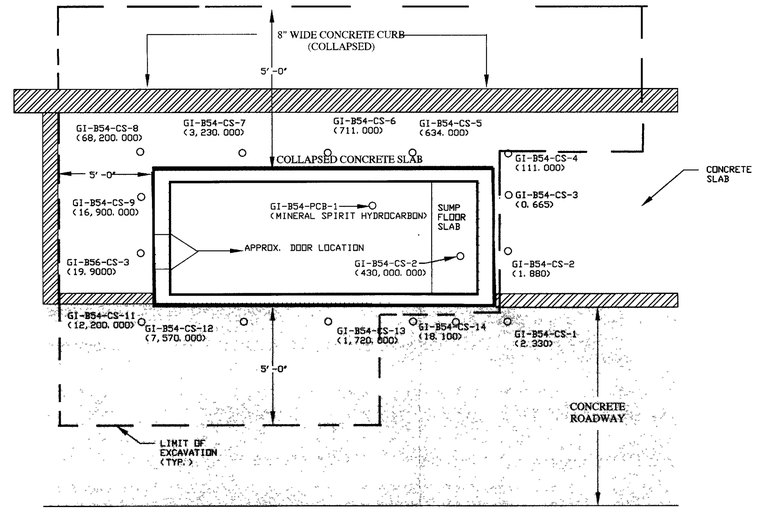
BUILDINGS 53, 54, 56, 59, 60 AND 61
PCB SAMPLING LOCATIONS AND ANALYTICAL RESULTS

* PRIOR TO BUILDING DEMOLITION
● – GRAB SAMPLE (FLOOR)
■ – 4-POINT COMPOSITE WALL SAMPLE
SAMPLING PERFORMED ON 6/14/00



TRANSFORMER VAULT BUILDING 53 SAMPLING GRID

APPROXIMATE INTERIOR SLAB SIZE = 6' x 15'
PERIMETER SAMPLED ON 4/12/01



TRANSFORMER VAULT - BUILDING 54 SAMPLING GRID

APPROXIMATE INTERIOR SLAB SIZE = 6' x 15'
PERIMETER SAMPLED ON 4/12/01

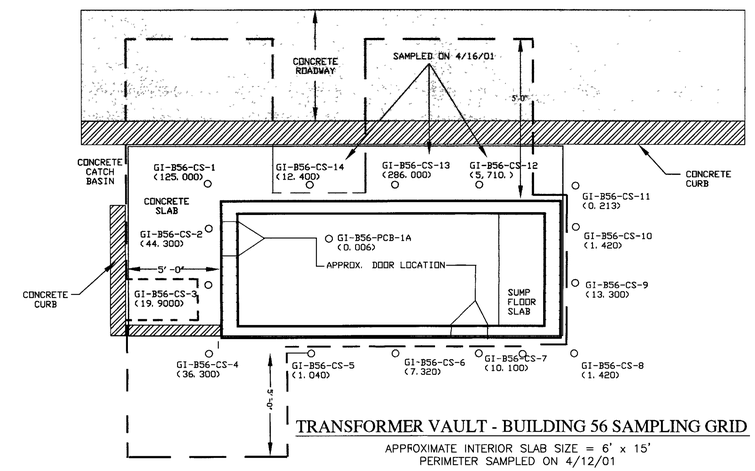
LEGEND

- CONCRETE SLAB
- CONCRETE FOUNDATION
- 8"HIGH CONCRETE CURB
- LIMIT OF EXCAVATION
- CONCRETE ROADWAY
- CONCRETE RETAINING WALL

NOTE: ALL PCB RESULTS IN PPM

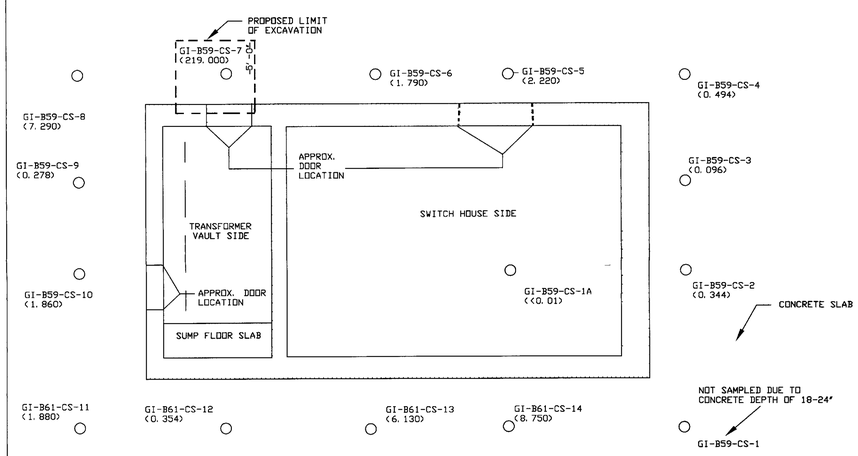
N

DRAWING NOT TO SCALE



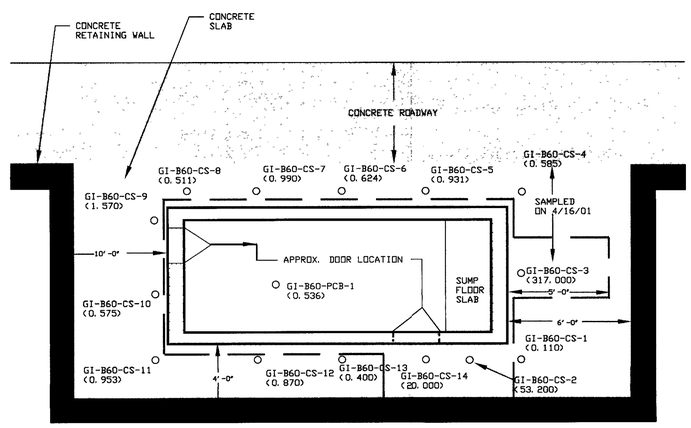
TRANSFORMER VAULT - BUILDING 56 SAMPLING GRID

APPROXIMATE INTERIOR SLAB SIZE = 6' x 15'
PERIMETER SAMPLED ON 4/12/01



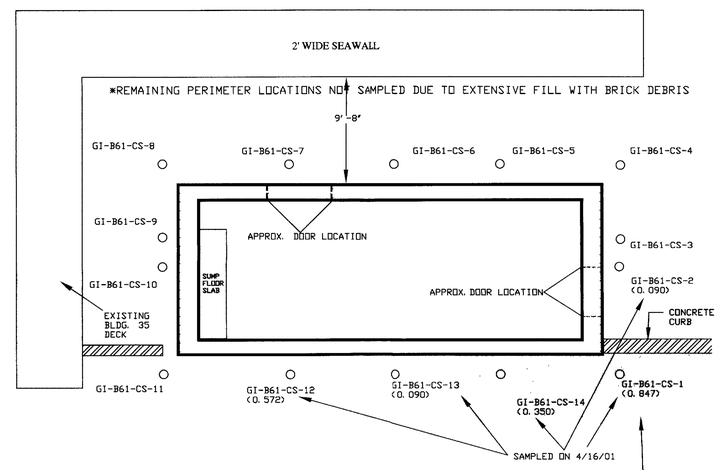
SWITCH HOUSE - BUILDING 59 SAMPLING GRID

APPROXIMATE INTERIOR SLAB SIZE = 15' x 16'
PERIMETER SAMPLED ON 4/12/01



TRANSFORMER VAULT - BUILDING 60 SAMPLING GRID

APPROXIMATE INTERIOR SLAB SIZE = 6' x 15'
PERIMETER SAMPLED ON 4/12/01



TRANSFORMER VAULT- BUILDING 61 SAMPLING GRID

APPROXIMATE INTERIOR SLAB SIZE = 9' x 14'

FOSTER WHEELER ENVIRONMENTAL

DSGN. DR. CH. DWG. CHK.
SUBMITTED BY: (TITLE) (DATE)
NOVITCH (PRIN. MEMBER) HP RD DR DM PPE OFFICER IN CHARGE

PREP BY DATE APPRVD

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND
LESTER — PENNSYLVANIA
ENGINEERING FIELD ACTIVITY – NORTHEAST
GOULD ISLAND – CTO 29
NEWPORT, RHODE ISLAND
JUNE 2001
DRAWING 2 OF 3

SEAL AREA
RA AND/OR PE SEAL

SAT TO DATE
CODE I D NO. 80091
SCALE
SPEC NO 04–
CONSTRN CONTR NO N62472–
NAVFAC DRAWING NO.
SHEET OF
SIZE: D DIS. SH NO.

DATE CREATED
LATEST CHANGE
CHANGED BY:

GOULD ISLAND\ADDENDUM5\SHEET 3.DWG

APPENDIX C

TRANSFORMER VAULT ANALYTICAL RESULTS

GOULD ISLAND DEMOLITION
NAVAL STATION, NEWPORT, CTO 47
PCB SAMPLING DETECTION TABLE
DATE: 6/7/01

LOCATION ID	DATE	TIME	MATRIX	ANALYSIS	PARAMETER	DETECTION (ppm)	ACTION LEVEL	COMMENTS
GI-B54-PCB-1	03/27/01	1245	GW	Fingerprint	Mineral spirit hydrocarbon	NA		WR, FS
GI-B54-PCB-2	03/27/01	1250	OIL	PCB	**Arochlor-1260**	**430,000**	**25**	WR, FS
GI-B54-PCB-3	05/21/01	1600	OIL	PCB	**Arochlor-1260**	**13,200**	**25**	WR, FS
GI-B54-CS-1	04/12/01	1025	S	PCB	Arochlor-1260	2.330	25	WR, FS, SBC
GI-B54-CS-2	04/12/01	1028	S	PCB	Arochlor-1260	1.880	25	WR, FS, SBC
GI-B54-CS-3	04/12/01	1031	S	PCB	Arochlor-1260	0.665	25	WR, FS, SBC
GI-B54-CS-4	04/12/01	1034	S	PCB	**Arochlor-1260**	**111.000**	**25**	WR, FS, SBC
GI-B54-CS-5	04/12/01	1037	S	PCB	**Arochlor-1260**	**634.000**	**25**	WR, FS, SBC
GI-B54-CS-6	04/12/01	1040	S	PCB	**Arochlor-1260**	**711.000**	**25**	WR, FS, SBC
GI-B54-CS-7	04/12/01	1043	S	PCB	**Arochlor-1260**	**3,230.000**	**25**	WR, FS, SBC
GI-B54-CS-8	04/12/01	1046	S	PCB	**Arochlor-1260**	**68,200.000**	**25**	WR, FS, SBC
GI-B54-CS-9	04/12/01	1050	S	PCB	**Arochlor-1260**	**16,900.000**	**25**	WR, FS, SBC
GI-B54-CS-10	04/12/01	1053	S	PCB	**Arochlor-1260**	**802.000**	**25**	WR, FS, SBC
GI-B54-CS-11	04/12/01	1057	S	PCB	**Arochlor-1260**	**12,200.000**	**25**	WR, FS, SBC
GI-B54-CS-12	04/12/01	1100	S	PCB	**Arochlor-1260**	**7,570.000**	**25**	WR, FS, SBC
GI-B54-CS-13	04/12/01	1105	S	PCB	**Arochlor-1260**	**1,720.000**	**25**	WR, FS, SBC
GI-B54-CS-14	04/12/01	1108	S	PCB	Arochlor-1260	18.100	25	WR, FS, SBC
GI-B56-PCB-1	03/29/01	1325	GW	PCB	NA	NA		WR, FR - Sample contaminated at Lab
GI-B56-PCB-1A	04/02/01	1415	GW	PCB	**Arochlor-1260**	**0.006**		WR, FR - Re-sampled
GI-B56-CS-1	04/12/01	1120	S	PCB	**Arochlor-1260**	**125.000**	**25**	WR, FR
GI-B56-CS-2	04/12/01	1123	S	PCB	**Arochlor-1260**	**44.300**	**25**	WR, FR
GI-B56-CS-3	04/12/01	1126	S	PCB	Arochlor-1260	19 900	25	WR, FR
GI-B56-CS-4	04/12/01	1129	S	PCB	**Arochlor-1260**	**36.300**	**25**	WR, FR, SBC
GI-B56-CS-5	04/12/01	1132	S	PCB	Arochlor-1260	1.040	25	WR, FR, SBC
GI-B56-CS-6	04/12/01	1135	S	PCB	Arochlor-1260	7.320	25	WR, FR, SBC
GI-B56-CS-7	04/12/01	1138	S	PCB	Arochlor-1260	10.100	25	WR, FR, SBC
GI-B56-CS-8	04/12/01	1140	S	PCB	Arochlor-1260	1.420	25	WR, FR, SBC
GI-B56-CS-9	04/12/01	1143	S	PCB	Arochlor-1260	13.300	25	WR, FR, SBC
GI-B56-CS-10	04/12/01	1146	S	PCB	Arochlor-1260	1.420	25	WR, FR, SBC

Bold = excedence of Action Level

GW = Groundwater.

S = Soil

FS = Floor slab removed and disposed of in March/April 2001

FR = Floor slab remains.

SBC = Soil sample collected from beneath concrete slab.

