

# TETER ENGINEERING

March 18, 2016

Mr. Dan Sawyer  
CEO  
Brock International  
2840 Wilderness Place, Suite C  
Boulder, CO 80301

RE: Environmental Compatibility Analysis of Brock Powerbase Shock Pad

Dear Mr. Sawyer:

In response to your request, Teter Engineering is pleased to submit this analysis for potential chemicals of concern in Brock Powerbase shock pad. The shock pad sample was analyzed for total heavy metals, total volatile organic compounds (VOCs), total semi-volatile organic compounds (SVOCs), total polycyclic aromatic hydrocarbons (PAHs), leachable heavy metals, leachable VOCs, and leachable SVOCs. The testing results for detected chemicals of concern are tabulated and compared with appropriate screening levels for the protection of human health.

## **EXECUTIVE SUMMARY**

No metals, PAHs, SVOCs, or VOCs were detected at concentrations that exceed screening levels for the protection of human health.

## **LABORATORY RESULTS AND COMPARISON TO SCREENING LEVELS**

### ***Total Metals***

The pad sample was prepared using EPA Method 3050B and analyzed for the Title 22 (CAM 17) metals using EPA Method 6010B/7471A. Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) results for antimony, barium, beryllium, copper, and silver were out of control due to suspected matrix interference. The associated laboratory controlled spike (LCS) recovery was in control. The spike recovery and relative percent difference (RPD) control limits do not apply resulting from the copper concentration in the sample exceeding the spike concentration by a factor of four or greater. These issues do not affect the validity of the results or the conclusions. No other analytical problems were encountered.

# **TETER ENGINEERING**

The total metals concentrations are compared to the California Department of Toxic Substances Control (DTSC) Total Threshold Limit Concentrations (TTLCs), California Regional Water Quality Control Board (RWQCB; “Water Board”) Environmental Screening Levels (ESLs), the Office of Environmental Health and Hazard Assessment (OEHHA) California Human Health Screening Levels (CHHSLs), and California Soil background levels in Table 1 (OEHHA, 2005). These ESLs and CHHSLs are based on direct contact exposure with contaminated soil in a residential scenario and are extremely conservative for a recreational use scenario. No metals were detected at concentrations that exceed screening levels.

## ***Leachable Metals***

The sample was analyzed for leachable metals using the synthetic precipitation leachate procedure (SPLP; EPA Method 1312) with extraction fluid #2 (pH 5.0 reagent water). The extraction fluid was analyzed for the CAM 17 metals using EPA Methods 6010B/7471A. No analytical problems were encountered.

The concentrations of dissolved metals are presented in Table 2 and are compared to the target leachate concentrations (TLCs) for the protection of human health and for preventing the degradation of taste and odor in drinking water. No metals were detected in the leachate at concentrations that exceed screening levels.

## ***Total SVOCs and PAHs***

The sample were prepared using EPA Method 3545 and analyzed for the SW-846 list of SVOCs using EPA Method 8270C. The sample extract was diluted due to high non-target analytes. The high dilution factors resulted in elevated laboratory reporting limits. These issues do not affect the validity of the results or the conclusions. No other analytical problems were encountered.

No SVOCs or PAHs were detected in the sample at concentrations that exceed screening levels.

## ***Leachable SVOCs***

The sample was tested for leachable SVOCs using the SPLP extraction with extraction fluid #2 (pH 5.0 reagent water). The extraction fluid was prepared using EPA Method 3520C and analyzed for the SW846 list of SVOCs using EPA Method 8270C. No analytical problems were encountered.

# TETER ENGINEERING

No dissolved SVOCs were detected at concentrations that exceed screening levels.

## *Total VOCs*

The sample was prepared using EPA Method 5030B and analyzed for the SW-846 list of VOCs using EPA Method 8260B. Chloromethane was detected in the method blank at levels below that detected in the sample. No other analytical problems were reported. The revised laboratory report provides the concentrations to the method detection limit instead of the reporting limit.

No VOCs were detected in the sample at concentrations that exceed screening levels.

## *Leachable VOCs*

The sample was tested for leachable VOCs using the SPLP extraction with extraction fluid #2 (pH 5.0 reagent water). The extraction fluid was prepared using EPA Method 5030B and analyzed for VOCs using EPA Method 8260B. No analytical problems were reported. The revised laboratory report provides the concentrations to the method detection limit instead of the reporting limit.

