

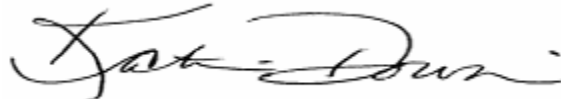
ANALYTICAL REPORT

Job Number: 580-5404-2

Job Description: Old Douglas Harbor

For:
PND Engineers, Inc.
1506 West 36th Ave.
Anchorage, AK 99503

Attention: Ms. Jennifer Lundberg



Katie Downie
Project Manager II
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05/31/2007

Project Manager: Katie Downie

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Case Narrative for job: 580-5404-2

Client: PND Engineers

Date: 05/31/2007

The additional mercury analyses were requested on May 22, 2007. This was outside of the standard 28 day hold time for mercury in environmental samples, and the results have been flagged "H".

MERCURY

Samples 580-5404-3 through 580-5404-12 and 580-5404-15 through 580-5404-18 were analyzed for mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 05-24-2007 and analyzed on 05/25/2007, which was within outside method required holding times.

Samples 580-5404-3 through 580-5404-12 and 580-5404-15 through 580-5404-18 required dilution prior to analysis.

The amount of mercury in batch QC 580-5404-3 was more than four times the matrix spike amount, and the normal control limits do not apply. The recoveries of mercury in the LCS and LCSD were acceptable.

No other difficulties were encountered during the mercury analyses.

All other quality control parameters were within the acceptance limits.

PERCENT SOLIDS

Samples 580-5404-2 through 580-5404-18 were analyzed for percent solids in accordance with EPA Method 160.3 Modified. The samples were analyzed on 04/03/2007 and 04/04/2007, which was within the required method holding time. No difficulties were encountered during the percent solids analyses. All quality control parameters were within the acceptance limits.

METHOD SUMMARY

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)	STL SEA	SW846 7471A	
Mercury in Solid or Semi-Solid Waste (Manual	STL SEA		SW846 7471A

LAB REFERENCES:

STL SEA = STL Seattle

METHOD REFERENCES:

SW846 - "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

SAMPLE SUMMARY

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
580-5404-3	PND07-15A	Solid	03/23/2007 0945	03/26/2007 1600
580-5404-4	PND07-15C	Solid	03/23/2007 0953	03/26/2007 1600
580-5404-5	PND07-16A	Solid	03/23/2007 1004	03/26/2007 1600
580-5404-6	PND07-16C	Solid	03/23/2007 1014	03/26/2007 1600
580-5404-7	PND07-14A	Solid	03/23/2007 1025	03/26/2007 1600
580-5404-8	PND07-14C	Solid	03/23/2007 1031	03/26/2007 1600
580-5404-9	PND07-12A	Solid	03/23/2007 1044	03/26/2007 1600
580-5404-10	PND07-12C	Solid	03/23/2007 1050	03/26/2007 1600
580-5404-11	PND07-13A	Solid	03/23/2007 1057	03/26/2007 1600
580-5404-12	PND07-13C	Solid	03/23/2007 1059	03/26/2007 1600
580-5404-15	PND07-4A	Solid	03/23/2007 1127	03/26/2007 1600
580-5404-16	PND07-4C	Solid	03/23/2007 1135	03/26/2007 1600
580-5404-17	PND07-3A	Solid	03/23/2007 1143	03/26/2007 1600
580-5404-18	PND07-C	Solid	03/23/2007 1150	03/26/2007 1600