GOULD ISLAND DEMOLITION
NAVAL STATION, NEWPORT, CTO 47
PCB SAMPLING DETECTION TABLE
DATE: 6/7/01

LOCATION ID	DATE	TIME	MATRIX	ANALYSIS	PARAMETER	DETECTION (ppm)	ACTION LEVEL	COMMENTS
WR = Building walls removed and disposed of in 2000.								
GI-B56-CS-11	04/12/01	1149	S	PCB	Arochlor-1260	0.213	25	WR, FR, SBC
GI-B56-CS-12	04/16/01	1452	S	PCB	**Arochlor-1260**	**5,710.000**	**25**	WR, FR
GI-B56-CS-13	04/16/01	1455	S	PCB	**Arochlor-1260**	**286.000**	**25**	WR, FR
GI-B56-CS-14	04/16/01	1458	S	PCB	Arochlor-1260	12.400	25	WR, FR
GI-B60-PCB-1	04/12/01	1405	GW	PCB	**Arochlor-1260**	**0.536**		WR, FR
GI-B60-CS-1	04/12/01	1500	S	PCB	Arochlor-1260	0.110	25	WR, FR, SBC
GI-B60-CS-2	04/12/01	1529	S	PCB	**Arochlor-1260**	**53.200**	**25**	WR, FR, SBC
GI-B60-CS-3	04/16/01	1332	S	PCB	**Arochlor-1260**	**317.000**	**25**	WR, FR, SBC
GI-B60-CS-4	04/16/01	1334	S	PCB	Arochlor-1260	0.585	25	WR, FR, SBC
GI-B60-CS-5	04/12/01	1358	S	PCB	Arochlor-1260	0.931	25	WR, FR, SBC
GI-B60-CS-6	04/12/01	1401	S	PCB	Arochlor-1260	0.624	25	WR, FR, SBC
GI-B60-CS-7	04/12/01	1404	S	PCB	Arochlor-1260	0.990	25	WR, FR, SBC
GI-B60-CS-8	04/12/01	1512	S	PCB	Arochlor-1260	0.511	25	WR, FR, SBC
GI-B60-CS-9	04/12/01	1410	S	PCB	Arochlor-1260	1.570	25	WR, FR, SBC
GI-B60-CS-10	04/12/01	1519	S	PCB	Arochlor-1260	0.575	25	WR, FR, SBC
GI-B60-CS-11	04/12/01	1515	S	PCB	Arochlor-1260	0.953	25	WR, FR, SBC
GI-B60-CS-12	04/12/01	1520	S	PCB	Arochlor-1260	0 870	25	WR, FR, SBC
GI-B60-CS-13	04/12/01	1523	S	PCB	Arochlor-1260	0 400	25	WR, FR, SBC
GI-B60-CS-14	04/12/01	1526	S	PCB	Arochlor-1260	20.000	25	WR, FR, SBC
GI-B53-PCB-1	03/27/01	1550	GW	PCB	Arochlor-1260	4.4		WR, FS
GI-B53-CS-1	04/12/01	0920	S	PCB	Arochlor-1260	0.110	25	WR, FS, SBC
GI-B53-CS-2	04/12/01	0923	S	PCB	Arochlor-1260	0 733	25	WR, FS, SBC
GI-B53-CS-3	04/12/01	0926	S	PCB	Arochlor-1260	5.840	25	WR, FS, SBC
GI-B53-CS-4	04/12/01	0930	S	PCB	Arochlor-1260	3.730	25	WR, FS, SBC
GI-B53-CS-5	04/12/01	0933	S	PCB	Arochlor-1260	2.110	25	WR, FS, SBC
GI-B53-CS-6	04/12/01	0936	S	PCB	Arochlor-1260	0.090	25	WR, FS, SBC
GI-B53-CS-7	04/12/01	0939	S	PCB	Arochlor-1260	3.040	25	WR, FS, SBC

Bold = excedence of Action Level

GW = Groundwater.

S = Soil

FS = Floor slab removed and disposed of in March/April 2001

FR = Floor slab remains.

SBC = Soil sample collected from beneath concrete slab.

GOULD ISLAND DEMOLITION
NAVAL STATION, NEWPORT, CTO 47
PCB SAMPLING DETECTION TABLE
DATE: 6/7/01

LOCATION ID	DATE	TIME	MATRIX	ANALYSIS	PARAMETER	DETECTION (ppm)	ACTION LEVEL	COMMENTS
WR = Building walls removed and disposed of in 2000.								
GI-B53-CS-8	04/12/01	0942	S	PCB	Arochlor-1260	23 300	25	WR, FS, SBC
GI-B53-CS-9	04/12/01	0945	S	PCB	**Arochlor-1260**	**32.400**	**25**	WR, FS, SBC
GI-B53-CS-10	04/12/01	0948	S	PCB	**Arochlor-1260**	**95.500**	**25**	WR, FS, SBC
GI-B53-CS-11	04/12/01	0951	S	PCB	Arochlor-1260	5 730	25	WR, FS, SBC
GI-B53-CS-12	04/12/01	0954	S	PCB	**Arochlor-1260**	**25.200**	**25**	WR, FS, SBC
GI-B53-CS-13	04/12/01	0957	S	PCB	Arochlor-1260	5.270	25	WR, FS, SBC
GI-B53-CS-14	04/12/01	1000	S	PCB	Arochlor-1260	0 120	25	WR, FS, SBC
GI-B59-PCB-1	03/29/01	1335	GW	PCB	NA	NA		WR, FS - Sample contaminated at Lab
GI-B59-PCB-1A	04/02/01	1420	GW	PCB	**Arochlor-1260**	<.001		WR, FS - Re-sampled
GI-B59-CS-1	----	----	S	PCB	Arochlor-1260	----	25	WR, FS - Not Sampled-Extensive Conc.
GI-B59-CS-2	04/12/01	1243	S	PCB	Arochlor-1260	0 344	25	WR, FS
GI-B59-CS-3	04/12/01	1246	S	PCB	Arochlor-1260	0 096	25	WR, FS
GI-B59-CS-4	04/12/01	1249	S	PCB	Arochlor-1260	0 494	25	WR, FS
GI-B59-CS-5	04/12/01	1252	S	PCB	Arochlor-1260	2 220	25	WR, FS
GI-B59-CS-6	04/12/01	1255	S	PCB	Arochlor-1260	1.790	25	WR, FS
GI-B59-CS-7	04/12/01	1258	S	PCB	**Arochlor-1260**	**219.000**	**25**	WR, FS
GI-B59-CS-8	04/12/01	1300	S	PCB	Arochlor-1260	7.290	25	WR, FS
GI-B59-CS-9	04/12/01	1303	S	PCB	Arochlor-1260	0 278	25	WR, FS
GI-B59-CS-10	04/12/01	1306	S	PCB	Arochlor-1260	1.860	25	WR, FS
GI-B59-CS-11	04/12/01	1309	S	PCB	Arochlor-1260	1.880	25	WR, FS
GI-B59-CS-12	04/12/01	1312	S	PCB	Arochlor-1260	0 354	25	WR, FS
GI-B59-CS-13	04/12/01	1315	S	PCB	Arochlor-1260	6.130	25	WR, FS
GI-B59-CS-14	04/12/01	1318	S	PCB	Arochlor-1260	8 750	25	WR, FS
GI-B61-CS-1	04/16/01	1359	S	PCB	Arochlor-1260	0 847	25	WR, FS, SBC
GI-B61-CS-2	04/16/01	1401	S	PCB	Arochlor-1260	0.090	25	WR, FS, SBC
GI-B61-CS-3	----	----	S	PCB	Arochlor-1260	----	25	WR, FS - Not Sampled-Extensive Fill
GI-B61-CS-4	----	----	S	PCB	Arochlor-1260	----	25	WR, FS - Not Sampled-Extensive Fill

Bold = excedence of Action Level

GW = Groundwater.

S = Soil

FS = Floor slab removed and disposed of in March/April 2001

FR = Floor slab remains.

SBC = Soil sample collected from beneath concrete slab.

GOULD ISLAND DEMOLITION
NAVAL STATION, NEWPORT, CTO 47
PCB SAMPLING DETECTION TABLE
DATE: 6/7/01

LOCATION ID	DATE	TIME	MATRIX	ANALYSIS	PARAMETER	DETECTION (ppm)	ACTION LEVEL	COMMENTS
WR = Building walls removed and disposed of in 2000.								
GI-B61-CS-5	----	----	S	PCB	Arochlor-1260	----	25	WR, FS - Not Sampled-Extensive Fill
GI-B61-CS-6	----	----	S	PCB	Arochlor-1260	----	25	WR, FS - Not Sampled-Extensive Fill
GI-B61-CS-7	----	----	S	PCB	Arochlor-1260	----	25	WR, FS - Not Sampled-Extensive Fill
GI-B61-CS-8	----	----	S	PCB	Arochlor-1260	----	25	WR, FS - Not Sampled-Extensive Fill
GI-B61-CS-9	----	----	S	PCB	Arochlor-1260	----	25	WR, FS - Not Sampled-Extensive Fill
GI-B61-CS-10	----	----	S	PCB	Arochlor-1260	----	25	WR, FS - Not Sampled-Extensive Fill
GI-B61-CS-11	----	----	S	PCB	Arochlor-1260	----	25	WR, FS - Not Sampled-Extensive Fill
GI-B61-CS-12	04/16/01	1347	S	PCB	Arochlor-1260	0 573	25	WR, FS
GI-B61-CS-13	04/16/01	1530	S	PCB	Arochlor-1260	0.090	25	WR, FS
GI-B61-CS-14	04/16/01	1343	S	PCB	Arochlor-1260	0.350	25	WR, FS, SBC

Bold = excedence of Action Level

GW = Groundwater.

S = Soil

WR = Building walls removed and disposed of in 2000.

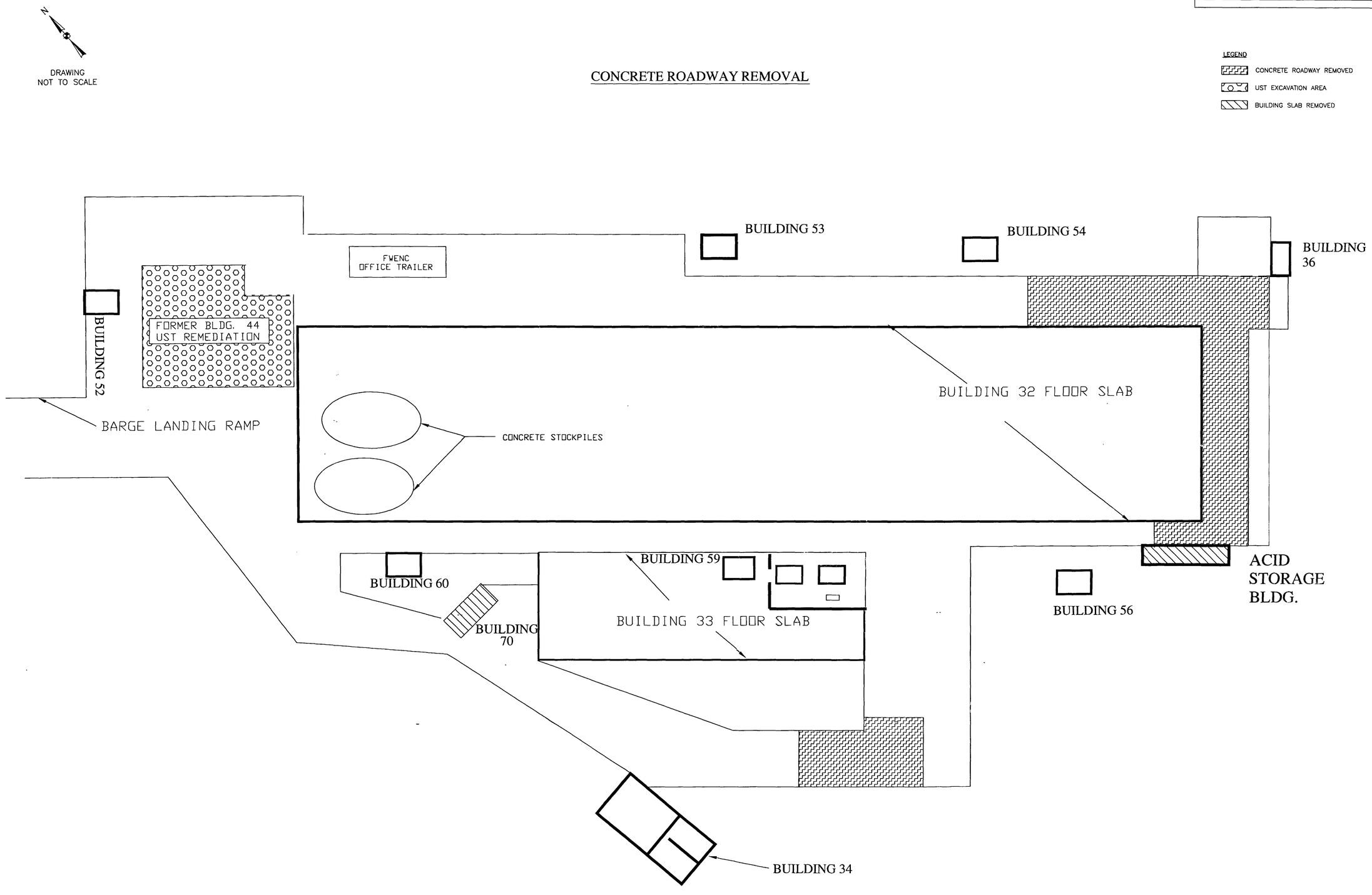
FS = Floor slab removed and disposed of in March/April 2001

FR = Floor slab remains.

SBC = Soil sample collected from beneath concrete slab.

APPENDIX D

CONCRETE ROADWAY REMOVAL DRAWING



REV.	DESCRIPTION	PREP BY	DATE	APPRVD

FOSTER WHEELER ENVIRONMENTAL

DESIGN: DRG:
SURV: CH. ENG:
SUBMITTED BY: (TITLE) (DATE)
(TITLE WORKER)
NORTHCOM
DM: VS:
FFE: HS:
DR:
OFFICER IN CHARGE
APPROVED DATE

PREP BY DATE APPRVD

NAVAL FACILITIES ENGINEERING COMMAND
DEPARTMENT OF THE NAVY ENGINEERING FIELD ACTIVITY - NORTHEAST PENNSYLVANIA
LESTER

GOULD ISLAND - CONCRETE ROADWAY REMOVAL
NEWPORT, RHODE ISLAND, MAY 2001
DRAWING 3 OF 3

APPROVED DATE

SEAL AREA

RA AND/OR PE
SEAL

SAT TO DATE

CODE I.D NO. 80091
SCALE .
SPEC. NO. 04-
CONSTRN. CONTR. NO
N62472-
NAVFAC DRAWING NO

SHEET 3 OF 3
SIZE: D
DIS SH. NO.