No VOCs were detected in the leachate at concentrations that exceed screening levels.

## CLOSING

I appreciate the opportunity to work with you on this project. Should you have any questions or require additional information, please do not hesitate to contact me.

Sincerely,



Principal Engineer  
Teter Engineering



Attachments:  
References  
Tables 1-3  
Laboratory Reports

TABLE 1 – COMPARISON OF DETECTED TOTAL CONCENTRATIONS WITH REGULATORY LEVELS AND CA SOIL BACKGROUND CONCENTRATIONS

<b>Class</b>	<b>Analyte</b>	<b>CAS Number</b>	<b>DTSC TTLC Regulatory Level (mg/kg)</b>	<b>Water Board ESL (mg/kg)</b>	<b>OEHHA CHSSL (mg/kg)</b>	<b>CA Surface Soil Background (mg/kg)</b>	<b>Brock Powerbase Pad (mg/kg)</b>
Metal	Copper	7440-50-8	2,500	3,100	3,000	28	<b>1.46</b>
Metal	Zinc	7440-66-6	5,000	23,000	23,000	81	<b>8.94</b>
VOC	Chloromethane	74-87-3	NA	29	NA	NA	<b>0.24 B,J</b>

TABLE 2 - COMPARISON DETECTED LEACHABLE CHEMICAL CONCENTRATIONS WITH TLCs FOR THE PROTECTION OF DRINKING WATER

<b>Class</b>	<b>Analyte</b>	<b>CAS Number</b>	<b>Drinking Water Goal (µg/L)</b>	<b>Basis</b>	<b>TLC For Protection of Drinking Water (µg/L)</b>	<b>Brock Powerbase Pad (µg/L)</b>
Metal	Zinc	7440-66-6	2,000	USEPA Lifetime HAL	40,000	<b>81.6</b>

### TABLE 3 - NOTES AND ABBREVIATIONS

#### **Notes and Abbreviations**

1. Target Leachate Concentrations are calculated using a DAF of 20.

2. Water Board ESL is for Residential Direct Contact Risk.

B: See Laboratory Report Narrative

BG: Background

CAS: Chemical Abstracts Service

CHSSL: California Human Health Screening Level

DAF: Dilution Attenuation Factor

ESL: Environmental Screening Level

HAL: Health Advisory Level

J: Estimated value

MCL: Maximum Contaminant Level

mg/kg: Milligram per kilogram

NA: Not Applicable

OEHHA: California Office of Environmental Health Hazard Assessment

PAHs: Polycyclic Aromatic Hydrocarbons

RL: Reporting limit

RWQCB: San Francisco Bay Regional Water Quality Control Board (Water Board)

SPLP: Synthetic Precipitation Leachate Procedure

TLC: Target Leachate Concentration

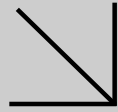
TTLC: Total Threshold Limit Concentration

USEPA: United States Environmental Protection Agency

µg/L: Micrograms per liter



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**WORK ORDER NUMBER: 15-02-0865**

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

**Analytical Report For**

**Client:** Brock International

**Client Project Name:** POWERBASE / SP ANALYTICAL TESTING

**Attention:** Richard Runkles  
2840 Wilderness Place  
Boulder, CO 80301-5414

Approved for release on 02/24/2015 by:  
Don Burley  
Project Manager

ResultLink ▶

Email your PM ▶



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 Work Order Number: 15-02-0865

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**Condition Upon Receipt:**

Samples were received under Chain-of-Custody (COC) on 02/12/15. They were assigned to Work Order 15-02-0865.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

**Additional Comments:**

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

## Sample Summary

---

Client: Brock International	Work Order: 15-02-0865
2840 Wilderness Place	Project Name: POWERBASE / SP ANALYTICAL TESTING
Boulder, CO 80301-5414	PO Number:
	Date/Time Received: 02/12/15 11:00
	Number of Containers: 4

Attn: Richard Runkles

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Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
POWERBASE	15-02-0865-1	02/09/15 18:00	3	Solid
SP	15-02-0865-2	02/09/15 18:00	1	Solid