Analytical Data

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Client Sample ID: PND07-15A

Lab Sample ID: 580-5404-3

Date Sampled: 03/23/2007 0945

Client Matrix: Solid

% Moisture: 30.7

Date Received: 03/26/2007 1600

7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method: 7471A

Analysis Batch: 580-19080

Instrument ID: SEA029

Preparation: 7471A

Prep Batch: 580-18998

Lab File ID: N/A

Dilution: 20

Initial Weight/Volume: 0.5906 g

Date Analyzed: 05/25/2007 1519

Final Weight/Volume: 50 mL

Date Prepared: 05/24/2007 1700

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		5.4	H	0.22	0.49

Analytical Data

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Client Sample ID: PND07-15C

Lab Sample ID: 580-5404-4

Date Sampled: 03/23/2007 0953

Client Matrix: Solid

% Moisture: 28.9

Date Received: 03/26/2007 1600

7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method: 7471A

Analysis Batch: 580-19080

Instrument ID: SEA029

Preparation: 7471A

Prep Batch: 580-18998

Lab File ID: N/A

Dilution: 20

Initial Weight/Volume: 0.6105 g

Date Analyzed: 05/25/2007 1543

Final Weight/Volume: 50 mL

Date Prepared: 05/24/2007 1700

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		2.5	H	0.21	0.46

Analytical Data

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Client Sample ID: PND07-16A

Lab Sample ID: 580-5404-5

Date Sampled: 03/23/2007 1004

Client Matrix: Solid

% Moisture: 31.9

Date Received: 03/26/2007 1600

7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method: 7471A

Analysis Batch: 580-19080

Instrument ID: SEA029

Preparation: 7471A

Prep Batch: 580-18998

Lab File ID: N/A

Dilution: 20

Initial Weight/Volume: 0.5805 g

Date Analyzed: 05/25/2007 1548

Final Weight/Volume: 50 mL

Date Prepared: 05/24/2007 1700

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		1.9	H	0.23	0.51

Analytical Data

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Client Sample ID: PND07-16C

Lab Sample ID: 580-5404-6

Date Sampled: 03/23/2007 1014

Client Matrix: Solid

% Moisture: 32.3

Date Received: 03/26/2007 1600

7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method: 7471A

Analysis Batch: 580-19080

Instrument ID: SEA029

Preparation: 7471A

Prep Batch: 580-18998

Lab File ID: N/A

Dilution: 20

Initial Weight/Volume: 0.6746 g

Date Analyzed: 05/25/2007 1553

Final Weight/Volume: 50 mL

Date Prepared: 05/24/2007 1700

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		3.0	H	0.20	0.44

Analytical Data

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Client Sample ID: PND07-14A

Lab Sample ID: 580-5404-7

Date Sampled: 03/23/2007 1025

Client Matrix: Solid

% Moisture: 42.8

Date Received: 03/26/2007 1600

7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method: 7471A

Analysis Batch: 580-19080

Instrument ID: SEA029

Preparation: 7471A

Prep Batch: 580-18998

Lab File ID: N/A

Dilution: 20

Initial Weight/Volume: 0.5366 g

Date Analyzed: 05/25/2007 1558

Final Weight/Volume: 50 mL

Date Prepared: 05/24/2007 1700

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		2.1	H	0.29	0.65

Analytical Data

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Client Sample ID: PND07-14C

Lab Sample ID: 580-5404-8

Date Sampled: 03/23/2007 1031

Client Matrix: Solid

% Moisture: 51.1

Date Received: 03/26/2007 1600

7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method: 7471A

Analysis Batch: 580-19080

Instrument ID: SEA029

Preparation: 7471A

Prep Batch: 580-18998

Lab File ID: N/A

Dilution: 20

Initial Weight/Volume: 0.5977 g

Date Analyzed: 05/25/2007 1603

Final Weight/Volume: 50 mL

Date Prepared: 05/24/2007 1700

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		2.7	H	0.31	0.68

Analytical Data

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Client Sample ID: PND07-12A

Lab Sample ID: 580-5404-9

Client Matrix: Solid

% Moisture: 29.8

Date Sampled: 03/23/2007 1044

Date Received: 03/26/2007 1600

7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method: 7471A

Preparation: 7471A

Dilution: 20

Date Analyzed: 05/25/2007 1617

Date Prepared: 05/24/2007 1700

Analysis Batch: 580-19080

Prep Batch: 580-18998

Instrument ID: SEA029

Lab File ID: N/A

Initial Weight/Volume: 0.5816 g

Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		4.9	H	0.22	0.49

Analytical Data

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Client Sample ID: PND07-12C

Lab Sample ID: 580-5404-10

Date Sampled: 03/23/2007 1050

Client Matrix: Solid

% Moisture: 32.0

Date Received: 03/26/2007 1600

7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method: 7471A

Analysis Batch: 580-19080

Instrument ID: SEA029

Preparation: 7471A

Prep Batch: 580-18998

Lab File ID: N/A

Dilution: 20

Initial Weight/Volume: 0.5537 g

Date Analyzed: 05/25/2007 1622

Final Weight/Volume: 50 mL

Date Prepared: 05/24/2007 1700

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		4.7	H	0.24	0.53

Analytical Data

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Client Sample ID: PND07-13A

Lab Sample ID: 580-5404-11

Date Sampled: 03/23/2007 1057

Client Matrix: Solid

% Moisture: 31.9

Date Received: 03/26/2007 1600

7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method: 7471A

Analysis Batch: 580-19080

Instrument ID: SEA029

Preparation: 7471A

Prep Batch: 580-18998

Lab File ID: N/A

Dilution: 20

Initial Weight/Volume: 0.5054 g

Date Analyzed: 05/25/2007 1626

Final Weight/Volume: 50 mL

Date Prepared: 05/24/2007 1700

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		4.4	H	0.26	0.58

Analytical Data

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Client Sample ID: PND07-13C

Lab Sample ID: 580-5404-12

Date Sampled: 03/23/2007 1059

Client Matrix: Solid

% Moisture: 33.6

Date Received: 03/26/2007 1600

7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method: 7471A

Analysis Batch: 580-19088

Instrument ID: SEA029

Preparation: 7471A

Prep Batch: 580-19051

Lab File ID: N/A

Dilution: 20

Initial Weight/Volume: 0.6494 g

Date Analyzed: 05/29/2007 1547

Final Weight/Volume: 50 mL

Date Prepared: 05/29/2007 1025

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		2.1	H	0.21	0.46

Analytical Data

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Client Sample ID: PND07-4A

Lab Sample ID: 580-5404-15

Date Sampled: 03/23/2007 1127

Client Matrix: Solid

% Moisture: 32.6

Date Received: 03/26/2007 1600

7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method: 7471A

Analysis Batch: 580-19080

Instrument ID: SEA029

Preparation: 7471A

Prep Batch: 580-18998

Lab File ID: N/A

Dilution: 20

Initial Weight/Volume: 0.5682 g

Date Analyzed: 05/25/2007 1637

Final Weight/Volume: 50 mL

Date Prepared: 05/24/2007 1700

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		3.5	H	0.23	0.52

Analytical Data

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Client Sample ID: PND07-4C

Lab Sample ID: 580-5404-16

Date Sampled: 03/23/2007 1135

Client Matrix: Solid

% Moisture: 26.7

Date Received: 03/26/2007 1600

7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method: 7471A

Analysis Batch: 580-19080

Instrument ID: SEA029

Preparation: 7471A

Prep Batch: 580-18998

Lab File ID: N/A

Dilution: 20

Initial Weight/Volume: 0.5043 g

Date Analyzed: 05/25/2007 1641

Final Weight/Volume: 50 mL

Date Prepared: 05/24/2007 1700

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		1.1	H	0.24	0.54

Analytical Data

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Client Sample ID: PND07-3A

Lab Sample ID: 580-5404-17

Date Sampled: 03/23/2007 1143

Client Matrix: Solid

% Moisture: 33.0

Date Received: 03/26/2007 1600

7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method: 7471A

Analysis Batch: 580-19080

Instrument ID: SEA029

Preparation: 7471A

Prep Batch: 580-18998

Lab File ID: N/A

Dilution: 20

Initial Weight/Volume: 0.6565 g

Date Analyzed: 05/25/2007 1646

Final Weight/Volume: 50 mL

Date Prepared: 05/24/2007 1700

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		2.8	H	0.20	0.46

Analytical Data

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Client Sample ID: PND07-C

Lab Sample ID: 580-5404-18

Date Sampled: 03/23/2007 1150

Client Matrix: Solid

% Moisture: 41.2

Date Received: 03/26/2007 1600

7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method: 7471A

Analysis Batch: 580-19080

Instrument ID: SEA029

Preparation: 7471A

Prep Batch: 580-18998

Lab File ID: N/A

Dilution: 20

Initial Weight/Volume: 0.5929 g

Date Analyzed: 05/25/2007 1651

Final Weight/Volume: 50 mL

Date Prepared: 05/24/2007 1700

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		2.2	H	0.26	0.57

Quality Control Results

Client: PND Engineers, Inc.

Job Number: 580-5404-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 580-18998					
LCS 580-18998/20-AA	Lab Control Spike	T	Solid	7471A	
LCSD 580-18998/21-AA	Lab Control Spike Duplicate	T	Solid	7471A	
LCSSRM 580-18998/22-AA	LCS-Standard Reference Material	T	Solid	7471A	
MB 580-18998/19-AA	Method Blank	T	Solid	7471A	
580-5404-3	PND07-15A	T	Solid	7471A	
580-5404-3DU	Duplicate	T	Solid	7471A	
580-5404-3MS	Matrix Spike	T	Solid	7471A	
580-5404-3MSD	Matrix Spike Duplicate	T	Solid	7471A	
580-5404-4	PND07-15C	T	Solid	7471A	
580-5404-5	PND07-16A	T	Solid	7471A	
580-5404-6	PND07-16C	T	Solid	7471A	
580-5404-7	PND07-14A	T	Solid	7471A	
580-5404-8	PND07-14C	T	Solid	7471A	
580-5404-9	PND07-12A	T	Solid	7471A	
580-5404-10	PND07-12C	T	Solid	7471A	
580-5404-11	PND07-13A	T	Solid	7471A	
580-5404-15	PND07-4A	T	Solid	7471A	
580-5404-16	PND07-4C	T	Solid	7471A	
580-5404-17	PND07-3A	T	Solid	7471A	
580-5404-18	PND07-C	T	Solid	7471A	
Prep Batch: 580-19051					
LCS 580-19051/16-AA	Lab Control Spike	T	Solid	7471A	
LCSD 580-19051/17-AA	Lab Control Spike Duplicate	T	Solid	7471A	
LCSSRM 580-19051/18-AA	LCS-Standard Reference Material	T	Solid	7471A	
MB 580-19051/15-AA	Method Blank	T	Solid	7471A	
580-5404-12	PND07-13C	T	Solid	7471A	

Quality Control Results

Client: PND Engineers, Inc.