DATE CREATED
LATEST CHANGE
CHANGED BY:

GOULD ISLAND\ADDENDUM5\SHEET 2.DWG

X0014371.03

APPENDIX E

RCRA 8 METALS SAMPLING RESULTS

GOULD ISLAND, CTO 29
CONCRETE SAMPLING DETECTION TABLE

LOCATION ID	DATE	TIME	MATRIX	ANALYSIS	PARAMETER	DETECTION (ppm)	RIDEC STANDARD		COMMENTS
							RES.	IND./COM.	
GI-C29-CONC-1	04/04/01	1600	S	RCRA 8	**Arsenic**	**3.7**	**1.7**	3.8	
					Barium	120	5,500	10,000	
					Cadmium	0.27	39	1,000	
					Chromium	10.6	390	10,000	
					Lead	4.0	150	500	
					Selenium	1.2	390	10,000	
					Silver	0.28	200	10,000	
					Mercury	0.023	23	610	
GI-C29-CONC-2	04/04/01	1600	S	RCRA 8	**Arsenic**	**4.6**	**1.7**	**3.8**	
					Barium	75.2	5,500	10,000	
					Cadmium	1.6	39	1,000	
					Chromium	11.1	390	10,000	
					Lead	8.5	150	500	
					Selenium	1.1	390	10,000	
					Silver	0.28	200	10,000	
					Mercury	0.023	23	610	
GI-C29-CONC-3	04/25/01	1515	S	RCRA 8	**Arsenic**	**4.1**	**1.7**	3.8	
					Barium	80.4	5,500	10,000	
					Cadmium	0.25	39	1,000	
					Chromium	11.5	390	10,000	
					Lead	9.7	150	500	
					Selenium	0.31	390	10,000	
					Silver	0.13	200	10,000	
					Mercury	0.0055	23	610	
GI-BLD60-CONC-PCB01	12/20/00	1136	S	PCB	Arochlor 1260	0.5	10	10	
GI-BLD60-CONC-PCB02	12/20/00	1129	S	PCB	Arochlor 1260	0.5	10	10	
GI-BLD60-CONC-PCB03	12/20/00	1124	S	PCB	Arochlor 1260	<0.1	10	10	
GI-BLD60-CONC-PCB04	12/20/00	1119	S	PCB	Arochlor 1260	<0.1	10	10	
GI-BLD60-CONC-PCB05	12/20/00	1116	S	PCB	Arochlor 1260	0.8	10	10	

Bold indicates excedence of RIDEC Standard.

GOULD ISLAND, CTO 29
CONCRETE SAMPLING DETECTION TABLE

LOCATION ID	DATE	TIME	MATRIX	ANALYSIS	PARAMETER	DETECTION (ppm)	RIDEC STANDARD		COMMENTS
							RES.	IND./COM.	
GI-BLD60-CONC-PCB06	12/20/00	1111	S	PCB	Arochlor 1260	<0.1	10	10	
GI-BLD60-CONC-PCB07	12/20/00	1104	S	PCB	Arochlor 1260	0.3	10	10	
GI-BLD60-CONC-PCB08	12/20/00	1057	S	PCB	Arochlor 1260	0.2	10	10	
GI-BLD60-CONC-PCB09	12/20/00	1051	S	PCB	Arochlor 1260	0.2	10	10	
GI-BLD60-CONC-PCB010	12/20/00	1047	S	PCB	Arochlor 1260	0.1	10	10	
GI-BLD60-CONC-PCB011	12/20/00	1040	S	PCB	Arochlor 1260	0.2	10	10	
GI-BLD60-CONC-PCB012	12/20/00	1033	S	PCB	Arochlor 1260	0.1	10	10	
GI-BLD60-CONC-PCB013	12/20/00	1022	S	PCB	Arochlor 1260	0.1	10	10	
GI-BLD60-CONC-PCB014	12/20/00	1014	S	PCB	Arochlor 1260	0.5	10	10	

Bold Indicates excedence of RIDEC Standard.

APPENDIX F

WASTE CHARACTERIZATION RESULTS

analytics environmental laboratory LLC

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analytics@analyticslab com

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

Report Number: 45398

Revision: Rev. 0

Re: GOULD ISLAND

Enclosed are the results of the analyses on your sample(s). Samples were received on 18 May 2001 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. Please see individual reports for specific methodologies and references.

Lab Number	Sample Date	Station Location	Analysis	Comments
45398-1	05/16/01	GI-C29-CONC-4	Cyanide Reactivity	
	05/16/01	GI-C29-CONC-4	EPA 8081/8082 Pesticides and PCBs	
	05/16/01	GI-C29-CONC-4	EPA 8260 Volatile Organics	
	05/16/01	GI-C29-CONC-4	EPA 8270 Acid/Base Neutrals	
	05/16/01	GI-C29-CONC-4	RCRA Metals	
	05/16/01	GI-C29-CONC-4	Sulfide Reactivity	
	05/16/01	GI-C29-CONC-4	SW-846 9045 pH in Solid	
	05/16/01	GI-C29-CONC-4	TCLP Extraction	
	05/16/01	GI-C29-CONC-4	TCLP RCRA Metals	
45398-2	05/16/01	GI-C29-CONC-5	Cyanide Reactivity	
	05/16/01	GI-C29-CONC-5	EPA 8081/8082 Pesticides and PCBs	
	05/16/01	GI-C29-CONC-5	EPA 8260 Volatile Organics	
	05/16/01	GI-C29-CONC-5	EPA 8270 Acid/Base Neutrals	
	05/16/01	GI-C29-CONC-5	RCRA Metals	
	05/16/01	GI-C29-CONC-5	Sulfide Reactivity	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, North Carolina and is validated by the U.S. Army Corps of Engineers. 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 Steph L. Kowally MSE

Date 5/25/2001

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1845

analytics environmental laboratory LLC

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analytics@analyticslab.com

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

Report Number: 45398

Revision: Rev. 0

Re: GOULD ISLAND

Enclosed are the results of the analyses on your sample(s). Samples were received on 18 May 2001 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. Please see individual reports for specific methodologies and references.

Lab Number	Sample Date	Station Location	Analysis	Comments
	05/16/01	GI-C29-CONC-5	SW-846 9045 pH in Solid	
	05/16/01	GI-C29-CONC-5	TCLP Extraction	
	05/16/01	GI-C29-CONC-5	TCLP RCRA Metals	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, North Carolina and is validated by the U.S. Army Corps of Engineers. 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 _____ MGR
Date 5/25/2001

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

May 25, 2001

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: GOULD ISLAND

Project Number:

Field Sample ID: GI-C29-CONC-4

Lab Sample ID: 45398-1
Matrix: Solid
Percent Solid: 96
Dilution Factor: 49
Collection Date: 05/16/01
Lab Receipt Date: 05/18/01
Analysis Date: 05/21/01

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/kg	Result µg/kg	COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Benzene	99	U	1,3-Dichloropropane	99	U
Bromobenzene	99	U	cis-1,3-Dichloropropene	99	U
Bromochloromethane	99	U	trans-1,3-Dichloropropene	99	U
Bromodichloromethane	74	U	2,2-Dichloropropane	99	U
Bromoform	74	U	1,1-Dichloropropene	99	U
Bromomethane	99	U	Ethylbenzene	99	U
n-butylbenzene	99	U	Hexachlorobutadiene	99	U
sec-butylbenzene	99	U	Isopropylbenzene	99	U
tert-butylbenzene	99	U	p-isopropyltoluene	99	U
Carbon Tetrachloride	99	U	Methylene Chloride	250	U
Chlorobenzene	99	U	Methyl-tert-butyl ether	99	U
Chloroethane	99	U	Naphthalene	99	U
Chloroform	74	U	n-Propylbenzene	99	U
Chloromethane	99	U	Styrene	99	U
2-Chlorotoluene	99	U	1,1,1,2-Tetrachloroethane	99	U
4-Chlorotoluene	99	U	1,1,2,2-Tetrachloroethane	74	U
Dibromochloromethane	74	U	Tetrachloroethene	99	U
1,2-Dibromo-3-chloropropane	99	U	Toluene	99	U
1,2-Dibromoethane	74	U	1,2,3-Trichlorobenzene	99	U
Dibromomethane	99	U	1,2,4-Trichlorobenzene	99	U
1,2-Dichlorobenzene	99	U	1,1,1-Trichloroethane	99	U
1,3-Dichlorobenzene	99	U	1,1,2-Trichloroethane	74	U
1,4-Dichlorobenzene	99	U	Trichloroethene	99	U
Dichlorodifluoromethane	99	U	Trichlorofluoromethane	99	U
1,1-Dichloroethane	99	U	1,2,3-Trichloropropane	99	U
1,2-Dichloroethane	74	U	1,2,4-Trimethylbenzene	99	U
1,1-Dichloroethene	74	U	1,3,5-Trimethylbenzene	99	U
cis-1,2-Dichloroethene	99	U	Vinyl Chloride	99	U
trans-1,2-Dichloroethene	99	U	o-Xylene	99	U
1,2-Dichloropropane	74	U	m,p-Xylene	99	U
Acetone	490	U	Diethyl ether	99	U
Carbon Disulfide	99	U	2-Hexanone	490	U
Tetrahydrofuran	490	U	Methyl isobutyl ketone	490	U
Methyl ethyl ketone	490	U	Di-isopropyl ether	99	U
t-Butyl alcohol	4000	U	Ethyl t-butyl ether	99	U
t-Amyl methyl ether	99	U			

Surrogate Standard Recovery

d4-1,2-Dichloroethane	90 %	d8-Toluene	98 %	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.

8260 full

Authorized signature

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800-929-9906

Mr. Rick Woodworth
Foster Wheeler Environmental Corp.
1 Oxford Valley Suite 200 2300 Lincoln Highway

May 25, 2001

SAMPLE DATA

Lab Sample ID:	45398-1
Matrix:	Solid
Percent Solid:	96
Dilution Factor:	1.0
Collection Date:	05/16/01
Lab Receipt Date:	05/18/01
Extraction Date:	05/21/01
Analysis Date:	05/23/01

CLIENT SAMPLE ID

Project Name: GOULD ISLAND

Project Number:

Field Sample ID: GI-C29-CONC-4

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	260	U	Pentachlorophenol	260	U
4-Chloro-3-methylphenol	260	U	Phenol	260	U
2,4-Dichlorophenol	260	U	2,4,5-Trichlorophenol	260	U
2,4-Dimethylphenol	260	U	2,4,6-Trichlorophenol	260	U
2,4-dinitrophenol	260	U	Benzoic Acid	260	U
4,6-Dinitro-2-methylphenol	260	U	2-Methylphenol	260	U
2-Nitrophenol	260	U	3+4-Methylphenol	260	U
2,6-Dichlorophenol	260	U	Benzyl Alcohol	260	U
4-Nitrophenol	260	U	2,3,4,6-Tetrachlorophenol	260	U

Acid Surrogate Standard Recovery

2-Fluorophenol	7 * %	d5-Phenol	31 %	2,4,6-Tribromophenol	2 * %

BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
1,2-Dichlorobenzene	260	U	Hexachlorobenzene	260	U
1,3-Dichlorobenzene	260	U	Benzidine	260	U
1,4-Dichlorobenzene	260	U	3,3'-Dichlorobenzidine	260	U
2,4-Dinitrotoluene	260	U	Azobenzene	260	U
2,6-Dinitrotoluene	260	U	Bis(2-chloroethoxy)methane	260	U
Nitrobenzene	260	U	bis(2-chloroethyl) ether	260	U
Hexachlorobutadiene	260	U	bis(2-chloroisopropyl)ether	260	U
Dimethyl Phthalate	260	U	4-bromophenyl phenyl ether	260	U
Di-n-butyl phthalate	260	U	Butyl benzyl phthalate	260	U
di-n-octyl-phthalate	260	U	4-Chlorophenyl phenyl ether	260	U
Bis (2-ethylhexyl) phthalate	260	U	Diethyl Phthalate	260	U
1,2,4-Trichlorobenzene	260	U	Hexachlorocyclopentadiene	260	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

8270/625 layout

analytics environmental laboratory LLC

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Mr. Rick Woodworth
Foster Wheeler Environmental Corp.
1 Oxford Valley Suite 200 2300 Lincoln Highway

May 25, 2001

SAMPLE DATA

Lab Sample ID:	45398-1
Matrix:	Solid
Percent Solid:	96
Dilution Factor:	1.0
Collection Date:	05/16/01
Lab Receipt Date:	05/18/01
Extraction Date:	05/21/01
Analysis Date:	05/23/01

CLIENT SAMPLE ID

Project Name: GOULD ISLAND

Project Number:

Field Sample ID: GI-C29-CONC-4

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	260	U	N-nitrosodimethylamine	260	U
Acenaphthylene	260	U	N-nitroso-di-n-propylamine	260	U
Anthracene	260	U	n-nitrosodiphenylamine	260	U
Benzo[a]anthracene	260	**152 J**	Pyridine	260	U
Benzo[a] pyrene	260	**138 J**	2-Methylnaphthalene	260	U
Benzo[b] fluoranthene	260	U	2-Chloronaphthalene	260	U
Benzo[k] fluoranthene	260	U	Naphthalene	260	U
Benzo(g,h,i) perylene	260	U	Phenanthrene	260	**336**
Chrysene	260	**172 J**	Dibenzofuran	260	U
Dibenz [a,h] anthracene	260	U	Aniline	260	U
Fluoranthene	260	**392**	4-Chloroaniline	260	U
Fluorene	260	U	2-Nitroaniline	260	U
Indeno [1,2,3-cd] pyrene	260	U	3-Nitroaniline	260	U
Pyrene	260	**331**	4-Nitroaniline	260	U
Hexachloroethane	260	U	Carbazole	260	U
Isophorone	260	U			

Base Neutral Surrogate Standard Recovery

2-Fluorobiphenyl	83	%	d5-nitrobenzene	72	%	d14-p-terphenyl	100	%

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. *Surrogate recovery was affected by sample matrix. Sample was reextracted to confirm results.