## Analytical Report

Brock International	Date Received:	02/12/15
2840 Wilderness Place	Work Order:	15-02-0865
Boulder, CO 80301-5414	Preparation:	EPA 3050B
	Method:	EPA 6010B
	Units:	mg/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>POWERBASE</b>	<b>15-02-0865-1-A</b>	<b>02/09/15 18:00</b>	<b>Solid</b>	<b>ICP 7300</b>	<b>02/17/15</b>	<b>02/18/15 21:09</b>	<b>150217L04</b>

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Antimony	ND	0.732	0.976	
Arsenic	ND	0.732	0.976	
Barium	ND	0.488	0.976	
Beryllium	ND	0.244	0.976	
Cadmium	ND	0.488	0.976	
Chromium	ND	0.244	0.976	
Cobalt	ND	0.244	0.976	
Copper	1.46	0.488	0.976	
Lead	ND	0.488	0.976	
Molybdenum	ND	0.244	0.976	
Nickel	ND	0.244	0.976	
Selenium	ND	0.732	0.976	
Silver	ND	0.244	0.976	
Thallium	ND	0.732	0.976	
Vanadium	ND	0.244	0.976	
Zinc	8.94	0.976	0.976	


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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International	Date Received:	02/12/15
2840 Wilderness Place	Work Order:	15-02-0865
Boulder, CO 80301-5414	Preparation:	EPA 3050B
	Method:	EPA 6010B
	Units:	mg/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SP	15-02-0865-2-A	02/09/15 18:00	Solid	ICP 7300	02/17/15	02/18/15 21:11	150217L04

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.732	0.976	
Arsenic	ND	0.732	0.976	
Barium	ND	0.488	0.976	
Beryllium	ND	0.244	0.976	
Cadmium	ND	0.488	0.976	
Chromium	ND	0.244	0.976	
Cobalt	0.273	0.244	0.976	
Copper	2.56	0.488	0.976	
Lead	ND	0.488	0.976	
Molybdenum	ND	0.244	0.976	
Nickel	ND	0.244	0.976	
Selenium	ND	0.732	0.976	
Silver	ND	0.244	0.976	
Thallium	ND	0.732	0.976	
Vanadium	ND	0.244	0.976	
Zinc	22.0	0.976	0.976	


  
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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
 2840 Wilderness Place  
 Boulder, CO 80301-5414

Date Received: 02/12/15  
 Work Order: 15-02-0865  
 Preparation: EPA 3050B  
 Method: EPA 6010B  
 Units: mg/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>097-01-002-20403</b>	<b>N/A</b>	<b>Solid</b>	<b>ICP 7300</b>	<b>02/17/15</b>	<b>02/18/15 19:23</b>	<b>150217L04</b>

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Antimony	ND	0.743	0.990	
Arsenic	ND	0.743	0.990	
Barium	ND	0.495	0.990	
Beryllium	ND	0.248	0.990	
Cadmium	ND	0.495	0.990	
Chromium	ND	0.248	0.990	
Cobalt	ND	0.248	0.990	
Copper	ND	0.495	0.990	
Lead	ND	0.495	0.990	
Molybdenum	ND	0.248	0.990	
Nickel	ND	0.248	0.990	
Selenium	ND	0.743	0.990	
Silver	ND	0.248	0.990	
Thallium	ND	0.743	0.990	
Vanadium	ND	0.248	0.990	
Zinc	ND	0.990	0.990	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 1312  
Method: EPA 6010B  
Units: mg/L

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
POWERBASE	15-02-0865-1-A	02/09/15 18:00	Solid	ICP 7300	02/12/15	02/16/15 22:43	150216LA3

Comment(s): - The analysis was performed on a SPLP extract of the sample.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Antimony	ND	0.0150	0.100	
Arsenic	ND	0.0100	0.100	
Barium	ND	0.100	0.100	
Beryllium	ND	0.0100	0.100	
Cadmium	ND	0.0100	0.100	
Chromium	ND	0.0100	0.100	
Cobalt	ND	0.0100	0.100	
Copper	ND	0.0100	0.100	
Lead	ND	0.0100	0.100	
Molybdenum	ND	0.0100	0.100	
Nickel	ND	0.0100	0.100	
Selenium	ND	0.0150	0.100	
Silver	ND	0.00500	0.100	
Thallium	ND	0.0150	0.100	
Vanadium	ND	0.0100	0.100	
Zinc	0.0816	0.0100	0.100	B