Job Number: 580-5404-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:580-19080					
LCS 580-18998/20-AA	Lab Control Spike	T	Solid	7471A	580-18998
LCSD 580-18998/21-AA	Lab Control Spike Duplicate	T	Solid	7471A	580-18998
LCSSRM 580-18998/22-AA	LCS-Standard Reference Material	T	Solid	7471A	580-18998
MB 580-18998/19-AA	Method Blank	T	Solid	7471A	580-18998
580-5404-3	PND07-15A	T	Solid	7471A	580-18998
580-5404-3DU	Duplicate	T	Solid	7471A	580-18998
580-5404-3MS	Matrix Spike	T	Solid	7471A	580-18998
580-5404-3MSD	Matrix Spike Duplicate	T	Solid	7471A	580-18998
580-5404-4	PND07-15C	T	Solid	7471A	580-18998
580-5404-5	PND07-16A	T	Solid	7471A	580-18998
580-5404-6	PND07-16C	T	Solid	7471A	580-18998
580-5404-7	PND07-14A	T	Solid	7471A	580-18998
580-5404-8	PND07-14C	T	Solid	7471A	580-18998
580-5404-9	PND07-12A	T	Solid	7471A	580-18998
580-5404-10	PND07-12C	T	Solid	7471A	580-18998
580-5404-11	PND07-13A	T	Solid	7471A	580-18998
580-5404-15	PND07-4A	T	Solid	7471A	580-18998
580-5404-16	PND07-4C	T	Solid	7471A	580-18998
580-5404-17	PND07-3A	T	Solid	7471A	580-18998
580-5404-18	PND07-C	T	Solid	7471A	580-18998
Analysis Batch:580-19088					
LCS 580-19051/16-AA	Lab Control Spike	T	Solid	7471A	580-19051
LCSD 580-19051/17-AA	Lab Control Spike Duplicate	T	Solid	7471A	580-19051
LCSSRM 580-19051/18-AA	LCS-Standard Reference Material	T	Solid	7471A	580-19051
MB 580-19051/15-AA	Method Blank	T	Solid	7471A	580-19051
580-5404-12	PND07-13C	T	Solid	7471A	580-19051

Report Basis

T = Total

Quality Control Results

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Method Blank - Batch: 580-18998

Method: 7471A
Preparation: 7471A

Lab Sample ID: MB 580-18998/19-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/25/2007 1705
Date Prepared: 05/24/2007 1700

Analysis Batch: 580-19080
Prep Batch: 580-18998
Units: mg/Kg

Instrument ID: SEA029
Lab File ID: N/A
Initial Weight/Volume: 0.5 g
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.0090	0.020

**Laboratory Control/
Laboratory Control Duplicate Recovery Report - Batch: 580-18998**

Method: 7471A
Preparation: 7471A

LCS Lab Sample ID: LCS 580-18998/20-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/25/2007 1710
Date Prepared: 05/24/2007 1700

Analysis Batch: 580-19080
Prep Batch: 580-18998
Units: mg/Kg

Instrument ID: SEA029
Lab File ID: N/A
Initial Weight/Volume: 0.5 g
Final Weight/Volume: 50 mL

LCSD Lab Sample ID: LCSD
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/25/2007 1715
Date Prepared: 05/24/2007 1700

Analysis Batch: 580-19080
Prep Batch: 580-18998
Units: mg/Kg

Instrument ID: SEA029
Lab File ID: N/A
Initial Weight/Volume: 0.5 g
Final Weight/Volume: 50 mL

Analyte	<u>% Rec.</u>		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Mercury	90	87	75 - 125	3	25		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: PND Engineers, Inc.

Job Number: 580-5404-2

**Laboratory Control/
Laboratory Duplicate Data Report - Batch: 580-18998**

**Method: 7471A
Preparation: 7471A**

LCS Lab Sample ID: LCS
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/25/2007 1710
Date Prepared: 05/24/2007 1700

Units: mg/Kg

LCSD Lab Sample ID: LCSD
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/25/2007 1715
Date Prepared: 05/24/2007 1700

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Mercury	0.200	0.200	0.179	0.174

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 580-18998**

**Method: 7471A
Preparation: 7471A**

MS Lab Sample ID: 580-5404-3
Client Matrix: Solid
Dilution: 20
Date Analyzed: 05/25/2007 1533
Date Prepared: 05/24/2007 1700

Analysis Batch: 580-19080
Prep Batch: 580-18998

Instrument ID: SEA029
Lab File ID: N/A
Initial Weight/Volume: 0.5726 g
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 580-5404-3
Client Matrix: Solid
Dilution: 20
Date Analyzed: 05/25/2007 1538
Date Prepared: 05/24/2007 1700

Analysis Batch: 580-19080
Prep Batch: 580-18998

Instrument ID: SEA029
Lab File ID: N/A
Initial Weight/Volume: 0.6081 g
Final Weight/Volume: 50 mL

Analyte	<u>% Rec.</u>		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Mercury	-183	-125	75 - 125	3	35	4	4

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Method Blank - Batch: 580-19051

Method: 7471A
Preparation: 7471A

Lab Sample ID: MB 580-19051/15-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/29/2007 1528
Date Prepared: 05/29/2007 1025

Analysis Batch: 580-19088
Prep Batch: 580-19051
Units: mg/Kg

Instrument ID: SEA029
Lab File ID: N/A
Initial Weight/Volume: 0.5 g
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.0090	0.020

**Laboratory Control/
Laboratory Control Duplicate Recovery Report - Batch: 580-19051**

Method: 7471A
Preparation: 7471A

LCS Lab Sample ID: LCS 580-19051/16-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/29/2007 1533
Date Prepared: 05/29/2007 1025

Analysis Batch: 580-19088
Prep Batch: 580-19051
Units: mg/Kg

Instrument ID: SEA029
Lab File ID: N/A
Initial Weight/Volume: 0.5 g
Final Weight/Volume: 50 mL

LCSD Lab Sample ID: LCSD
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/29/2007 1538
Date Prepared: 05/29/2007 1025

Analysis Batch: 580-19088
Prep Batch: 580-19051
Units: mg/Kg

Instrument ID: SEA029
Lab File ID: N/A
Initial Weight/Volume: 0.5 g
Final Weight/Volume: 50 mL

Analyte	<u>% Rec.</u>		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Mercury	113	110	75 - 125	3	25		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: PND Engineers, Inc.

Job Number: 580-5404-2

**Laboratory Control/
Laboratory Duplicate Data Report - Batch: 580-19051**

**Method: 7471A
Preparation: 7471A**

LCS Lab Sample ID: LCS
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/29/2007 1533
Date Prepared: 05/29/2007 1025

Units: mg/Kg

LCSD Lab Sample ID: LCSD
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 05/29/2007 1538
Date Prepared: 05/29/2007 1025

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Mercury	0.200	0.200	0.226	0.219

Calculations are performed before rounding to avoid round-off errors in calculated results.

DATA REPORTING QUALIFIERS

Client: PND Engineers, Inc.

Job Number: 580-5404-2

Lab Section	Qualifier	Description
Metals		
	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.
	H	Sample was prepped or analyzed beyond the specified holding time

Downie, Katie

From: Jennifer Lundberg [jennifer@pnd-anc.com]
Sent: Tuesday, May 22, 2007 4:32 PM
To: Downie, Katie
Subject: Old Douglas Harbor mercury only

Katie,
Please run the following samples for mercury only. Of course there are 23 to do.