8270/625 layout

Authorized signature

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

May 25, 2001

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: GOULD ISLAND

Project Number:

Field Sample ID: GI-C29-CONC-4

Lab Sample ID: 45398-1
Matrix: Solid
Percent Solid: 96
Dilution Factor: 1.0
Collection Date: 05/16/01
Lab Receipt Date: 05/18/01
Extraction Date: 05/21/01
Analysis Date: 05/23/01 **PCB Analyzed:** 05/23/01

PESTICIDE AND PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg	COMPOUND	Quantitation Limit µg/kg	Results µg/kg
Aldrin	5	U	Endrin Ketone	5	U
a-BHC	5	U	Heptachlor	5	U
b-BHC	5	U	Heptachlor Epoxide	5	U
d-BHC	5	U	Methoxychlor	10	U
g-BHC	5	U	Chlordane	5	U
4,4'-DDD	5	U	Toxaphene	33	U
4,4'-DDE	5	U	PCB-1016	15	U
4,4'-DDT	5	U	PCB-1221	15	U
Dieldrin	5	U	PCB-1232	15	U
Endosulfan I	5	U	PCB-1242	15	U
Endosulfan II	5	U	PCB-1248	15	U
Endosulfan Sulfate	5	U	PCB-1254	15	U
Endrin	5	U	PCB-1260	15	U
Endrin Aldehyde	5	U			

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene	76	%
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 8081/82.

COMMENTS: Results are expressed on a dry weight basis.

Authorized signature

608/8081/8082

analytics environmental laboratory LLC

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800-929-9906

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

May 25, 2001

CLIENT SAMPLE ID

Project Name: GOULD ISLAND

Project Number:

Client Sample ID: GI-C29-CONC-4

SAMPLE DATA

Lab Sample ID: 45398-1

Matrix: Solid

Percent Solid 96%

Collection Date: 05/16/01 11:00

Lab Receipt Date: 05/18/01

Analysis Date: 05/18/01

REACTIVITY

	Result	Units	Detection Limit	Dilution Factor
Sulfide Reactivity	U	mg/kg	10	1
Cyanide Reactivity	U	mg/kg	10	1

U denotes undetected

METHODOLOGY: Sulfide reactivity analysis was conducted according to "Test Methods for Evaluating Solid Waste, SW-846, Sulfide by Modified Method 7.3.4.2."
Cyanide reactivity analysis was conducted according to "Test Methods for Evaluating Solid Waste, SW-846, Cyanide by Modified Method 7.3.3.2."

COMMENTS:

Authorized signature

analytics environmental laboratory LLC

195 Commerce Way
Portsmouth, New Hampshire 03801
603-436-5111 Fax 603-430-2151
800-929-9906

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

May 25, 2001

CLIENT SAMPLE ID

Project Name: GOULD ISLAND

Project Number:

Client Sample ID: GI-C29-CONC-4

SAMPLE DATA

Lab Sample ID: 45398-1

Matrix: Solid

Percent Solid 96%

Collection Date: 05/16/01 Time Collected: 11:00

Lab Receipt Date: 05/18/01

Analysis Date: 05/18/01 Time Analyzed: 15:17

pH ANALYSIS

Sample	Result	Units
45398-1	**11.35**	pH Units

METHODOLOGY: Sample analyzed according to "EPA SW 846 Method 9045 pH in solid"

COMMENTS:

Authorized signature

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Mr. Rick Woodworth
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1 Oxford Valley Suite 200 2300 Lincoln Highway
Langhorne PA 19047

May 25, 2001

SAMPLE DATA

Lab Sample ID:	45398-2
Matrix:	Solid
Percent Solid:	95
Dilution Factor:	49
Collection Date:	05/16/01
Lab Receipt Date:	05/18/01
Analysis Date:	05/21/01

CLIENT SAMPLE ID

Project Name: GOULD ISLAND

Project Number:

Field Sample ID: GI-C29-CONC-5

ANALYTICAL RESULTS VOLATILE ORGANICS

COMPOUND	Quantitation Limit µg/kg	Result µg/kg	COMPOUND	Quantitation Limit µg/kg	Result µg/kg
Benzene	99	U	1,3-Dichloropropane	99	U
Bromobenzene	99	U	cis-1,3-Dichloropropene	99	U
Bromochloromethane	99	U	trans-1,3-Dichloropropene	99	U
Bromodichloromethane	74	U	2,2-Dichloropropane	99	U
Bromoform	74	U	1,1-Dichloropropene	99	U
Bromomethane	99	U	Ethylbenzene	99	U
n-butylbenzene	99	U	Hexachlorobutadiene	99	U
sec-butylbenzene	99	U	Isopropylbenzene	99	U
tert-butylbenzene	99	U	p-isopropyltoluene	99	U
Carbon Tetrachloride	99	U	Methylene Chloride	250	U
Chlorobenzene	99	U	Methyl-tert-butyl ether	99	U
Chloroethane	99	U	Naphthalene	99	U
Chloroform	74	U	n-Propylbenzene	99	U
Chloromethane	99	U	Styrene	99	U
2-Chlorotoluene	99	U	1,1,1,2-Tetrachloroethane	99	U
4-Chlorotoluene	99	U	1,1,2,2-Tetrachloroethane	74	U
Dibromochloromethane	74	U	Tetrachloroethene	99	U
1,2-Dibromo-3-chloropropane	99	U	Toluene	99	U
1,2-Dibromoethane	74	U	1,2,3-Trichlorobenzene	99	U
Dibromomethane	99	U	1,2,4-Trichlorobenzene	99	U
1,2-Dichlorobenzene	99	U	1,1,1-Trichloroethane	99	U
1,3-Dichlorobenzene	99	U	1,1,2-Trichloroethane	74	U
1,4-Dichlorobenzene	99	U	Trichloroethene	99	U
Dichlorodifluoromethane	99	U	Trichlorofluoromethane	99	U
1,1-Dichloroethane	99	U	1,2,3-Trichloropropane	99	U
1,2-Dichloroethane	74	U	1,2,4-Trimethylbenzene	99	U
1,1-Dichloroethene	74	U	1,3,5-Trimethylbenzene	99	U
cis-1,2-Dichloroethene	99	U	Vinyl Chloride	99	U
trans-1,2-Dichloroethene	99	U	o-Xylene	99	U
1,2-Dichloropropane	74	U	m,p-Xylene	99	U
Acetone	490	U	Diethyl ether	99	U
Carbon Disulfide	99	U	2-Hexanone	490	U
Tetrahydrofuran	490	U	Methyl isobutyl ketone	490	U
Methyl ethyl ketone	490	U	Di-isopropyl ether	99	U
t-Butyl alcohol	4000	U	Ethyl t-butyl ether	99	U
t-Amyl methyl ether	99	U			

Surrogate Standard Recovery

d4-1,2-Dichloroethane	89 %	d8-Toluene	99 %	Bromofluorobenzene	93 %

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

8260 full

Authorized signature

analytics environmental laboratory LLC

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Mr. Rick Woodworth
Foster Wheeler Environmental Corp.
1 Oxford Valley Suite 200 2300 Lincoln Highway

May 25, 2001

SAMPLE DATA

Lab Sample ID:	45398-2
Matrix:	Solid
Percent Solid:	95
Dilution Factor:	1.1
Collection Date:	05/16/01
Lab Receipt Date:	05/18/01
Extraction Date:	05/21/01
Analysis Date:	05/23/01

CLIENT SAMPLE ID

Project Name: GOULD ISLAND

Project Number:

Field Sample ID: GI-C29-CONC-5

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	260	U	Pentachlorophenol	260	U
4-Chloro-3-methylphenol	260	U	Phenol	260	U
2,4-Dichlorophenol	260	U	2,4,5-Trichlorophenol	260	U
2,4-Dimethylphenol	260	U	2,4,6-Trichlorophenol	260	U
2,4-dinitrophenol	260	U	Benzoic Acid	260	U
4,6-Dinitro-2-methylphenol	260	U	2-Methylphenol	260	U
2-Nitrophenol	260	U	3+4-Methylphenol	260	U
2,6-Dichlorophenol	260	U	Benzyl Alcohol	260	U
4-Nitrophenol	260	U	2,3,4,6-Tetrachlorophenol	260	U

Acid Surrogate Standard Recovery

2-Fluorophenol	4 * %	d5-Phenol	22 * %	2,4,6-Tribromophenol	1 * %

BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg	BASE NEUTRAL COMPOUND	Quantitation Limit µg/kg	Result µg/kg
1,2-Dichlorobenzene	260	U	Hexachlorobenzene	260	U
1,3-Dichlorobenzene	260	U	Benzidine	260	U
1,4-Dichlorobenzene	260	U	3,3'-Dichlorobenzidine	260	U
2,4-Dinitrotoluene	260	U	Azobenzene	260	U
2,6-Dinitrotoluene	260	U	Bis(2-chloroethoxy)methane	260	U
Nitrobenzene	260	U	bis(2-chloroethyl) ether	260	U
Hexachlorobutadiene	260	U	bis(2-chloroisopropyl)ether	260	U
Dimethyl Phthalate	260	U	4-bromophenyl phenyl ether	260	U
Di-n-butyl phthalate	260	U	Butyl benzyl phthalate	260	U
di-n-octyl-phthalate	260	U	4-Chlorophenyl phenyl ether	260	U
Bis (2-ethylhexyl) phthalate	260	U	Diethyl Phthalate	260	U
1,2,4-Trichlorobenzene	260	U	Hexachlorocyclopentadiene	260	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

8270/625 layout

analytics environmental laboratory LLC

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Portsmouth, New Hampshire 03801
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Mr. Rick Woodworth
Foster Wheeler Environmental Corp.
1 Oxford Valley Suite 200 2300 Lincoln Highway

May 25, 2001

SAMPLE DATA

Lab Sample ID:	45398-2
Matrix:	Solid
Percent Solid:	95
Dilution Factor:	1.1
Collection Date:	05/16/01
Lab Receipt Date:	05/18/01
Extraction Date:	05/21/01
Analysis Date:	05/23/01

CLIENT SAMPLE ID

Project Name: GOULD ISLAND

Project Number:

Field Sample ID: GI-C29-CONC-5

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	260	U	N-nitrosodimethylamine	260	U
Acenaphthylene	260	U	N-nitroso-di-n-propylamine	260	U
Anthracene	260	U	n-nitrosodiphenylamine	260	U
Benzo[a]anthracene	260	**240 J**	Pyridine	260	U
Benzo[a] pyrene	260	**223 J**	2-Methylnaphthalene	260	U
Benzo[b] fluoranthene	260	**186 J**	2-Chloronaphthalene	260	U
Benzo[k] fluoranthene	260	**208 J**	Naphthalene	260	U
Benzo(g,h,i) perylene	260	U	Phenanthrene	260	**502**
Chrysene	260	**274**	Dibenzofuran	260	U
Dibenz [a,h] anthracene	260	U	Aniline	260	U
Fluoranthene	260	**593**	4-Chloroaniline	260	U
Fluorene	260	U	2-Nitroaniline	260	U
Indeno [1,2,3-cd] pyrene	260	**149 J**	3-Nitroaniline	260	U
Pyrene	260	**480**	4-Nitroaniline	260	U
Hexachloroethane	260	U	Carbazole	260	U
Isophorone	260	U			

Base Neutral Surrogate Standard Recovery

2-Fluorobiphenyl	68	%	d5-nitrobenzene	50	%	d14-p-terphenyl	97	%

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. *Surrogate recovery was affected by sample matrix. Sample was reextracted to confirm results.

8270/625 layout

Authorized signature

analytics environmental laboratory LLC

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Langhorne PA 19047

May 25, 2001

SAMPLE DATA

CLIENT SAMPLE ID

Project Name: GOULD ISLAND

Project Number:

Field Sample ID: GI-C29-CONC-5

Lab Sample ID: 45398-2
Matrix: Solid
Percent Solid: 95
Dilution Factor: 1.0
Collection Date: 05/16/01
Lab Receipt Date: 05/18/01
Extraction Date: 05/21/01
Analysis Date: 05/23/01 **PCB Analyzed:** 05/23/01

PESTICIDE AND PCB ANALYTICAL RESULTS

COMPOUND	Quantitation Limit µg/kg	Results µg/kg	COMPOUND	Quantitation Limit µg/kg	Results µg/kg
Aldrin	5	U	Endrin Ketone	5	U
a-BHC	5	U	Heptachlor	5	U
b-BHC	5	U	Heptachlor Epoxide	5	U
d-BHC	5	U	Methoxychlor	10	U
g-BHC	5	U	Chlordane	5	U
4,4'-DDD	5	U	Toxaphene	33	U
4,4'-DDE	5	U	PCB-1016	15	U
4,4'-DDT	5	U	PCB-1221	15	U
Dieldrin	5	U	PCB-1232	15	U
Endosulfan I	5	U	PCB-1242	15	U
Endosulfan II	5	U	PCB-1248	15	U
Endosulfan Sulfate	5	U	PCB-1254	15	U
Endrin	5	U	PCB-1260	15	U
Endrin Aldehyde	5	U			

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene	66	%
Decachlorobiphenyl	78	%

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 8081/82.

COMMENTS Results are expressed on a dry weight basis.