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 1312  
Method: EPA 6010B  
Units: mg/L

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SP	15-02-0865-2-A	02/09/15 18:00	Solid	ICP 7300	02/12/15	02/16/15 22:48	150216LA3

Comment(s): - The analysis was performed on a SPLP extract of the sample.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Antimony	ND	0.0150	0.100	
Arsenic	ND	0.0100	0.100	
Barium	ND	0.100	0.100	
Beryllium	ND	0.0100	0.100	
Cadmium	ND	0.0100	0.100	
Chromium	ND	0.0100	0.100	
Cobalt	ND	0.0100	0.100	
Copper	ND	0.0100	0.100	
Lead	ND	0.0100	0.100	
Molybdenum	ND	0.0100	0.100	
Nickel	ND	0.0100	0.100	
Selenium	ND	0.0150	0.100	
Silver	ND	0.00500	0.100	
Thallium	ND	0.0150	0.100	
Vanadium	ND	0.0100	0.100	
Zinc	0.117	0.0100	0.100	B

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 1312  
Method: EPA 6010B  
Units: mg/L

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-14-021-1471</b>	<b>N/A</b>	<b>Aqueous</b>	<b>ICP 7300</b>	<b>02/12/15</b>	<b>02/16/15 20:28</b>	<b>150216LA3</b>

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Antimony	ND	0.0150	0.100	
Arsenic	ND	0.0100	0.100	
Barium	ND	0.100	0.100	
Beryllium	ND	0.0100	0.100	
Cadmium	ND	0.0100	0.100	
Chromium	ND	0.0100	0.100	
Cobalt	ND	0.0100	0.100	
Copper	ND	0.0100	0.100	
Lead	ND	0.0100	0.100	
Molybdenum	ND	0.0100	0.100	
Nickel	ND	0.0100	0.100	
Selenium	ND	0.0150	0.100	
Silver	ND	0.00500	0.100	
Thallium	ND	0.0150	0.100	
Vanadium	ND	0.0100	0.100	
Zinc	0.0128	0.0100	0.100	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.





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## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 1312  
Method: EPA 7470A  
Units: mg/L

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>POWERBASE</b>	<b>15-02-0865-1-A</b>	<b>02/09/15 18:00</b>	<b>Solid</b>	<b>Mercury 04</b>	<b>02/12/15</b>	<b>02/18/15 18:57</b>	<b>150218L05</b>

Comment(s): - The analysis was performed on a SPLP extract of the sample.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	ND	0.00500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>SP</b>	<b>15-02-0865-2-A</b>	<b>02/09/15 18:00</b>	<b>Solid</b>	<b>Mercury 04</b>	<b>02/12/15</b>	<b>02/18/15 19:08</b>	<b>150218L05</b>

Comment(s): - The analysis was performed on a SPLP extract of the sample.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	ND	0.00500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-04-005-921</b>	<b>N/A</b>	<b>Aqueous</b>	<b>Mercury 04</b>	<b>02/12/15</b>	<b>02/18/15 18:52</b>	<b>150218L05</b>

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	ND	0.00500	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 7471A Total  
Method: EPA 7471A  
Units: mg/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>POWERBASE</b>	<b>15-02-0865-1-A</b>	<b>02/09/15 18:00</b>	<b>Solid</b>	<b>Mercury 05</b>	<b>02/18/15</b>	<b>02/18/15 13:58</b>	<b>150218L01</b>
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Mercury		ND		0.0833		1.00	
<b>SP</b>	<b>15-02-0865-2-A</b>	<b>02/09/15 18:00</b>	<b>Solid</b>	<b>Mercury 05</b>	<b>02/18/15</b>	<b>02/18/15 14:00</b>	<b>150218L01</b>
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Mercury		ND		0.0862		1.00	
<b>Method Blank</b>	<b>099-16-272-989</b>	<b>N/A</b>	<b>Solid</b>	<b>Mercury 05</b>	<b>02/18/15</b>	<b>02/18/15 13:20</b>	<b>150218L01</b>
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Mercury		ND		0.0833		1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 3545  
Method: EPA 8270C  
Units: mg/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
POWERBASE	15-02-0865-1-A	02/09/15 18:00	Solid	GC/MS CCC	02/21/15	02/23/15 17:40	150221L09