Thanks, Jennifer

PND07-02 A, B, & C
PND07-03 A& C
PND07-04 A& C
PND07-05 A& C
PND07-06 A& C
PND07-07 A& C
PND07-12 A& C
PND07-13 A& C
PND07-14 A& C
PND07-15 A& C
PND07-16 A& C

Jennifer Lundberg, CEP, MES | Senior Environmental Scientist
P|N|D Engineers Inc., Consulting Engineers
1506 W 36th Avenue, Anchorage, AK 99503
p. 907.561.1011 f. 907.563.4220 c. 907.301.2738
jennifer@pnd-anc.com | www.pndengineers.com

DATA DELIVERABLES PACKAGE

TOTAL MERCURY DATA PACKAGE



Protocol STL-SEA

Dataset/Proto 052507A / STL-SEA

Protocol Line Info Cal Curve Report Ctrl Chart Viewer

- Reset
- Calb Coeffs
- New Cal
- Update Coeffs
- Spike Coeffs

A

B 1.11036e-5

C 4.19361e-3

Rho .999953

Type

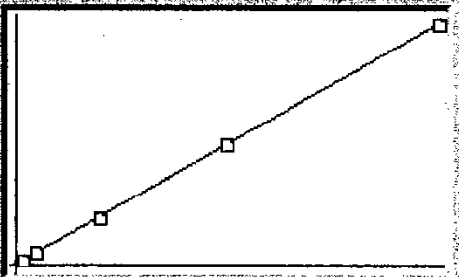
Calibrated

Accepted

Rel Abs: 899540

Accepted

New



Include ST Rep 1 2 3 4 5

Conc. 10.0

S	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3
01	.0000	.023	.023	2447	5776	4109	3979	7211
02	.2000	.228	.028	20125	2.64%	20901	19750	10998 ?
03	.5000	.530	.030	47364	3.96%	48690	35873 ?	46036
04	2.0000	1.94	-.061	174210	2.79%	176979	168602	177046
05	5.0000	5.03	.034	453019	1.85%	455032	443831	460193
06	10.000	9.99	-.008	899541	1.02%	905143	888949	904529

Ready

CAP NUM

STDS 5/25/07

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 1 Rep: 1				Seq: 0		10:39:45	25 May 07	HG
Hg	.000	PPB	-4109					
*** Standard: 1 Rep: 2				Seq: 1		10:44:36	25 May 07	HG
Hg	.000	PPB	3979					
*** Standard: 1 Rep: 3				Seq: 2		10:49:16	25 May 07	HG
Hg	.000	PPB	-7211					
*** Standard: 2 Rep: 1				Seq: 3		10:53:56	25 May 07	HG
Hg	.200	PPB	20501					
*** Standard: 2 Rep: 2				Seq: 4		10:58:59	25 May 07	HG
Hg	.200	PPB	19750					
*** Standard: 2 Rep: 3				Seq: 5		11:03:50	25 May 07	HG
Hg	.200	PPB	10958					
*** Standard: 3 Rep: 1				Seq: 6		11:08:40	25 May 07	HG
Hg	.500	PPB	48690					
*** Standard: 3 Rep: 2				Seq: 7		11:13:20	25 May 07	HG
Hg	.500	PPB	35873					
*** Standard: 3 Rep: 3				Seq: 8		11:18:24	25 May 07	HG
Hg	.500	PPB	46036					
*** Standard: 4 Rep: 1				Seq: 9		11:23:06	25 May 07	HG
Hg	2.00	PPB	176979					
*** Standard: 4 Rep: 2				Seq: 10		11:27:48	25 May 07	HG
Hg	2.00	PPB	168602					
*** Standard: 4 Rep: 3				Seq: 11		11:32:30	25 May 07	HG
Hg	2.00	PPB	177046					
*** Standard: 5 Rep: 1				Seq: 12		11:37:32	25 May 07	HG
Hg	5.00	PPB	455031					
*** Standard: 5 Rep: 2				Seq: 13		11:42:23	25 May 07	HG
Hg	5.00	PPB	443831					
*** Standard: 5 Rep: 3				Seq: 14		11:47:19	25 May 07	HG
Hg	5.00	PPB	460193					

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 6 Rep: 1								
				Seq: 15		11:52:00	25 May 07	HG
Hg	10.0	PPB	905143					
*** Standard: 6 Rep: 2								
				Seq: 16		11:56:45	25 May 07	HG
Hg	10.0	PPB	888949					
*** Standard: 6 Rep: 3								
				Seq: 17		12:01:26	25 May 07	HG
Hg	10.0	PPB	904529					
*** Sample ID: RINSE								
				Seq: 18		12:10:49	25 May 07	HG
Hg	-.054	PPB	.000	FCW Hg#1	-.054			
*** Check Standard: 3 Ck32 PPB								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		91.9	1.84	2.00	PPB	.000	12:15:29	25 May 07 HG
*** Check Standard: 4 Ck45 PPB								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		98.8	4.94	5.00	PPB	.000	12:20:30	25 May 07 HG
*** Check Standard: 1 Ck1BLANK								
Line	Flag	Found	Range(+/-)	Units	SD/RSD			
Hg		-.040	.200	PPB	.000		12:25:09	25 May 07 HG
*** Check Standard: 4 Ck45 PPB								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		97.0	4.85	5.00	PPB	.000	13:24:53	25 May 07 HG
*** Check Standard: 1 Ck1BLANK								
Line	Flag	Found	Range(+/-)	Units	SD/RSD			
Hg		-.091	.200	PPB	.000		13:29:42	25 May 07 HG
*** Sample ID: 580-157040								
				Seq: 32		13:36:58	25 May 07	HG
Hg	1.40	PPB	.000	FCW Hg#1(18997)20X	1.40			
*** Sample ID: 580-157041								
				Seq: 33		13:42:19	25 May 07	HG
Hg	1.32	PPB	.000	FCW Hg#1(18997)20X	1.32			
*** Sample ID: 580-157043								
				Seq: 35		13:51:44	25 May 07	HG
Hg	1.47	PPB	.000	FCW Hg#1(18997)20X	1.47			
*** Sample ID: 580-157044								
				Seq: 36		13:56:23	25 May 07	HG
Hg	1.63	PPB	.000	FCW Hg#1(18997)20X	1.63			
*** Sample ID: 580-157045								
				Seq: 37		14:01:05	25 May 07	HG
Hg	1.42	PPB	.000	FCW Hg#1(18997)20X	1.42			