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608/8081/8082

analytics environmental laboratory LLC

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May 25, 2001

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

CLIENT SAMPLE ID

Project Name: GOULD ISLAND

Project Number:

Client Sample ID: GI-C29-CONC-5

SAMPLE DATA

Lab Sample ID: 45398-2

Matrix: Solid

Percent Solid 95%

Collection Date: 05/16/01 11:10

Lab Receipt Date: 05/18/01

Analysis Date: 05/18/01

REACTIVITY

	Result	Units	Detection Limit	Dilution Factor
Sulfide Reactivity	U	mg/kg	10	1
Cyanide Reactivity	U	mg/kg	10	1

U denotes undetected

METHODOLOGY: Sulfide reactivity analysis was conducted according to "Test Methods for Evaluating Solid Waste, SW-846, Sulfide by Modified Method 7.3.4.2."
Cyanide reactivity analysis was conducted according to "Test Methods for Evaluating Solid Waste, SW-846, Cyanide by Modified Method 7.3.3.2."

COMMENTS:

Authorized signature

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Mr. Rick Woodworth
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1 Oxford Valley Suite 200 2300 Lincoln Highway
Langhorne PA 19047

May 25, 2001

CLIENT SAMPLE ID

Project Name: GOULD ISLAND

Project Number:

Client Sample ID: GI-C29-CONC-5

SAMPLE DATA

Lab Sample ID: 45398-2

Matrix: Solid

Percent Solid 95%

Collection Date: 05/16/01 Time Collected: 11:10

Lab Receipt Date: 05/18/01

Analysis Date: 05/18/01 Time Analyzed: 15:20

pH ANALYSIS

Sample	Result	Units
45398-2	11.27	pH Units

METHODOLOGY: Sample analyzed according to "EPA SW 846 Method 9045 pH in solid"

COMMENTS:

Authorized signature

SEVERN TRENT SERVICES

STL Chicago

SEVERN TRENT LABORATORIES
ANALYTICAL REPORT

JOB NUMBER: 203488

Prepared For:

Analytics Environmental Laboratory, LLC
195 Commerce Way
Suite E
Portsmouth, NH 03801

Project: Foster Wheeler Gould Island

Attention: Steve Knollmeyer

Date: 05/29/2001

Donna L. Ingersoll
Signature

5/29/01
Date

Name: Donna L. Ingersoll

Title: Project Manager

E-Mail: dingersoll@stl-inc.com

STL Chicago
2417 Bond Street
University Park, IL 60466

PHONE: (708) 534-5200
FAX..: (708) 534-5211

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Severn Trent Laboratories Chicago
METALS CASE NARRATIVE

Client: Analytics Environmental Laboratory
Project ID: Gould Island
STL Job#: 203488

Date Rec'd: 05/19/01

1. This narrative covers Metals analysis samples in the above STL Job.

   Method Refs: USEPA, SW-846

2. All analyses were performed within the required holding times.

3. All Initial and Continuing Calibration Verification (ICV/CCV's) bracketing the samples were within control limits.

4. All Initial and Continuing Calibration Blanks (ICB/CCB's) bracketing the samples were within control limits.

5. All Preparation/Method Blanks were below the Reporting Limits.

6. Laboratory Control Sample (LCS) recoveries were within control limits.

7. Serial dilution, Matrix Spike (MS/MSD) recovery and Duplicate analysis was performed on the Solid and TCLP sample 203488-1.

8. Serial dilution analysis was within control limits.

9. All Matrix spike recoveries were within the 75-125% control limits for total and 50-150% control limits for TCLP (exception allowed when the sample concentration exceed the spike added concentration by a factor of 4 or more) except for Lead in the Solid sample.

10. All Duplicate results were within the 20% Relative Percent Difference (RPD) control limits for sample concentration greater than 5X the reporting limits or +\- the reporting limits for sample concentration less than 5X the reporting limits except for Barium, Chromium and Lead in Solid sample.

Metals Unit Leader
Jodi L. Wojcik

5/29/01
Date

SEVERN TRENT SERVICES

STL Chicago

SAMPLE INFORMATION

Date: 05/29/2001

Job Number.: 203488
Customer...: Analytics Environmental Laboratory, LLC
Attn.....: Steve Knollmeyer

Project Number.....: 20000975
Customer Project ID....: FW GOULD ISLAND
Project Description....: Foster Wheeler Gould Island

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
203488-1	GI-C29-CONC-4	Solid	05/16/2001	11:00	05/19/2001	09:20
203488-2	GI-C29-CONC-5	Solid	05/16/2001	11:10	05/19/2001	09:20

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SEVERN TRENT SERVICES

LABORATORY TEST RESULTS

Job Number: 203488

Date:05/29/2001

USTOMER: Analytics Environmental Laboratory, LLC

PROJECT: FW GOULD ISLAND

ATTN: Steve Knollmeyer

Customer Sample ID: GI-C29-CONC-4
Date Sampled.....: 05/16/2001
Time Sampled.....: 11:00
Sample Matrix.....: Solid

Laboratory Sample ID: 203488-1
Date Received.....: 05/19/2001
Time Received.....: 09:20

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
Method	% Solids Determination											
	% Solids, Solid	98.1			0.10	0.10	1	%	19646		05/21/01 0000	clb
	% Moisture, Solid	1.9			0.10	0.10	1	%	19646		05/21/01 0000	clb
7471A	Mercury (CVAA) Solids											
	Mercury, Solid*	0.0055	U		0.0055	0.034	1	mg/Kg	19621		05/21/01 1500	gok
6010B	Metals Analysis (ICAP Trace)											
	Arsenic, Solid*	1.6			0.33	0.86	1	mg/Kg	20271		05/24/01 1824	pfk
	Barium, Solid*	82.2			0.079	0.86	1	mg/Kg	20271		05/24/01 1824	pfk
	Cadmium, Solid*	0.085	U		0.085	0.17	1	mg/Kg	20271		05/24/01 1824	pfk
	Chromium, Solid*	6.4			0.14	0.86	1	mg/Kg	20271		05/24/01 1824	pfk
	Lead, Solid*	2.9			0.33	0.43	1	mg/Kg	20271		05/24/01 1824	pfk
	Selenium, Solid*	0.39	U		0.39	0.43	1	mg/Kg	20271		05/24/01 1824	pfk
	Silver, Solid*	0.16	U		0.16	0.43	1	mg/Kg	20271		05/24/01 1824	pfk
7470A	Leachable, Mercury (CVAA)											
	Mercury, TCLP	2.0	U		2.0	2.0	1	ug/L	19862		05/23/01 1255	gok
6010B	Leachable, Metals Analysis (ICAP)											
	Arsenic, TCLP	100	U		100	100	1	ug/L	20182		05/24/01 1356	pfk
	Barium, TCLP	1000	U		1000	1000	1	ug/L	20182		05/24/01 1356	pfk
	Cadmium, TCLP	50.0	U		50.0	50.0	1	ug/L	20182		05/24/01 1356	pfk
	Chromium, TCLP	50.0	U		50.0	50.0	1	ug/L	20182		05/24/01 1356	pfk
	Lead, TCLP	55.6			50.0	50.0	1	ug/L	20182		05/24/01 1356	pfk
	Selenium, TCLP	100	U		100	100	1	ug/L	20182		05/24/01 1356	pfk
	Silver, TCLP	50.0	U		50.0	50.0	1	ug/L	20182		05/24/01 1356	pfk

018/045

* In Description = Dry Wgt.

SEVERN TRENT SERVICES

LABORATORY TEST RESULTS

Job Number: 203488

Date:05/29/2001

JSTOMER: Analytics Environmental Laboratory, LLC

PROJECT: FW GOULD ISLAND

ATTN: Steve Knollmeyer

Customer Sample ID: GI-C29-CONC-5
Date Sampled.....: 05/16/2001
Time Sampled.....: 11:10
Sample Matrix.....: Solid

Laboratory Sample ID: 203488-2
Date Received.....: 05/19/2001
Time Received.....: 09:20

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
Method	% Solids Determination											
	% Solids, Solid	98.2			0.10	0.10	1	%	19646		05/21/01 0000	clb
	% Moisture, Solid	1.8			0.10	0.10	1	%	19646		05/21/01 0000	clb
7471A	Mercury (CVAA) Solids											
	Mercury, Solid*	0.0055	U		0.0055	0.034	1	mg/Kg	19621		05/21/01 1502	gok
6010B	Metals Analysis (ICAP Trace)											
	Arsenic, Solid*	0.39	U		0.39	1.0	1	mg/Kg	20271		05/24/01 1900	pfk
	Barium, Solid*	1.1			0.094	1.0	1	mg/Kg	20271		05/24/01 1900	pfk
	Cadmium, Solid*	0.10	U		0.10	0.20	1	mg/Kg	20271		05/24/01 1900	pfk
	Chromium, Solid*	0.16	U		0.16	1.0	1	mg/Kg	20271		05/24/01 1900	pfk
	Lead, Solid*	0.39	U		0.39	0.51	1	mg/Kg	20271		05/24/01 1900	pfk
	Selenium, Solid*	0.47	U		0.47	0.51	1	mg/Kg	20271		05/24/01 1900	pfk
	Silver, Solid*	0.19	U		0.19	0.51	1	mg/Kg	20271		05/24/01 1900	pfk
7470A	Leachable, Mercury (CVAA)											
	Mercury, TCLP	2.0	U		2.0	2.0	1	ug/L	19862		05/23/01 1302	gok
6010B	Leachable, Metals Analysis (ICAP)											
	Arsenic, TCLP	100	U		100	100	1	ug/L	20182		05/24/01 1411	pfk
	Barium, TCLP	1000	U		1000	1000	1	ug/L	20182		05/24/01 1411	pfk
	Cadmium, TCLP	50.0	U		50.0	50.0	1	ug/L	20182		05/24/01 1411	pfk
	Chromium, TCLP	50.0	U		50.0	50.0	1	ug/L	20182		05/24/01 1411	pfk
	Lead, TCLP	50.0	U		50.0	50.0	1	ug/L	20182		05/24/01 1411	pfk
	Selenium, TCLP	100	U		100	100	1	ug/L	20182		05/24/01 1411	pfk
	Silver, TCLP	50.0	U		50.0	50.0	1	ug/L	20182		05/24/01 1411	pfk

* In Description = Dry Wgt.

010/045

SEVERN TRENT SERVICES

STL Chicago

LABORATORY CHRONICLE

Job Number: 203488 Date: 05/29/2001

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: FW GOULD ISLAND ATTN: Steve Knollmeyer

Lab ID: 203488-1 Client ID: GI-C29-CONC-4 Date Recvd: 05/19/2001 Sample Date: 05/16/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
Method	% Solids Determination	1	19646		05/21/2001 0000	
3010A	Acid Dig. Leachates (ICAP)	1	19804	19721	05/23/2001 1000	
3050B	Acid Digestion: Solids (ICAP)	1	19673		05/22/2001 1015	
7470A	Leachable, Mercury (CVAA)	1	19862	19854 -19721	05/23/2001 1255	
6010B	Leachable, Metals Analysis (ICAP)	1	20182	19804 -19721	05/24/2001 1356	
7471A	Mercury (CVAA) Solids	1	19621	19620	05/21/2001 1500	
6010B	Metals Analysis (ICAP Trace)	1	20271	19673	05/24/2001 1824	
7470	SW846 Dig. Leachates (Hg)	1	19854		05/23/2001 1040	
7470/7471	SW846 Digestion (Hg)	1	19620		05/21/2001 1431	
1311	TCLP Extraction	1	19721		05/22/2001 1540	

Lab ID: 203488-2 Client ID: GI-C29-CONC-5 Date Recvd: 05/19/2001 Sample Date: 05/16/2001

METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT #(S)	DATE/TIME ANALYZED	DILUTION
Method	% Solids Determination	1	19646		05/21/2001 0000	
3010A	Acid Dig. Leachates (ICAP)	1	19804	19721	05/23/2001 1000	
3050B	Acid Digestion: Solids (ICAP)	1	19673		05/22/2001 1015	
7470A	Leachable, Mercury (CVAA)	1	19862	19854 -19721	05/23/2001 1302	
6010B	Leachable, Metals Analysis (ICAP)	1	20182	19804 -19721	05/24/2001 1411	
7471A	Mercury (CVAA) Solids	1	19621	19620	05/21/2001 1502	
6010B	Metals Analysis (ICAP Trace)	1	20271	19673	05/24/2001 1900	
7470	SW846 Dig. Leachates (Hg)	1	19854		05/23/2001 1120	
7470/7471	SW846 Digestion (Hg)	1	19620		05/21/2001 1434	
1311	TCLP Extraction	1	19721		05/22/2001 1540	

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QUALITY CONTROL RESULTS

Job Number.: 203488

Report Date.: 05/29/2001

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: FW GOULD ISLAND ATTN: Steve Knollmeyer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

Test Method.....: 6010B
Method Description.: Metals Analysis (ICAP Trace)
Units.....: mg/L
Batch.....: 20271
Analyst...: pfk

CCB	Continuing Calibration Blank				05/24/2001	1252

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.00424								
Barium	0.00024								
Cadmium	0.00013								
Chromium	-0.00026								
Lead	0.00113								
Selenium	-0.00545								H
Silver	0.00031								

CCB	Continuing Calibration Blank				05/24/2001	1419

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.00520								
Barium	0.00042								
Cadmium	0.00007								
Chromium	-0.00014								
Lead	-0.00001								
Selenium	0.00175								
Silver	0.00075								

CCB	Continuing Calibration Blank				05/24/2001	1548

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.00553								
Barium	0.00052								
Cadmium	0.00037								
Chromium	0.00029								
Lead	0.00162								
Selenium	0.00209								
Silver	0.00019								

CCB	Continuing Calibration Blank				05/24/2001	1632

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.00135								
Barium	0.00060								
Cadmium	0.00044								
Chromium	0.00043								
Lead	0.00028								
Selenium	-0.00158								
Silver	0.00116								