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	4.9	1.00	
Acenaphthylene	ND	4.9	1.00	
Aniline	ND	4.9	1.00	
Anthracene	ND	4.9	1.00	
Azobenzene	ND	4.9	1.00	
Benzidine	ND	98	1.00	
Benzo (a) Anthracene	ND	4.9	1.00	
Benzo (a) Pyrene	ND	4.9	1.00	
Benzo (b) Fluoranthene	ND	4.9	1.00	
Benzo (g,h,i) Perylene	ND	4.9	1.00	
Benzo (k) Fluoranthene	ND	4.9	1.00	
Benzoic Acid	ND	25	1.00	
Benzyl Alcohol	ND	4.9	1.00	
Bis(2-Chloroethoxy) Methane	ND	4.9	1.00	
Bis(2-Chloroethyl) Ether	ND	25	1.00	
Bis(2-Chloroisopropyl) Ether	ND	4.9	1.00	
Bis(2-Ethylhexyl) Phthalate	ND	4.9	1.00	
4-Bromophenyl-Phenyl Ether	ND	4.9	1.00	
Butyl Benzyl Phthalate	ND	4.9	1.00	
4-Chloro-3-Methylphenol	ND	4.9	1.00	
4-Chloroaniline	ND	4.9	1.00	
2-Chloronaphthalene	ND	4.9	1.00	
2-Chlorophenol	ND	4.9	1.00	
4-Chlorophenyl-Phenyl Ether	ND	4.9	1.00	
Chrysene	ND	4.9	1.00	
Di-n-Butyl Phthalate	ND	4.9	1.00	
Di-n-Octyl Phthalate	ND	4.9	1.00	
Dibenz (a,h) Anthracene	ND	4.9	1.00	
Dibenzofuran	ND	4.9	1.00	
1,2-Dichlorobenzene	ND	4.9	1.00	
1,3-Dichlorobenzene	ND	4.9	1.00	
1,4-Dichlorobenzene	ND	4.9	1.00	
3,3'-Dichlorobenzidine	ND	98	1.00	
2,4-Dichlorophenol	ND	4.9	1.00	
Diethyl Phthalate	ND	4.9	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
 2840 Wilderness Place  
 Boulder, CO 80301-5414

Date Received: 02/12/15  
 Work Order: 15-02-0865  
 Preparation: EPA 3545  
 Method: EPA 8270C  
 Units: mg/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Dimethyl Phthalate	ND	4.9	1.00	
2,4-Dimethylphenol	ND	4.9	1.00	
4,6-Dinitro-2-Methylphenol	ND	25	1.00	
2,4-Dinitrophenol	ND	25	1.00	
2,4-Dinitrotoluene	ND	4.9	1.00	
2,6-Dinitrotoluene	ND	4.9	1.00	
Fluoranthene	ND	4.9	1.00	
Fluorene	ND	4.9	1.00	
Hexachloro-1,3-Butadiene	ND	4.9	1.00	
Hexachlorobenzene	ND	4.9	1.00	
Hexachlorocyclopentadiene	ND	25	1.00	
Hexachloroethane	ND	4.9	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	4.9	1.00	
Isophorone	ND	4.9	1.00	
2-Methylnaphthalene	ND	4.9	1.00	
1-Methylnaphthalene	ND	4.9	1.00	
2-Methylphenol	ND	4.9	1.00	
3/4-Methylphenol	ND	4.9	1.00	
N-Nitroso-di-n-propylamine	ND	4.9	1.00	
N-Nitrosodimethylamine	ND	4.9	1.00	
N-Nitrosodiphenylamine	ND	4.9	1.00	
Naphthalene	ND	4.9	1.00	
4-Nitroaniline	ND	4.9	1.00	
3-Nitroaniline	ND	4.9	1.00	
2-Nitroaniline	ND	4.9	1.00	
Nitrobenzene	ND	25	1.00	
4-Nitrophenol	ND	4.9	1.00	
2-Nitrophenol	ND	4.9	1.00	
Pentachlorophenol	ND	25	1.00	
Phenanthrene	ND	4.9	1.00	
Phenol	ND	4.9	1.00	
Pyrene	ND	4.9	1.00	
Pyridine	ND	4.9	1.00	
1,2,4-Trichlorobenzene	ND	4.9	1.00	
2,4,6-Trichlorophenol	ND	4.9	1.00	
2,4,5-Trichlorophenol	ND	4.9	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorobiphenyl	83	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 3545  
Method: EPA 8270C  
Units: mg/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorophenol	86	25-120	
Nitrobenzene-d5	72	33-123	
p-Terphenyl-d14	84	27-159	
Phenol-d6	86	26-122	
2,4,6-Tribromophenol	90	18-138	