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 580-157046								
				Seq: 38		14:05:48	25 May 07	HG
				FCW Hg#1(18997)20X				
Hg	.945	PPB	.000	.945				
*** Sample ID: 580-157047								
				Seq: 39		14:10:28	25 May 07	HG
				FCW Hg#1(18997)20X				
Hg	.841	PPB	.000	.841				
*** Sample ID: 580-157048								
				Seq: 40		14:15:37	25 May 07	HG
				FCW Hg#1(18997)20X				
Hg	.780	PPB	.000	.780				
*** Check Standard: 4 Ck45 PPB								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		103.	5.17	5.00	PPB	.000	14:20:37	25 May 07 HG
*** Check Standard: 1 Ck1BLANK								
Line	Flag	Found	Range(+/-)	Units	SD/RSD			
Hg		-.002	.200	PPB	.000		14:25:19	25 May 07 HG
*** Sample ID: 580-157049								
				Seq: 43		14:30:12	25 May 07	HG
				FCW Hg#1(18997)20X				
Hg	.636	PPB	.000	.636				
*** Sample ID: 580-157050								
				Seq: 44		14:35:15	25 May 07	HG
				FCW Hg#1(18997)20X				
Hg	.249	PPB	.000	.249				
*** Sample ID: 580-157051								
				Seq: 45		14:40:28	25 May 07	HG
				FCW Hg#1(18997)20X				
Hg	.496	PPB	.000	.496				
*** Sample ID: 580-157052								
				Seq: 46		14:45:18	25 May 07	HG
				FCW Hg#1(18997)20X				
Hg	.843	PPB	.000	.843				
*** Sample ID: 580-157053								
				Seq: 47		14:49:59	25 May 07	HG
				FCW Hg#1(18997)				
Hg	.058	PPB	.000	.058				
*** Sample ID: 580-157054								
				Seq: 48		14:54:51	25 May 07	HG
				FCW Hg#1(18997)				
Hg	1.98	PPB	.000	1.98				
*** Sample ID: 580-157055								
				Seq: 49		14:59:33	25 May 07	HG
				FCW Hg#1(18997)				
Hg	1.89	PPB	.000	1.89				
*** Sample ID: 580-157056								
				Seq: 50		15:04:35	25 May 07	HG
				FCW Hg#1(18997)				
Hg	7.19	PPB	.000	7.19				

Protocol: STL-SEA

POST-RUN REPORT

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Check Standard: 4 Ck45 PPB Seq: 51 15:09:35 25 May 07 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		104.	5.21	5.00	PPB	.000		
*** Check Standard: 1 Ck1BLANK Seq: 52 15:14:27 25 May 07 HG								
Line	Flag	Found	Range(+/-)	Units	SD/RSD			
Hg		.069	.200	PPB	.000			
*** Sample ID: 580-157063 Seq: 53 15:19:19 25 May 07 HG								
					FCW Hg#1(18998)20X			
Hg	2.19	PPB	.000	2.19				
*** Sample ID: 580-157064 Seq: 54 15:24:09 25 May 07 HG								
					FCW Hg#1(18998)20X			
Hg	2.02	PPB	.000	2.02				
*** Sample ID: 580-157066 Seq: 56 15:33:37 25 May 07 HG								
					FCW Hg#1(18998)20X			
Hg	1.94	PPB	.000	1.94				
*** Sample ID: 580-157067 Seq: 57 15:38:50 25 May 07 HG								
					FCW Hg#1(18998)20X			
Hg	2.13	PPB	.000	2.13				
*** Sample ID: 580-157068 Seq: 58 15:43:29 25 May 07 HG								
					FCW Hg#1(18998)20X			
Hg	1.08	PPB	.000	1.08				
*** Sample ID: 580-157069 Seq: 59 15:48:19 25 May 07 HG								
					FCW Hg#1(18998)20X			
Hg	.769	PPB	.000	.769				
*** Sample ID: 580-157070 Seq: 60 15:53:28 25 May 07 HG								
					FCW Hg#1(18998)20X			
Hg	1.35	PPB	.000	1.35				
*** Sample ID: 580-157071 Seq: 61 15:58:37 25 May 07 HG								
					FCW Hg#1(18998)20X			
Hg	.647	PPB	.000	.647				
*** Sample ID: 580-157072 Seq: 62 16:03:16 25 May 07 HG								
					FCW Hg#1(18998)20X			
Hg	.778	PPB	.000	.778				
*** Check Standard: 4 Ck45 PPB Seq: 63 16:08:00 25 May 07 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		101.	5.04	5.00	PPB	.000		
*** Check Standard: 1 Ck1BLANK Seq: 64 16:12:42 25 May 07 HG								
Line	Flag	Found	Range(+/-)	Units	SD/RSD			
Hg		-.031	.200	PPB	.000			

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 580-157073								
				Seq: 65	16:17:22	25 May 07		HG
				FCW Hg#1(18998)20X				
Hg	2.02	PPB	.000	2.02				
*** Sample ID: 580-157074								
				Seq: 66	16:22:16	25 May 07		HG
				FCW Hg#1(18998)20X				
Hg	1.78	PPB	.000	1.78				
*** Sample ID: 580-157075								
				Seq: 67	16:26:56	25 May 07		HG
				FCW Hg#1(18998)20X				
Hg	1.53	PPB	.000	1.53				
*** Sample ID: 580-157076								
				Seq: 68	16:31:38	25 May 07		HG
				FCW Hg#1(18998)20X				
Hg	.087	PPB	.000	.087				
*** Sample ID: 580-157077								
				Seq: 69	16:37:03	25 May 07		HG
				FCW Hg#1(18998)20X				
Hg	1.34	PPB	.000	1.34				
*** Sample ID: 580-157078								
				Seq: 70	16:41:58	25 May 07		HG
				FCW Hg#1(18998)20X				
Hg	.394	PPB	.000	.394				
*** Sample ID: 580-157079								
				Seq: 71	16:46:49	25 May 07		HG
				FCW Hg#1(18998)20X				
Hg	1.22	PPB	.000	1.22				
*** Sample ID: 580-157080								
				Seq: 72	16:51:29	25 May 07		HG
				FCW Hg#1(18998)20X				
Hg	.755	PPB	.000	.755				
*** Check Standard: 4 Ck45 PPB								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		99.1	4.95	5.00	PPB	.000		
*** Check Standard: 1 Ck1BLANK								
Line	Flag	Found	Range(+/-)	Units	SD/RSD			
Hg		-.033	.200	PPB	.000			
*** Sample ID: 580-157081								
				Seq: 75	17:05:32	25 May 07		HG
				FCW Hg#1(18998)				
Hg	-.047	PPB	.000	-.047				
*** Sample ID: 580-157082								
				Seq: 76	17:10:16	25 May 07		HG
				FCW Hg#1(18998)				
Hg	1.79	PPB	.000	1.79				
*** Sample ID: 580-157083								
				Seq: 77	17:15:17	25 May 07		HG
				FCW Hg#1(18998)				
Hg	1.74	PPB	.000	1.74				

Line	Conc.	Units	SD/RSD	1	2	3	4	5	
*** Sample ID: 580-157084									
				Seq: 78	17:20:03	25 May 07	HG		
				FCW Hg#1(18998)					
Hg	7.61	PPB	.000	7.61					
*** Check Standard: 4 Ck45 PPB									
				Seq: 79	17:24:57	25 May 07	HG		
Line	Flag	%Rcv.	Found	True	Units	SD/RSD			
Hg		97.5	4.88	5.00	PPB	.000			
*** Check Standard: 1 Ck1BLANK									
				Seq: 80	17:29:40	25 May 07	HG		
Line	Flag	Found	Range(+/-)	Units	SD/RSD				
Hg		-.059	.200	PPB	.000				
*** Sample ID: 0.5 PPB									
				Seq: 82	17:39:51	25 May 07	HG		
				FCW Hg#1					
Hg	.443	PPB	.000	.443					

Job # 6000, 5404 (#12)