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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Job Number.: 203488

Report Date.: 05/29/2001

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: FW GOULD ISLAND ATTN: Steve Knollmeyer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank				05/24/2001	1756

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.00406								
Barium	0.00058								
Cadmium	0.00018								
Chromium	-0.00015								
Lead	-0.00083								
Selenium	-0.00310								
Silver	0.00069								

CCB	Continuing Calibration Blank				05/24/2001	1915

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.00497								
Barium	0.00050								
Cadmium	0.00018								
Chromium	0.00015								
Lead	0.00042								
Selenium	0.00147								
Silver	0.00046								

CCB	Continuing Calibration Blank				05/24/2001	2008

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.00137								
Barium	0.00066								
Cadmium	0.00045								
Chromium	-0.00038								
Lead	-0.00080								
Selenium	-0.00223								
Silver	-0.00115								

CCV	Continuing Calibration Verification	M01ECCV005			05/24/2001	1245

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.49276			0.50		99		90-110	
Barium	0.50028			0.50		100		90-110	
Cadmium	0.48112			0.50		96		90-110	
Chromium	0.49186			0.50		98		90-110	
Lead	0.47794			0.50		96		90-110	
Selenium	0.50257			0.50		101		90-110	
Silver	0.50644			0.50		101		90-110	

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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Job Number.: 203488

Report Date.: 05/29/2001

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: FW GOULD ISLAND ATTN: Steve Knollmeyer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
CCV	Continuing Calibration Verification	M01ECCV005			05/24/2001 1411

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.49573			0.50		99		90-110	
Barium	0.50057			0.50		100		90-110	
Cadmium	0.48320			0.50		97		90-110	
Chromium	0.49344			0.50		99		90-110	
Lead	0.48045			0.50		96		90-110	
Selenium	0.49720			0.50		99		90-110	
Silver	0.50936			0.50		102		90-110	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
CCV	Continuing Calibration Verification	M01ECCV005			05/24/2001 1541

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.50197			0.50		100		90-110	
Barium	0.50908			0.50		102		90-110	
Cadmium	0.48921			0.50		98		90-110	
Chromium	0.49967			0.50		100		90-110	
Lead	0.48835			0.50		98		90-110	
Selenium	0.50654			0.50		101		90-110	
Silver	0.51421			0.50		103		90-110	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
CCV	Continuing Calibration Verification	M01ECCV005			05/24/2001 1625

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.49545			0.50		99		90-110	
Barium	0.50417			0.50		101		90-110	
Cadmium	0.48460			0.50		97		90-110	
Chromium	0.49593			0.50		99		90-110	
Lead	0.48031			0.50		96		90-110	
Selenium	0.49555			0.50		99		90-110	
Silver	0.51065			0.50		102		90-110	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
CCV	Continuing Calibration Verification	M01ECCV005			05/24/2001 1748

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.48451			0.50		97		90-110	
Barium	0.49383			0.50		99		90-110	
Cadmium	0.47570			0.50		95		90-110	
Chromium	0.48618			0.50		97		90-110	
Lead	0.47327			0.50		95		90-110	
Selenium	0.48607			0.50		97		90-110	
Silver	0.50141			0.50		100		90-110	

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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Job Number.: 203488

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CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: FW GOULD ISLAND

ATTN: Steve Knollmeyer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
CCV	Continuing Calibration Verification	M01ECCV005			05/24/2001 1907

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.48023			0.50		96		90-110	
Barium	0.49128			0.50		98		90-110	
Cadmium	0.47330			0.50		95		90-110	
Chromium	0.48344			0.50		97		90-110	
Lead	0.47059			0.50		94		90-110	
Selenium	0.48565			0.50		97		90-110	
Silver	0.49843			0.50		100		90-110	

CCV	Continuing Calibration Verification	M01ECCV005			05/24/2001 2000

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.48334			0.50		97		90-110	
Barium	0.49436			0.50		99		90-110	
Cadmium	0.47565			0.50		95		90-110	
Chromium	0.48616			0.50		97		90-110	
Lead	0.47458			0.50		95		90-110	
Selenium	0.48550			0.50		97		90-110	
Silver	0.50055			0.50		100		90-110	

CRI	Contract Required Detection Limits	M01ECRI002			05/24/2001 1224

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.01702			0.0200		85		50-150	
Barium	0.38913			0.4000		97		50-150	
Cadmium	0.00985			0.010		98		50-150	
Chromium	0.02024			0.0200		101		50-150	
Lead	0.00612			0.0060		102		50-150	
Selenium	0.01714			0.010		171		50-150	
Silver	0.01997			0.0200		100		50-150	

CRI	Contract Required Detection Limits	M01ECRI002			05/24/2001 1555

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.01605			0.0200		80		50-150	
Barium	0.39292			0.4000		98		50-150	
Cadmium	0.01003			0.010		100		50-150	
Chromium	0.02050			0.0200		102		50-150	
Lead	0.00565			0.0060		94		50-150	
Selenium	0.01202			0.010		120		50-150	
Silver	0.02049			0.0200		102		50-150	

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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Job Number.: 203488

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CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: FW GOULD ISLAND

ATTN: Steve Knollmeyer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
CRI	Contract Required Detection Limits	M01ECRI002			05/24/2001 1939

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.01823			0.0200		91		50-150	
Barium	0.39019			0.4000		98		50-150	
Cadmium	0.01024			0.010		102		50-150	
Chromium	0.02026			0.0200		101		50-150	
Lead	0.00522			0.0060		87		50-150	
Selenium	0.00967			0.010		97		50-150	
Silver	0.02013			0.0200		101		50-150	

ICB	Initial Calibration Blank				05/24/2001 1216

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.00406								
Barium	0.00042								
Cadmium	0.00026								
Chromium	0.00037								
Lead	0.00130								
Selenium	-0.00231								
Silver	-0.00032								

ICV	Initial Calibration Verification	M01EICV001			05/24/2001 1209

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.39242			0.40		98		90-110	
Barium	0.40236			0.40		101		90-110	
Cadmium	0.38886			0.40		97		90-110	
Chromium	0.39645			0.40		99		90-110	
Lead	0.39383			0.40		98		90-110	
Selenium	0.40131			0.40		100		90-110	
Silver	0.40597			0.40		101		90-110	

ISB	Interference Check Sample B	M01EIS8002			05/24/2001 1238

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.09996			0.10		100		80-120	
Barium	0.51832			0.50		104		80-120	
Cadmium	0.90835			1.00		91		80-120	
Chromium	0.48109			0.50		96		80-120	
Lead	0.04683			0.05		94		80-120	
Selenium	0.05092			0.05		102		80-120	
Silver	0.21218			0.20		106		80-120	

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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Job Number.: 203488

Report Date.: 05/29/2001

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: FW GOULD ISLAND ATTN: Steve Knollmeyer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
ISB	Interference Check Sample B	M01EISB002			05/24/2001	1609

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.08694			0.10		87		80-120	
Barium	0.52156			0.50		104		80-120	
Cadmium	0.91273			1.00		91		80-120	
Chromium	0.48298			0.50		97		80-120	
Lead	0.04573			0.05		91		80-120	
Selenium	0.04305			0.05		86		80-120	
Silver	0.21301			0.20		107		80-120	

ISB	Interference Check Sample B	M01EISB002			05/24/2001	1953

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.09384			0.10		94		80-120	
Barium	0.52539			0.50		105		80-120	
Cadmium	0.92308			1.00		92		80-120	
Chromium	0.48794			0.50		98		80-120	
Lead	0.04653			0.05		93		80-120	
Selenium	0.04886			0.05		98		80-120	
Silver	0.21437			0.20		107		80-120	

LCS	Laboratory Control Sample	M01CSPK002	19673		05/24/2001	1810

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.09637			0.100000		96		80-120	
Barium	1.88291			2.000000		94		80-120	
Cadmium	0.04717			0.050000		94		80-120	
Chromium	0.19497			0.200000		97		80-120	
Lead	0.09799			0.100000		98		80-120	
Selenium	0.09625			0.100000		96		80-120	
Silver	0.04719			0.050000		94		80-120	

MB	Method Blank	19673	19673		05/24/2001	1803

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.00482								
Barium	0.00070								
Cadmium	-0.00013								
Chromium	0.00109								
Lead	-0.00017								
Selenium	-0.00006								
Silver	0.00014								

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: FW GOULD ISLAND

ATTN: Steve Knollmeyer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MD	Method Duplicate		203488-1		05/24/2001	1832

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.01472				0.01834	0.1120		0.9709	
Barium	0.43473				0.95942	62.6		20.0	*
Cadmium	0.00189				0.00036	0.1532		0.1942	
Chromium	0.04660				0.07495	32.8		20.0	*
Lead	0.04626				0.03406	44.3		20.0	*
Selenium	0.00062				-0.00275	200		0.4854	
Silver	-0.00000				0.00011	0.0092		0.4854	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MS	Matrix Spike	M01CSPK002	203488-1		05/24/2001	1839

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.10525			0.100000	0.01834	86		75-125	
Barium	2.63031			2.000000	0.95942	81		75-125	
Cadmium	0.04397			0.050000	0.00036	88		75-125	
Chromium	0.26953			0.200000	0.07495	95		75-125	
Lead	0.12934			0.100000	0.03406	93		75-125	
Selenium	0.08731			0.100000	-0.00275	87		75-125	
Silver	0.04538			0.050000	0.00011	91		75-125	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	M01CSPK002	203488-1		05/24/2001	1846

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.11620		0.10525	0.100000	0.01834	99		75-125	
						19.8		20	
Barium	3.14389		2.63031	2.000000	0.95942	111		75-125	
						27.6		20	*
Cadmium	0.04379		0.04397	0.050000	0.00036	88		75-125	
						9.5		20	
Chromium	0.30620		0.26953	0.200000	0.07495	117		75-125	
						22.6		20	*
Lead	0.16055		0.12934	0.100000	0.03406	128		75-125	N
						31.3		20	*
Selenium	0.08599		0.08731	0.100000	-0.00275	86		75-125	
						8.4		20	
Silver	0.04572		0.04538	0.050000	0.00011	91		75-125	
						10.7		20	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
S1	Standard 1	M01AINT001			05/24/2001	1155

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.99897			1.000000		100		95-105	
Barium	1.01227			1.000000		101		95-105	
Cadmium	0.99614			1.000000		100		95-105	
Chromium	1.00285			1.000000		100		95-105	
Lead	0.98965			1.000000		99		95-105	
Selenium	0.99497			1.000000		99		95-105	
Silver	1.01348			1.000000		101		95-105	

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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Job Number.: 203488

Report Date.: 05/29/2001

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: FW GOULD ISLAND ATTN: Steve Knollmeyer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
S2	Standard 2	M01AINT002			05/24/2001	1202

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Lead	19.01221			20.000000		95		95-105	

SD	Serial Dilution		203488-1		05/24/2001	1853

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.00112				0.01834				
Barium	0.20349				0.95942	6.0		10.0	
Cadmium	-0.00000				0.00036				
Chromium	0.01597				0.07495				
Lead	0.00834				0.03406				
Selenium	-0.00282				-0.00275				
Silver	-0.00020				0.00011				

Test Method.....: 6010B Units.....: mg/L Analyst...: pfk
Method Description.: Leachable, Metals Analysis (ICAP) Batch.....: 20182

CCB	Continuing Calibration Blank				05/24/2001	1257

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.00123								
Barium	0.00388								
Cadmium	0.00170								
Chromium	0.00152								
Lead	0.01524								
Selenium	-0.01978								
Silver	-0.00037								

CCB	Continuing Calibration Blank				05/24/2001	1341

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.00664								
Barium	0.00191								
Cadmium	0.00156								
Chromium	0.00315								
Lead	0.00767								
Selenium	0.00341								
Silver	-0.00037								

CCB	Continuing Calibration Blank				05/24/2001	1418

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.00397								
Barium	0.00417								
Cadmium	0.00167								
Chromium	0.00488								

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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Job Number.: 203488

Report Date.: 05/29/2001

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: FW GOULD ISLAND

ATTN: Steve Knollmeyer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank				05/24/2001	1418

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Lead	0.00482								
Selenium	-0.01243								
Silver	-0.00003								

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank				05/24/2001	1455

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.00954								
Barium	0.00298								
Cadmium	0.00141								
Chromium	0.00283								
Lead	0.00571								
Selenium	-0.00103								
Silver	-0.00090								

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank				05/24/2001	1750

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.01132								
Barium	0.00212								
Cadmium	-0.00207								
Chromium	0.00269								
Lead	-0.00227								
Selenium	0.01100								
Silver	0.00112								

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank				05/24/2001	1827

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.00120								
Barium	0.00212								
Cadmium	0.00163								
Chromium	0.00289								
Lead	0.00600								
Selenium	0.00415								
Silver	0.00021								

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank				05/24/2001	1853

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.00239								
Barium	0.00532								
Cadmium	0.00211								
Chromium	0.00342								
Lead	-0.01547								
Selenium	0.01931								

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCB	Continuing Calibration Blank				05/24/2001	1853

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Silver	-0.00145								

CCB	Continuing Calibration Blank				05/24/2001	1912

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.01018								
Barium	0.00417								
Cadmium	-0.00028								
Chromium	0.00389								
Lead	0.00384								
Selenium	0.01039								
Silver	-0.00242								

CCB	Continuing Calibration Blank				05/24/2001	2010

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.01187								
Barium	0.00405								
Cadmium	-0.00061								
Chromium	0.00185								
Lead	0.01460								
Selenium	0.00657								
Silver	-0.00173								

CCB	Continuing Calibration Blank				05/24/2001	2029

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.00126								
Barium	0.00515								
Cadmium	-0.00018								
Chromium	0.00480								
Lead	0.01384								
Selenium	0.00449								
Silver	0.00085								