Method # 7471A

Prep Batch # 19051

Analytical Batch # 19088

Problems

Metals to Run: Ag

- As, Ba, Cd, Cr, Pb, Se, Ag,
- Cu, Ni, Zn, Be, Sb, Tl, Co,
- Mn, V, K, Na, Al, Fe, Ca,
- Mg, Mo, Si, Sr, B, Ti, Sn,
- Zr, Bi, P, U, Au

Analyst *Amel M*

Metals/Inorganics Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 580-19051
















Analyst: Boardway, Peter A

Method Code: 580-7471A_Prep-580

Batch Open: 5/29/2007 10:25:38AM

Batch End: 5/29/2007 11:50:00AM

Mercury in Solid or Semi-Solid Waste (Manual Cold Vapor Technique)/Preparation

Input Sample Lab ID (Analytical Method)	SDG	Matrix	Initial Amount	Final Amount	Due Date	Analytical TAT	Div Rank	Comments	Output Sample Lab ID
580-6000-A-1 (7471A)	07-020	Solid	0.5804 g	50 mL	6/5/07	13_Days - R	4		
580-6000-A-1-DU (7471A)	07-020	Solid	0.5360 g	50 mL	6/5/07	13_Days - R	4		
580-6000-A-1-DU (7471A)	07-020	Solid	0.5673 g	50 mL	6/5/07	13_Days - R	4		
580-6000-A-1-MS (7471A)	07-020	Solid	0.5265 g	50 mL	6/5/07	13_Days - R	4		
580-6000-A-1-MSD (7471A)	07-020	Solid	0.5817 g	50 mL	6/5/07	13_Days - R	4		
580-6000-A-3 (7471A)	07-020	Solid	0.5686 g	50 mL	6/5/07	13_Days - R	4		
580-6000-A-5 (7471A)	07-020	Solid	0.5642 g	50 mL	6/5/07	13_Days - R	4		
580-6000-A-8 (7471A)	07-020	Solid	0.5344 g	50 mL	6/5/07	13_Days - R	4		
580-6000-A-9 (7471A)	07-020	Solid	0.5240 g	50 mL	6/5/07	13_Days - R	4		
580-6000-A-10 (7471A)	07-020	Solid	0.6168 g	50 mL	6/5/07	13_Days - R	4		
580-6000-A-14 (7471A)	07-020	Solid	0.5057 g	50 mL	6/5/07	13_Days - R	4		
580-6000-A-15 (7471A)	07-020	Solid	0.6030 g	50 mL	6/5/07	13_Days - R	4		
580-6000-A-17 (7471A)	07-020	Solid	0.6736 g	50 mL	6/5/07	13_Days - R	4		
580-5404-B-12 (7471A)	N/A	Solid	0.8494 g	50 mL	5/30/07	4_Days - R	4	OK	
MB-580-19051/15 N/A	N/A		0.5 g	50 mL	N/A	N/A	N/A		

Metals/Inorganics Analysis Sheet

(To Accompany Samples to Instruments)




Batch Number: 580-19051

Analyst: Boardway, Peter A

Batch Open: 5/29/2007 10:25:38AM

Method Code: 580-7471A_Prep-580

Batch End: 5/29/2007 11:50:00AM

16	LCS-580-19051/16 N/A	N/A	0.5 g	50 mL	N/A	N/A	N/A	N/A		
17	LCSD-580-19051/17 N/A	N/A	0.5 g	50 mL	N/A	N/A	N/A	N/A		
18	LCSSRM-580-19051/18 N/A	N/A	0.1120 g	50 mL	N/A	N/A	N/A	N/A		

Metals/Inorganics Analysis Sheet
(To Accompany Samples to Instruments)

Batch Number: 580-19051
Method Code: 580-7471A_Prep-580

Analyst: Boardway, Peter A

Batch Open: 5/29/2007 10:25:38AM
Batch End: 5/29/2007 11:50:00AM

Batch Notes

Hydroxylamine Sulfate Lot Number 056527

Hydroxylamine Hydrochloride Lot

Acid used for pH adjustment

Aqua Regia Lot Number

Balance ID SEA204

Batch Comment

Blank Soil Lot Number

Sulfuric Acid Lot Number

Lot # of hydrochloric acid 4106110

Lot # of Nitric Acid 1106122

Hood ID or number 6

Hot Block ID number 224125

Potassium Persulfate Lot Number 60384

Potassium Permanganate Lot Number 045936

NaCL Lot # 30198

Oven, Bath or Block Temperature 1

Oven, Bath or Block Temperature 2

Reпитetor Volume Check

Stannous chloride Lot Number 060944

SOP Number

Metals/Inorganics Analysis Sheet
(To Accompany Samples to Instruments)

Batch Number: 580-19051

Analyst: Boardway, Peter A

Method Code: 580-7471A_Prep-580

Batch Open: 5/29/2007 10:25:38AM
Batch End: 5/29/2007 11:50:00AM

Digestion Tubes	ID number of the thermometer
	15-041-1A

Metals/Inorganics Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 580-19051

Analyst: Boardway, Peter A

Method Code: 580-7471A_Prep-580

Batch Open: 5/29/2007 10:25:38AM

Batch End: 5/29/2007 11:50:00AM

Comments

580-6000-A-1	Method Comments: DOD Criteria!
580-6000-A-1~DU	Method Comments: DOD Criteria!
580-6000-A-1~DU	Method Comments: DOD Criteria!
580-6000-A-1~MS	Method Comments: DOD Criteria!
580-6000-A-1~MSD	Method Comments: DOD Criteria!
580-6000-A-3	Method Comments: DOD Criteria!
580-6000-A-5	Method Comments: DOD Criteria!
580-6000-A-8	Method Comments: DOD Criteria!
580-6000-A-9	Method Comments: DOD Criteria!
580-6000-A-10	Method Comments: DOD Criteria!
580-6000-A-14	Method Comments: DOD Criteria!
580-6000-A-15	Method Comments: DOD Criteria!
580-6000-A-17	Method Comments: DOD Criteria!

Metals/Inorganics Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 580-19051
Method Code: 580-7471A_Prep-580

Analyst: Boardway, Peter A

Batch Open: 5/29/2007 10:25:38AM
Batch End: 5/29/2007 11:50:00AM

Reagent Additions Worksheet

Lab ID	Reagent Code	Amount Added	Final Amount	By	Witness
580-6000-A-1 MS	HgSPK_00010	1 mL	50 mL		
580-6000-A-1 MSD	HgSPK_00010	1 mL	50 mL		
LCS 580-19051/16	HgSPK_00010	1 mL	50 mL		
LCSD 580-19051/17	HgSPK_00010	1 mL	50 mL		

Reagent

Other Reagents:
Amount/Units

Lot#:



Protocol STL-SEA

Dataset/Proto 052907 / STL-SEA

Protocol | Line Info | Cal Curve | Report | Ctrl Chart | Viewer

Reset

Calc Coeffs

New Cal

Update Coeffs

Spike Coeffs

A

B 1.10663e-5

C -1.11097e-1

Rho 998586

Type

Calibrated

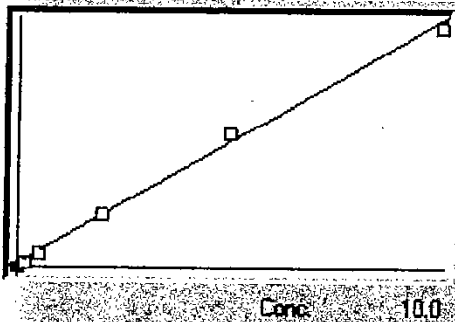
Accepted

Accept

Rel. Abs. 893628

Accepted

New



Include ST Rep 1 2 3 4 5

S	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3
01	00000	.090	-.090	1941	1441	333	3117	2375
02	.20000	.111	-.089	20050	10.11%	18374	22304	19471
03	.50000	.450	-.050	50657	1.23%	50502	50141	51356
04	2.0000	2.07	.070	197128	1.36%	196721	194672	199991
05	5.0000	5.38	.381	496276	0.63%	492861	497000	498970
06	10.000	9.78	-.222	893628	2.1%	906661	902083	872140

ST003 5/29/07

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 1 Rep: 1				Seq: 0		08:36:14	29 May 07	HG
Hg	.000	PPB	333					
*** Standard: 1 Rep: 2				Seq: 1		08:41:27	29 May 07	HG
Hg	.000	PPB	3117					
*** Standard: 1 Rep: 3				Seq: 2		08:46:08	29 May 07	HG
Hg	.000	PPB	2375					
*** Standard: 2 Rep: 1				Seq: 3		08:50:49	29 May 07	HG
Hg	.200	PPB	18374					
*** Standard: 2 Rep: 2				Seq: 4		08:55:42	29 May 07	HG
Hg	.200	PPB	22304					
*** Standard: 2 Rep: 3				Seq: 5		09:00:26	29 May 07	HG
Hg	.200	PPB	19471					
*** Standard: 3 Rep: 1				Seq: 6		09:05:26	29 May 07	HG
Hg	.500	PPB	50501					
*** Standard: 3 Rep: 2				Seq: 7		09:10:27	29 May 07	HG
Hg	.500	PPB	50141					
*** Standard: 3 Rep: 3				Seq: 8		09:15:08	29 May 07	HG
Hg	.500	PPB	51356					
*** Standard: 4 Rep: 1				Seq: 9		09:19:48	29 May 07	HG
Hg	2.00	PPB	196721					
*** Standard: 4 Rep: 2				Seq: 10		09:24:30	29 May 07	HG
Hg	2.00	PPB	194672					
*** Standard: 4 Rep: 3				Seq: 11		09:29:10	29 May 07	HG
Hg	2.00	PPB	199991					
*** Standard: 5 Rep: 1				Seq: 12		09:33:50	29 May 07	HG
Hg	5.00	PPB	492860					
*** Standard: 5 Rep: 2				Seq: 13		09:38:30	29 May 07	HG
Hg	5.00	PPB	497000					
*** Standard: 5 Rep: 3				Seq: 14		09:43:36	29 May 07	HG
Hg	5.00	PPB	498970					

Protocol: STL-SEA

POST-RUN REPORT

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Standard: 6 Rep: 1								
				Seq: 15		09:48:36	29 May 07	HG
Hg	10.0	PPB	906661					
*** Standard: 6 Rep: 2								
				Seq: 16		09:53:18	29 May 07	HG
Hg	10.0	PPB	902083					
*** Standard: 6 Rep: 3								
				Seq: 17		09:57:59	29 May 07	HG
Hg	10.0	PPB	872140					
*** Check Standard: 3 Ck32 PPB								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		109.	2.17	2.00	PPB	.000	10:37:30	29 May 07 HG
*** Check Standard: 4 Ck45 PPB								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		99.6	4.98	5.00	PPB	.000	10:42:24	29 May 07 HG
*** Check Standard: 1 Ck1BLANK								
Line	Flag	Found	Range(+/-)	Units	SD/RSD			
Hg		-.100	.200	PPB	.000		10:47:09	29 May 07 HG
*** Check Standard: 4 Ck45 PPB								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		104.	5.19	5.00	PPB	.000	11:08:12	29 May 07 HG
*** Check Standard: 1 Ck1BLANK								
Line	Flag	Found	Range(+/-)	Units	SD/RSD			
Hg		-.097	.200	PPB	.000		11:12:52	29 May 07 HG
*** Sample ID: 580-157762								
				Seq: 26		11:31:18	29 May 07	HG
				FCW Hg#1(19047)				
Hg	-.021	PPB	.000					
*** Sample ID: 580-157763								
				Seq: 27		11:35:57	29 May 07	HG
				FCW Hg#1(19047)				
Hg	-.084	PPB	.000					
*** Sample ID: 580-157764								
				Seq: 28		11:40:40	29 May 07	HG
				FCW Hg#1(19047)				
Hg	1.45	PPB	.000					
*** Sample ID: 580-157765								
				Seq: 29		11:45:50	29 May 07	HG
				FCW Hg#1(19047)				
Hg	1.46	PPB	.000					
*** Sample ID: 580-157766								
				Seq: 30		11:50:32	29 May 07	HG
				FCW Hg#1(19047)				
Hg	-.137	PPB	.000					
*** Sample ID: 580-157767								
				Seq: 31		11:55:32	29 May 07	HG
				FCW Hg#1(19047)				
Hg	-.031	PPB	.000					

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 580-157877								
				Seq: 45	13:58:19	29 May 07	HG	
				FCW Hg#1(19063)				
Hg	2.29	PPB	.000	2.29				
*** Check Standard: 4 Ck45 PPB								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		102.	5.11	5.00	PPB	.000		
*** Check Standard: 1 Ck1BLANK								
Line	Flag	Found	Range(+/-)	Units	SD/RSD			
Hg		-.140	.200	PPB	.000			
*** Sample ID: 580-157792								
				Seq: 48	14:12:19	29 May 07	HG	
				FCW Hg#1(19051)				
Hg	.049	PPB	.000	.049				
*** Sample ID: 580-157793								
				Seq: 49	14:17:00	29 May 07	HG	
				FCW Hg#1(19051)				
Hg	.149	PPB	.000	.149				
*** Sample ID: 580-157795								
				Seq: 51	14:26:28	29 May 07	HG	
				FCW Hg#1(19051)				
Hg	2.35	PPB	.000	2.35				
*** Sample ID: 580-157796								
				Seq: 52	14:31:20	29 May 07	HG	
				FCW Hg#1(19051)				
Hg	2.34	PPB	.000	2.34				
*** Sample ID: 580-157797								
				Seq: 53	14:36:10	29 May 07	HG	
				FCW Hg#1(19051)				
Hg	.034	PPB	.000	.034				
*** Sample ID: 580-157798								
				Seq: 54	14:40:52	29 May 07	HG	
				FCW Hg#1(19051)				
Hg	.176	PPB	.000	.176				
*** Sample ID: 580-157799								
				Seq: 55	14:45:45	29 May 07	HG	
				FCW Hg#1(19051)				
Hg	.027	PPB	.000	.027				
*** Sample ID: 580-157800								
				Seq: 56	14:50:27	29 May 07	HG	
				FCW Hg#1(19051)				
Hg	.056	PPB	.000	.056				
*** Sample ID: 580-157801								
				Seq: 57	14:55:16	29 May 07	HG	
				FCW Hg#1(19051)				
Hg	.042	PPB	.000	.042				
*** Check Standard: 4 Ck45 PPB								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		97.8	4.89	5.00	PPB	.000		