CCV	Continuing Calibration Verification	M01ECCV003			05/24/2001	1253

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	5.07390			5.00		101		90-110	
Barium	9.93442			10.00		99		90-110	
Cadmium	2.52807			2.50		101		90-110	
Chromium	4.94903			5.00		99		90-110	
Lead	4.95030			5.00		99		90-110	
Selenium	5.01908			5.00		100		90-110	
Silver	1.00033			1.00		100		90-110	

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: FW GOULD ISLAND ATTN: Steve Knollmeyer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
CCV	Continuing Calibration Verification	M01ECCV003			05/24/2001 1338

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	5.03925			5.00		101		90-110	
Barium	9.92570			10.00		99		90-110	
Cadmium	2.50459			2.50		100		90-110	
Chromium	4.94660			5.00		99		90-110	
Lead	4.96807			5.00		99		90-110	
Selenium	4.99201			5.00		100		90-110	
Silver	0.99378			1.00		99		90-110	

CCV	Continuing Calibration Verification	M01ECCV003			05/24/2001 1415

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	5.13439			5.00		103		90-110	
Barium	9.92640			10.00		99		90-110	
Cadmium	2.52828			2.50		101		90-110	
Chromium	4.96595			5.00		99		90-110	
Lead	4.97598			5.00		100		90-110	
Selenium	5.03463			5.00		101		90-110	
Silver	0.99869			1.00		100		90-110	

CCV	Continuing Calibration Verification	M01ECCV003			05/24/2001 1451

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	5.04623			5.00		101		90-110	
Barium	9.93223			10.00		99		90-110	
Cadmium	2.51342			2.50		101		90-110	
Chromium	4.96454			5.00		99		90-110	
Lead	4.93280			5.00		99		90-110	
Selenium	5.05173			5.00		101		90-110	
Silver	0.99718			1.00		100		90-110	

CCV	Continuing Calibration Verification	M01ECCV003			05/24/2001 1747

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	5.05949			5.00		101		90-110	
Barium	9.93713			10.00		99		90-110	
Cadmium	2.49923			2.50		100		90-110	
Chromium	4.94071			5.00		99		90-110	
Lead	4.93898			5.00		99		90-110	
Selenium	5.06777			5.00		101		90-110	
Silver	0.99262			1.00		99		90-110	

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Report Date.: 05/29/2001

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QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
CCV	Continuing Calibration Verification	M01ECCV003			05/24/2001 1824

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	5.04510			5.00		101		90-110	
Barium	9.94652			10.00		99		90-110	
Cadmium	2.49152			2.50		100		90-110	
Chromium	4.94040			5.00		99		90-110	
Lead	4.92233			5.00		98		90-110	
Selenium	5.01025			5.00		100		90-110	
Silver	0.99384			1.00		99		90-110	

CCV	Continuing Calibration Verification	M01ECCV003			05/24/2001 1849

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	5.07390			5.00		101		90-110	
Barium	9.92935			10.00		99		90-110	
Cadmium	2.49923			2.50		100		90-110	
Chromium	4.94606			5.00		99		90-110	
Lead	4.90644			5.00		98		90-110	
Selenium	5.01952			5.00		100		90-110	
Silver	0.99353			1.00		99		90-110	

CCV	Continuing Calibration Verification	M01ECCV003			05/24/2001 1908

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	5.05818			5.00		101		90-110	
Barium	9.92161			10.00		99		90-110	
Cadmium	2.49417			2.50		100		90-110	
Chromium	4.94876			5.00		99		90-110	
Lead	4.92408			5.00		98		90-110	
Selenium	5.01101			5.00		100		90-110	
Silver	0.99561			1.00		100		90-110	

CCV	Continuing Calibration Verification	M01ECCV003			05/24/2001 2007

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	5.07783			5.00		102		90-110	
Barium	9.89652			10.00		99		90-110	
Cadmium	2.48924			2.50		100		90-110	
Chromium	4.96483			5.00		99		90-110	
Lead	4.92696			5.00		99		90-110	
Selenium	5.02877			5.00		101		90-110	
Silver	0.99163			1.00		99		90-110	

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QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CCV	Continuing Calibration Verification	M01ECCV003			05/24/2001	2025

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	5.07784			5.00		102		90-110	
Barium	9.87513			10.00		99		90-110	
Cadmium	2.48591			2.50		99		90-110	
Chromium	4.95192			5.00		99		90-110	
Lead	4.88900			5.00		98		90-110	
Selenium	5.02359			5.00		100		90-110	
Silver	0.99182			1.00		99		90-110	

CRI	Contract Required Detection Limits	M01DCRI001			05/24/2001	1233

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.20408			0.20		102		50-150	
Barium	0.40386			0.40		101		50-150	
Cadmium	0.00965			0.01		96		50-150	
Chromium	0.02580			0.02		129		50-150	
Lead	0.10484			0.10		105		50-150	
Selenium	0.21257			0.20		106		50-150	
Silver	0.02284			0.02		114		50-150	

CRI	Contract Required Detection Limits	M01DCRI001			05/24/2001	1439

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.19668			0.20		98		50-150	
Barium	0.40398			0.40		101		50-150	
Cadmium	0.00898			0.01		90		50-150	
Chromium	0.02680			0.02		134		50-150	
Lead	0.12204			0.10		122		50-150	
Selenium	0.22543			0.20		113		50-150	
Silver	0.02237			0.02		112		50-150	

CRI	Contract Required Detection Limits	M01DCRI001			05/24/2001	1736

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.19906			0.20		100		50-150	
Barium	0.41044			0.40		103		50-150	
Cadmium	0.00980			0.01		98		50-150	
Chromium	0.02313			0.02		116		50-150	
Lead	0.11036			0.10		110		50-150	
Selenium	0.23468			0.20		117		50-150	
Silver	0.01899			0.02		95		50-150	

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CRI	Contract Required Detection Limits	M01DCRI001			05/24/2001	1857

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.19285			0.20		96		50-150	
Barium	0.40832			0.40		102		50-150	
Cadmium	0.00863			0.01		86		50-150	
Chromium	0.02121			0.02		106		50-150	
Lead	0.10382			0.10		104		50-150	
Selenium	0.20870			0.20		104		50-150	
Silver	0.02014			0.02		101		50-150	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
CRI	Contract Required Detection Limits	M01DCRI001			05/24/2001	2014

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.22400			0.20		112		50-150	
Barium	0.40598			0.40		101		50-150	
Cadmium	0.00883			0.01		88		50-150	
Chromium	0.02390			0.02		120		50-150	
Lead	0.10724			0.10		107		50-150	
Selenium	0.20436			0.20		102		50-150	
Silver	0.02070			0.02		104		50-150	

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
EB1	Extraction Blank 1	19804	19804		05/24/2001	1319

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.01517								
Barium	0.06066								
Cadmium	0.00034								
Chromium	0.00297								
Lead	0.00374								
Selenium	-0.02118								
Silver	0.00245								

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
EB1	Extraction Blank 1	19804	19804		05/24/2001	1323

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.03103								
Barium	0.55416								
Cadmium	-0.00144								
Chromium	0.00036								
Lead	0.00577								
Selenium	-0.00563								
Silver	-0.00035								

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QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
ICB	Initial Calibration Blank				05/24/2001	1229

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.00440								
Barium	0.00193								
Cadmium	0.00058								
Chromium	0.00419								
Lead	0.00960								
Selenium	-0.00125								
Silver	0.00014								

ICB	Initial Calibration Blank				05/24/2001	1732

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	0.00574								
Barium	0.00215								
Cadmium	-0.00078								
Chromium	0.00156								
Lead	-0.00648								
Selenium	0.00982								
Silver	-0.00331								

ICV	Initial Calibration Verification	M01DICV001			05/24/2001	1225

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	4.06731			4.00		102		90-110	
Barium	8.05363			8.000		101		90-110	
Cadmium	2.01473			2.00		101		90-110	
Chromium	4.00632			4.00		100		90-110	
Lead	3.99350			4.00		100		90-110	
Selenium	4.02293			4.00		101		90-110	
Silver	0.79789			0.800		100		90-110	

ICV	Initial Calibration Verification	M01DICV001			05/24/2001	1728

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	4.13280			4.00		103		90-110	
Barium	8.03187			8.000		100		90-110	
Cadmium	2.03046			2.00		102		90-110	
Chromium	4.02031			4.00		101		90-110	
Lead	4.01167			4.00		100		90-110	
Selenium	4.07506			4.00		102		90-110	
Silver	0.80136			0.800		100		90-110	

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
ISB	Interference Check Sample B	M01DISB002			05/24/2001	1249

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	4.91332			5.000		98		80-120	
Barium	0.49491			0.50		99		80-120	
Cadmium	1.00496			1.00		100		80-120	
Chromium	0.48363			0.50		97		80-120	
Lead	4.98906			5.000		100		80-120	
Selenium	4.92554			5		99		80-120	
Silver	0.20130			0.20		101		80-120	

ISB	Interference Check Sample B	M01DISB002			05/24/2001	1446

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	4.87842			5.000		98		80-120	
Barium	0.49320			0.50		99		80-120	
Cadmium	0.99507			1.00		100		80-120	
Chromium	0.48503			0.50		97		80-120	
Lead	4.99462			5.000		100		80-120	
Selenium	4.92736			5		99		80-120	
Silver	0.19877			0.20		99		80-120	

ISB	Interference Check Sample B	M01DISB002			05/24/2001	1743

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	4.95958			5.000		99		80-120	
Barium	0.49959			0.50		100		80-120	
Cadmium	0.98473			1.00		98		80-120	
Chromium	0.48054			0.50		96		80-120	
Lead	4.82727			5.000		97		80-120	
Selenium	4.99676			5		100		80-120	
Silver	0.19570			0.20		98		80-120	

ISB	Interference Check Sample B	M01DISB002			05/24/2001	1904

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	4.99962			5.000		100		80-120	
Barium	0.49738			0.50		99		80-120	
Cadmium	0.99322			1.00		99		80-120	
Chromium	0.48346			0.50		97		80-120	
Lead	4.85594			5.000		97		80-120	
Selenium	4.99255			5		100		80-120	
Silver	0.19457			0.20		97		80-120	

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
ISB	Interference Check Sample B	M01DISB002			05/24/2001	2021

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	4.95443			5.000		99		80-120	
Barium	0.49548			0.50		99		80-120	
Cadmium	0.99012			1.00		99		80-120	
Chromium	0.48342			0.50		97		80-120	
Lead	4.86169			5.000		97		80-120	
Selenium	4.96938			5		99		80-120	
Silver	0.19786			0.20		99		80-120	

LCS	Laboratory Control Sample	M01ASPK001	19804		05/24/2001	1327

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	1.76832			2.000000		88		80-120	
Barium	1.76801			2.000000		88		80-120	
Cadmium	0.04460			0.050000		89		80-120	
Chromium	0.18006			0.200000		90		80-120	
Lead	0.45092			0.500000		90		80-120	
Selenium	1.76316			2.000000		88		80-120	
Silver	0.04436			0.050000		89		80-120	

MD	Method Duplicate		203484-1		05/24/2001	1345

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.03010				-0.02470	200		0.1000	
Barium	0.18115				0.17745	0.0037		1.0000	
Cadmium	0.00652				0.00495	0.0016		0.0500	
Chromium	0.01792				0.01857	0.0006		0.0500	
Lead	0.11655				0.00612	0.1104		0.0500	
Selenium	0.00360				-0.01065	200		0.1000	
Silver	-0.00175				-0.00441	200		0.0500	

MD	Method Duplicate		203488-1		05/24/2001	1400

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.01682				-0.00413	200		0.1000	
Barium	0.31522				0.32793	0.0127		1.0000	
Cadmium	0.00244				0.00048	0.0020		0.0500	
Chromium	0.02560				0.02518	0.0004		0.0500	
Lead	0.04064				0.05561	0.0150		0.0500	
Selenium	-0.00801				-0.01766	200		0.1000	
Silver	0.00234				-0.00190	200		0.0500	

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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SEVERN TRENT SERVICES

STL Chicago

QUALITY CONTROL RESULTS

Job Number.: 203488 Report Date.: 05/29/2001

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: FW GOULD ISLAND ATTN: Steve Knollmeyer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MS	Matrix Spike	M01ESPK001	203484-1		05/24/2001	1349

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	3.82796			5.00	-0.02470	77		50-150	
Barium	11.29932			100.00	0.17745	11		50-150	N
Cadmium	0.76246			1.00	0.00495	76		50-150	
Chromium	3.58987			5.00	0.01857	72		50-150	
Lead	2.22366			5.00	0.00612	44		50-150	N
Selenium	0.78622			1.00	-0.01065	79		50-150	
Silver	0.75847			1.00	-0.00441	76		50-150	

MS	Matrix Spike	M01ESPK001	203488-1		05/24/2001	1404

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	4.33820			5.00	-0.00413	87		50-150	
Barium	87.27884			100.00	0.32793	87		50-150	
Cadmium	0.85092			1.00	0.00048	85		50-150	
Chromium	4.18010			5.00	0.02518	84		50-150	
Lead	4.11963			5.00	0.05561	81		50-150	
Selenium	0.86374			1.00	-0.01766	86		50-150	
Silver	0.82547			1.00	-0.00190	83		50-150	

S3	Standard 3	M00KINT003			05/24/2001	1221

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	10.00167			10.000000		100		95-105	
Barium	19.90049			20.000000		100		95-105	
Cadmium	4.98678			5.000000		100		95-105	
Chromium	9.86633			10.000000		99		95-105	
Lead	9.87627			10.000000		99		95-105	
Selenium	9.91557			10.000000		99		95-105	
Silver	2.00534			2.000000		100		95-105	

SD	Serial Dilution		203484-1		05/24/2001	1352

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.01924				-0.02470				
Barium	0.03380				0.17745				
Cadmium	-0.00063				0.00495				
Chromium	0.00451				0.01857				
Lead	0.02423				0.00612				
Selenium	-0.02023				-0.01065				
Silver	0.00054				-0.00441				