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Check Standard: 1 Ck1BLANK Seq: 59 15:04:46 29 May 07 HG								
Line	Flag	Found	Range(+/-)	Units	SD/RSD			
Hg		-.033	.200	PPB	.000			
*** Sample ID: 580-157802 Seq: 60 15:09:30 29 May 07 HG								
				FCW Hg#1(19051)				
Hg	.094	PPB	.000	.094				
*** Sample ID: 580-157803 Seq: 61 15:14:20 29 May 07 HG								
				FCW Hg#1(19051)				
Hg	.296	PPB	.000	.296				
*** Sample ID: 580-157804 Seq: 62 15:19:15 29 May 07 HG								
				FCW Hg#1(19051)				
Hg	.046	PPB	.000	.046				
*** Sample ID: 580-157806 Seq: 64 15:28:36 29 May 07 HG								
				FCW Hg#1(19051)				
Hg	-.042	PPB	.000	-.042				
*** Sample ID: 580-157807 Seq: 65 15:33:27 29 May 07 HG								
				FCW Hg#1(19051)				
Hg	2.26	PPB	.000	2.26				
*** Sample ID: 580-157808 Seq: 66 15:38:10 29 May 07 HG								
				FCW Hg#1(19051)				
Hg	2.19	PPB	.000	2.19				
*** Sample ID: 580-157809 Seq: 67 15:42:49 29 May 07 HG								
				FCW Hg#1(19051)				
Hg	7.33	PPB	.000	7.33				
*** Sample ID: 580-157805 Seq: 68 15:47:29 29 May 07 HG								
				FCW Hg#1(19051)20X				
Hg	.896	PPB	.000	.896				
*** Check Standard: 4 Ck45 PPB Seq: 69 15:52:49 29 May 07 HG								
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		98.0	4.90	5.00	PPB	.000		
*** Check Standard: 1 Ck1BLANK Seq: 70 15:57:50 29 May 07 HG								
Line	Flag	Found	Range(+/-)	Units	SD/RSD			
Hg		-.061	.200	PPB	.000			

LABORATORY WORKSHEETS

Metals/Inorganics Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 580-18998

Analyst: Boardway, Peter A

Batch Open: 5/24/2007 5:00:44PM

Method Code: 580-7471A_Prep-580

Batch End:

Mercury in Solid or Semi-Solid Waste (Manual Cold Vapor Technique)/Preparation

Input Sample Lab ID (Analytical Method)	SDG	Matrix	Initial Amount	Final Amount	Due Date	Analytical TAT	Div Rank	Comments	Output Sample Lab ID
1 580-5404-B-3 (7471A)	N/A	Solid	0.5906 g	50 mL	5/30/07	4_Days - R	4		580-5404-B-3
2 580-5404-B-3-DU (7471A)	N/A	Solid	0.5956 g	50 mL	5/30/07	4_Days - R	4		580-5404-B-3
3 580-5404-B-3-DU (7471A)	N/A	Solid	0.6066 g	50 mL	5/30/07	4_Days - R	4		580-5404-B-3
4 580-5404-B-3-MS (7471A)	N/A	Solid	0.5726 g	50 mL	5/30/07	4_Days - R	4		580-5404-B-3
5 580-5404-B-3-MSD (7471A)	N/A	Solid	0.6081 g	50 mL	5/30/07	4_Days - R	4		580-5404-B-3
6 580-5404-B-4 (7471A)	N/A	Solid	0.6105 g	50 mL	5/30/07	4_Days - R	4		580-5404-B-3
7 580-5404-B-5 (7471A)	N/A	Solid	0.5805 g	50 mL	5/30/07	4_Days - R	4		580-5404-B-3
8 580-5404-B-6 (7471A)	N/A	Solid	0.6746 g	50 mL	5/30/07	4_Days - R	4		580-5404-B-3
9 580-5404-B-7 (7471A)	N/A	Solid	0.5366 g	50 mL	5/30/07	4_Days - R	4		580-5404-B-3
10 580-5404-B-8 (7471A)	N/A	Solid	0.5977 g	50 mL	5/30/07	4_Days - R	4		580-5404-B-3
11 580-5404-B-9 (7471A)	N/A	Solid	0.5816 g	50 mL	5/30/07	4_Days - R	4		580-5404-B-3
12 580-5404-B-10 (7471A)	N/A	Solid	0.5537 g	50 mL	5/30/07	4_Days - R	4		580-5404-B-3
13 580-5404-C-11 (7471A)	N/A	Solid	0.5054 g	50 mL	5/30/07	4_Days - R	4		580-5404-B-3
14 580-5401-B-12 (6020)	N/A	Solid	0.6029 g	50 mL	4/4/07	8_Days - R	4	<i>Don't return</i>	580-5404-B-3
15 580-5404-B-15 (7471A)	N/A	Solid	0.5692 g	50 mL	5/30/07	4_Days - R	4		580-5404-B-3

Metals/Inorganics Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 580-18998

Analyst: Boardway, Peter A

Batch Open: 5/24/2007 5:00:44PM

Method Code: 580-7471A_Prep-580

Batch End:

Sample ID	Sample Description	Weight (g)	Volume (mL)	Date	4_Days - R	Count	Count Range
16	580-5404-B-16 (7471A)	0.5043 g	50 mL	5/30/07	4_Days - R	4	3-8
17	580-5404-B-17 (7471A)	0.6565 g	50 mL	5/30/07	4_Days - R	4	3-8
18	580-5404-B-18 (7471A)	0.5929 g	50 mL	5/30/07	4_Days - R	4	3-8
19	MB~580-18998/19 N/A	0.5 g	50 mL	N/A	N/A	N/A	3-8
20	LCS~580-18998/20 N/A	0.5 g	50 mL	N/A	N/A	N/A	3-8
21	LCSD~580-18998/21 N/A	0.5 g	50 mL	N/A	N/A	N/A	3-8
22	LCSSRM~580-18998/22 N/A	0.1046 g	50 mL	N/A	N/A	N/A	3-8

Metals/Inorganics Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 580-18998

Method Code: 580-7471A_Prep-580

Analyst: Boardway, Peter A

Batch Open: 5/24/2007 5:00:44PM

Batch End:

Batch Notes

Hydroxylamine Sulfate Lot Number 056527

Hydroxylamine Hydrochloride Lot

Acid used for pH adjustment

Aqua Regia Lot Number

Balance ID SEA204

Batch Comment

Blank Soil Lot Number

Sulfuric Acid Lot Number

Lot # of hydrochloric acid 4106110

Lot # of Nitric Acid 1106122

Hood ID or number 6

Hot Block ID number 226751

Potassium Persulfate Lot Number 60384

Potassium Permanganate Lot
Number 045936

NaCL Lot # 30198

Oven, Bath or Block Temperature 1 95

Oven, Bath or Block Temperature 2

Repitettor Volume Check

Stannous chloride Lot Number

SOP Number 060944

Metals/Inorganics Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 580-18998

Method Code: 580-7471A_Prep-580

Analyst: Boardway, Peter A

Batch Open: 5/24/2007 5:00:44PM

Batch End:

ID number of the thermometer 15-0411-1A

DigestionTubes

Comments

Login Comments for Job 5401: Verified pH<2 in preserved bottles