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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STL Chicago

QUALITY CONTROL RESULTS

Job Number.: 203488

Report Date.: 05/29/2001

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: FW GOULD ISLAND ATTN: Steve Knollmeyer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
SD	Serial Dilution		203488-1		05/24/2001	1407

Parameter/Test Description	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic	-0.00516				-0.00413				
Barium	0.07024				0.32793				
Cadmium	0.00154				0.00048				
Chromium	0.00564				0.02518				
Lead	-0.00214				0.05561	119.2		10.0	E
Selenium	-0.01021				-0.01766				
Silver	-0.00141				-0.00190				

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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STL Chicago

QUALITY CONTROL RESULTS

Job Number.: 203488 Report Date.: 05/29/2001

CUSTOMER: Analytics Environmental Laboratory, LLC PROJECT: FW GOULD ISLAND ATTN: Steve Knollmeyer

Test Method.....: Method Batch.....: 19646 Analyst...: clb
Method Description.: % Solids Determination Units.....: % Test Code.: %SOLID
Parameter.....: % Solids

QC	Lab ID	Reagent	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
MB			0.0								05/21/2001	0000
MD	203490-1		85.0				87.8	3.2	20.0		05/21/2001	0000

Test Method.....: 7471A Batch.....: 19621 Analyst...: gok
Method Description.: Mercury (CVAA) Solids Units.....: ug/L Test Code.: HG
Parameter.....: Mercury

QC	Lab ID	Reagent	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
CCB			-0.01182								05/21/2001	1514
CCB			-0.00613								05/21/2001	1531
CCV		M00LSK1572	1.077922			1.000000		108	90-110		05/21/2001	1511
CCV		M00LSK1572	1.101271			1.000000		110	90-110		05/21/2001	1527
CRA		M00JSK1564	0.207334			0.200000		104	50-150		05/21/2001	1453
ICB			-0.01625								05/21/2001	1451
ICV		M00LSK1572	2.027205			2.000000		101	90-110		05/21/2001	1449
LCS	19620	M00LSK1572	2.017474			2.000000		101	80-120		05/21/2001	1458
MB	19620		-0.00332								05/21/2001	1456
MD	203490-1		0.064134				0.054583	1.5918	33.0000		05/21/2001	1507
MS	203490-1	M00JSK1564	1.18545			1.000000	0.054583	119	75-125		05/21/2001	1509

Test Method.....: 7470A Batch.....: 19862 Analyst...: gok
Method Description.: Leachable, Mercury (CVAA) Units.....: ug/L Test Code.: HG
Parameter.....: Mercury

QC	Lab ID	Reagent	QC Result	Q	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
CCB			-0.01145								05/23/2001	1226
CCB			0.01584								05/23/2001	1253
CCB			0.009371								05/23/2001	1306
CCV		M00LSK1572	1.01994			1.000000		102	80-120		05/23/2001	1224
CCV		M00LSK1572	0.984428			1.000000		98	80-120		05/23/2001	1250
CCV		M00LSK1572	1.009787			1.000000		101	80-120		05/23/2001	1304
CRA		M00JSK1564	0.237993			0.200000		119	50-150		05/23/2001	1206
EB1	19854		0.043341								05/23/2001	1242
ICB			0.013869								05/23/2001	1204
ICV		M00LSK1572	2.016629			2.000000		101	90-110		05/23/2001	1201
LCS	19854	M00LSK1572	2.007976			2.000000		100	80-120		05/23/2001	1210
MB	19854		0.034003								05/23/2001	1208
MD	203484-1		0.18586				0.139639	0.4622	2.0000		05/23/2001	1246
MD	203488-1		0.034345				0.055293	0.2095	2.0000		05/23/2001	1257
MS	203484-1	M00DSK1485	1.033262			1.000000	0.139639	103	50-150		05/23/2001	1248
MS	203488-1	M00DSK1485	0.946389			1.000000	0.055293	95	50-150		05/23/2001	1300

 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 05/29/2001

REPORT COMMENTS

1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

2) Soil, sediment and sludge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.

3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. ID# 100201
5) Arizona Environmental Laboratory License number AZ0603.
6) According to 40CFR Part 136.3, pH, Chloride Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossary of flags, qualifiers and abbreviation

Inorganic Qualifiers (Q-Column)

U Analyte was not detected at or above the reporting limit.
< Not detected at or above the reporting limit.
J Result is less than the RL, but greater than or equal to the method detection limit.
B Result is less than the CRDL/RL, but greater than or equal to the IDL/MDL.
S Result was determined by the Method of Standard Additions.
F AFCEE: Result is less than the RL, but greater than or equal to the method detection limit.

Inorganic Flags (Flag Column)

- ICV,CCV,ICB,CCB,ISA,ISB,CRI,CRA,MRL: Instrument related QC exceed th upper or lower control limits.
* LCS, LCD, MD: Batch QC exceeds the upper or lower control limits.
+ MSA correlation coefficient is less than 0.995.
4 MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
E SD: Serial dilution exceeds the control limits.
H MB, EB: Batch QC is greater than reporting limit or had a negative instrument reading lower than the absolute value of the reporting limit.
N MS, MSD: Spike recovery exceeds the upper or lower control limits.
W PS: Post-digestion spike was outside 85-115% control limits.

Organic Qualifiers (Q - Column)

U Analyte was not detected at or above the reporting limit.
ND Compound not detected.
J Result is an estimated value below the reporting limit or a tentatively identified compound (TIC).
Q Result was qualitatively confirmed, but not quantified.
C Pesticide identification was confirmed by GC/MS.
Y The chromatographic response resembles a typical fuel pattern.
Z The chromatographic response does not resemble a typical fuel pattern.
E Result exceeded calibration range, secondary dilution required.
F AFCEE:Result is an estimated value below the reporting limit or a tentatively identified compound (TIC)

Organic Flags (Flags Column)

- MB,EB, MLE: Batch QC is greater than reporting limit.
* LCS, LCD, CCV, MS, MSD, Surrogate, RS:Batch QC exceeds the upper or lower control limits.
A Concentration exceeds the instrument calibration range or below the reporting limit.
B Compound was found in the blank and sample.
D Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution will be flagged with a D.
H Alternate peak selection upon analytical review
I Indicates the presence of an interfence, recovery is not calculated.
M Manually integrated compound.
P The lower of the two values is reported when the % difference between the results of two GC columns is greater than 25%.

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 05/29/2001

Abbreviations

Batch	Designation given to identify a specific extraction, digestion, preparation set, or analysis set
CAP	Capillary Column
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CF	Confirmation Analysis
CRA	Low Level Standard Check - GFAA; Mercury
CRI	Low Level Standard Check - ICP
Dil Fac	Dilution Factor
DL	Secondary dilution and analysis
DLFac	Detection Limit Factor
DSH	Distilled Standard - High Level
DSL	Distilled Standard - Low Level
DSM	Distilled Standard - Medium Level
EB	Extraction Blank
ICB	Initial Calibration Blank
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
ISA	Interference Check Sample A
ISB	Interference Check Sample B
Job No.	The first six digits of the sample ID which refers to a specific client, project and sample group
Lab ID	An 8 number unique laboratory identification
LCD	Laboratory Control Standard Duplicate
LCS	Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest
MB	Method Blank or (PB) Preparation Blank
MD	Method Duplicate
MDL	Method Detection Limit
MLE	Medium Level Extraction Blank
MRL	Method Reporting Limit Standard
MSA	Method of Standard Additions
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not Detected
PACK	Packed Column
PREPF	Preparation factor used by the Laboratory's Information Management System (LIMS)
PS	Post Spike
PSD	Post Spike Duplicate
RA	Re-analysis
RE	Re-extraction and analysis
RL	Reporting Limit
RPD	Relative Percent Difference of duplicate (unrounded) analyses
RRF	Relative Response Factor
RS	Reference Standard
RT	Retention Time
RTW	Retention Time Window
SampleID	A 9 digit number unique for each sample, the first six digits are referred as the job number
SCB	Seeded Control Blank
SD	Serial Dilution
UCB	Unseeded Control Blank

One or a combination of these data qualifiers and abbreviations may appear in the analytical report.

SIL

205400

analytics environmental laboratory LLC

195 Commerce Way Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

For Analytics Use Only Rev 2/00

Samples were:
1) Shipped r hand-deliv red
2) T mp blank °C 2.3
3) Received in good condition Y or N
4) pH checked by:
5) Labels checked by: JL

Project#: Proj. Name: Gold Island

Company: ANALYTICS

Contact: Stephen Knollmeyer

Address: 195 COMMERCE WAY
PORTSMOUTH, NH 03801

Phone: 603-436-5111 PO# Quote #

Sampler (Signature): Dan Conover

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwate
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

	Station Identification	Sample Date	Sample Time	Analysis	Unpres	4°C	HNO_3	H_2SO_4	HCL	Other	Matrix	Container number/type		pH	Analytics Sample #
1	GI-C29-Conc-4	5/16/01	1100	TCLP metals							X	1	G		45378-1
1	1	1	1	Total RCRA 8 metals							X	—	—		
2	GI-C29-Conc-5	5/16/01	1110	TCLP metals, Total RCRA 8							X	1	G		45378 2

Received By	Received By	Received By
UPS	[illegible]	
Time 16:30	Time 0920	Time
Date 05/16/01	Date 5/17/01	Date
Relinquished By Sampler [illegible]	Relinquished By:	Relinquished By:

FAX RESULTS? YES NO
Fax #: 603-430-2151

Turnaround Request
Standard ☐ Due Date
Priority ☒ Due Date 5/25/01

Comments / Instructions:
Please reference Station ID number and AEL Lab number on report(s).
Please ~~Prep~~ Report total RCRA 8 including mercury

Temp. 2.3

Page 1 of 1

043/045

Analytics\AEL Documents\AEL COC

analytic environmental laboratory LLC

195 Commerce W Suite E
Portsmouth, NH 03801
Phone (603) 436-5111
Fax (603) 430-2151

For Analytics Use Only Rev 2/00

Samples were:
1) Shipped or hand-delivered
2) Temp blank oC 5°C
3) Received in good condition Y or N
4) pH checked by: N/A
5) Labels checked by: VC 5.18.01

Project #: Proj Name: GOULD ISLAND
Company: FOSTER WHEELER ENVIRONMENTAL CORP.
Contact: Dan Conover
Address: P.O. Box 4350
Middletown, RI 02842
Phone: (401) 265-3662 PO#: Quote#
Sampler (Signature): Dan Conover

Matrix Key:
WW=Wastewater
SW=Surfacewater
GW=Groundwater
DW=Drinkingwater
S=Soil/Sludge
O=Oil
E=Extract
X=Other

Container Key
P=plastic G=glass

Station Identification	Sample Date	Sample Time	Analysis	Preservation: Unpres	4° C	HNO_3	H_2SO_4	HCL	Other	Matrix	Container number/type		pH	Analytics Sample #
GI-C29-CONC-4	5/16/01	1100	Waste Characterization		X					O	2	G		45398-1
GI-C29-CONC-5	5/16/01	1110	Waste Characterization		X					O	2	G		2

	Received By:	Received by:	Received by:
	DHL Shipper	Melissa Cadelli	
Time:	1700	11:30	
Date:	5/16/01	5/18/01	
Relinquished by Sampler:	Dan Conover		
Relinquished by:		DHL shipper	
Relinquished by:			

FAX RESULTS? YES NO
Fax # (401) 845-4169

Turnaround Request
Standard [X] Due Date 5/25/01
Priority [ ] Due Date

Comments / Instructions.
5/18/01 mag per Dan Conover - Waste Characterization
PCB/PEST - 8081/8082S
SVOC - 8270S
VOC - 8260S
react - CYANS, SULFS
pHS
Semi-Ext
TCLPMW
Total RCRA 8 metals (RCRAS)

Client Code: FWECRI

ANALYTICS SAMPLE RECEIPT CHECKLIST

AEL LAB#: 45

CLIENT: FUSCPA

PROJECT: Gould Island

COOLER NUMBER: —

NUMBER OF COOLERS: 1

DATE RECEIVED: 5/18/01

A: PRELIMINARY EXAMINATION:

DATE COOLER OPENED: 5·18·01

1. Cooler received by(initials) — Date Received: 5/18·01
2. Did cooler come with a shipping slip? DHL 7980638794 — (Y) N

If YES, enter carrier name and airbill number here: 7980638794

3. Were custody seals on the outside of cooler? — (Y) N
How many & where: 2 Seal Date: 5·17·01 Seal Name: Dan Conover
4. Did the custody seals arrive unbroken and intact upon arrival? — (Y) N
5. COC#: N/A
6. Were Custody papers filled out properly (ink,signed, etc)? — (Y) N
7. Were custody papers sealed in a plastic bag? — (Y) N
8. Did you sign the COC in the appropriate place? — (Y) N
9. Was the project identifiable from the COC papers? — (Y) N
10. Was enough ice used to chill the cooler? (Y) N Temp. of cooler: 5°C

B. Log-In: Date samples were logged in: 5·18·01 By: MJ

11. Type of packing in cooler (bubble wrap/popcorn) — (Y) N
12. Were all bottles sealed in separate plastic bags? — (Y) N
13. Did all bottles arrive unbroken and were labels in good condition? — (Y) N
14. Were all bottle labels complete(ID,Date,time,etc.) — (Y) N
15. Did all bottle labels agree with custody papers? — (Y) N
16. Were the correct containers used for the tests indicated: — (Y) N
17. Were samples received at the correct pH? — Y (NA)
18. Was sufficient amount of sample sent for the tests indicated? — (Y) N
19. Were bubbles absent in VOA samples? — Y (NA)

If NO, List sample #'s:

20. Laboratory labeling verified by (initials): VC Date: 5.18.01