## Analytical Report

Brock International	Date Received:	02/12/15
2840 Wilderness Place	Work Order:	15-02-0865
Boulder, CO 80301-5414	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SP	15-02-0865-2-A	02/09/15 18:00	Solid	GC/MS CCC	02/21/15	02/23/15 17:58	150221L09

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	5.0	1.00	
Acenaphthylene	ND	5.0	1.00	
Aniline	ND	5.0	1.00	
Anthracene	ND	5.0	1.00	
Azobenzene	ND	5.0	1.00	
Benzidine	ND	100	1.00	
Benzo (a) Anthracene	ND	5.0	1.00	
Benzo (a) Pyrene	ND	5.0	1.00	
Benzo (b) Fluoranthene	ND	5.0	1.00	
Benzo (g,h,i) Perylene	ND	5.0	1.00	
Benzo (k) Fluoranthene	ND	5.0	1.00	
Benzoic Acid	ND	25	1.00	
Benzyl Alcohol	ND	5.0	1.00	
Bis(2-Chloroethoxy) Methane	ND	5.0	1.00	
Bis(2-Chloroethyl) Ether	ND	25	1.00	
Bis(2-Chloroisopropyl) Ether	ND	5.0	1.00	
Bis(2-Ethylhexyl) Phthalate	ND	5.0	1.00	
4-Bromophenyl-Phenyl Ether	ND	5.0	1.00	
Butyl Benzyl Phthalate	ND	5.0	1.00	
4-Chloro-3-Methylphenol	ND	5.0	1.00	
4-Chloroaniline	ND	5.0	1.00	
2-Chloronaphthalene	ND	5.0	1.00	
2-Chlorophenol	ND	5.0	1.00	
4-Chlorophenyl-Phenyl Ether	ND	5.0	1.00	
Chrysene	ND	5.0	1.00	
Di-n-Butyl Phthalate	ND	5.0	1.00	
Di-n-Octyl Phthalate	ND	5.0	1.00	
Dibenz (a,h) Anthracene	ND	5.0	1.00	
Dibenzofuran	ND	5.0	1.00	
1,2-Dichlorobenzene	ND	5.0	1.00	
1,3-Dichlorobenzene	ND	5.0	1.00	
1,4-Dichlorobenzene	ND	5.0	1.00	
3,3'-Dichlorobenzidine	ND	100	1.00	
2,4-Dichlorophenol	ND	5.0	1.00	
Diethyl Phthalate	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 3545  
Method: EPA 8270C  
Units: mg/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Dimethyl Phthalate	ND	5.0	1.00	
2,4-Dimethylphenol	ND	5.0	1.00	
4,6-Dinitro-2-Methylphenol	ND	25	1.00	
2,4-Dinitrophenol	ND	25	1.00	
2,4-Dinitrotoluene	ND	5.0	1.00	
2,6-Dinitrotoluene	ND	5.0	1.00	
Fluoranthene	ND	5.0	1.00	
Fluorene	ND	5.0	1.00	
Hexachloro-1,3-Butadiene	ND	5.0	1.00	
Hexachlorobenzene	ND	5.0	1.00	
Hexachlorocyclopentadiene	ND	25	1.00	
Hexachloroethane	ND	5.0	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	5.0	1.00	
Isophorone	ND	5.0	1.00	
2-Methylnaphthalene	ND	5.0	1.00	
1-Methylnaphthalene	ND	5.0	1.00	
2-Methylphenol	ND	5.0	1.00	
3/4-Methylphenol	ND	5.0	1.00	
N-Nitroso-di-n-propylamine	ND	5.0	1.00	
N-Nitrosodimethylamine	ND	5.0	1.00	
N-Nitrosodiphenylamine	ND	5.0	1.00	
Naphthalene	ND	5.0	1.00	
4-Nitroaniline	ND	5.0	1.00	
3-Nitroaniline	ND	5.0	1.00	
2-Nitroaniline	ND	5.0	1.00	
Nitrobenzene	ND	25	1.00	
4-Nitrophenol	ND	5.0	1.00	
2-Nitrophenol	ND	5.0	1.00	
Pentachlorophenol	ND	25	1.00	
Phenanthrene	ND	5.0	1.00	
Phenol	ND	5.0	1.00	
Pyrene	ND	5.0	1.00	
Pyridine	ND	5.0	1.00	
1,2,4-Trichlorobenzene	ND	5.0	1.00	
2,4,6-Trichlorophenol	ND	5.0	1.00	
2,4,5-Trichlorophenol	ND	5.0	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorobiphenyl	87	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 3545  
Method: EPA 8270C  
Units: mg/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorophenol	93	25-120	
Nitrobenzene-d5	76	33-123	
p-Terphenyl-d14	89	27-159	
Phenol-d6	93	26-122	
2,4,6-Tribromophenol	95	18-138	



## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 3545  
Method: EPA 8270C  
Units: mg/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-12-549-3208</b>	<b>N/A</b>	<b>Solid</b>	<b>GC/MS CCC</b>	<b>02/21/15</b>	<b>02/23/15 13:33</b>	<b>150221L09</b>

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1.00	
Acenaphthylene	ND	0.50	1.00	
Aniline	ND	0.50	1.00	
Anthracene	ND	0.50	1.00	
Azobenzene	ND	0.50	1.00	
Benzidine	ND	10	1.00	
Benzo (a) Anthracene	ND	0.50	1.00	
Benzo (a) Pyrene	ND	0.50	1.00	
Benzo (b) Fluoranthene	ND	0.50	1.00	
Benzo (g,h,i) Perylene	ND	0.50	1.00	
Benzo (k) Fluoranthene	ND	0.50	1.00	
Benzoic Acid	ND	2.5	1.00	
Benzyl Alcohol	ND	0.50	1.00	
Bis(2-Chloroethoxy) Methane	ND	0.50	1.00	
Bis(2-Chloroethyl) Ether	ND	2.5	1.00	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1.00	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1.00	
4-Bromophenyl-Phenyl Ether	ND	0.50	1.00	
Butyl Benzyl Phthalate	ND	0.50	1.00	
4-Chloro-3-Methylphenol	ND	0.50	1.00	
4-Chloroaniline	ND	0.50	1.00	
2-Chloronaphthalene	ND	0.50	1.00	
2-Chlorophenol	ND	0.50	1.00	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1.00	
Chrysene	ND	0.50	1.00	
Di-n-Butyl Phthalate	ND	0.50	1.00	
Di-n-Octyl Phthalate	ND	0.50	1.00	
Dibenz (a,h) Anthracene	ND	0.50	1.00	
Dibenzofuran	ND	0.50	1.00	
1,2-Dichlorobenzene	ND	0.50	1.00	
1,3-Dichlorobenzene	ND	0.50	1.00	
1,4-Dichlorobenzene	ND	0.50	1.00	
3,3'-Dichlorobenzidine	ND	10	1.00	
2,4-Dichlorophenol	ND	0.50	1.00	
Diethyl Phthalate	ND	0.50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

**Analytical Report**

Brock International  
 2840 Wilderness Place  
 Boulder, CO 80301-5414

Date Received: 02/12/15  
 Work Order: 15-02-0865  
 Preparation: EPA 3545  
 Method: EPA 8270C  
 Units: mg/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Dimethyl Phthalate	ND	0.50	1.00	
2,4-Dimethylphenol	ND	0.50	1.00	
4,6-Dinitro-2-Methylphenol	ND	2.5	1.00	
2,4-Dinitrophenol	ND	2.5	1.00	
2,4-Dinitrotoluene	ND	0.50	1.00	
2,6-Dinitrotoluene	ND	0.50	1.00	
Fluoranthene	ND	0.50	1.00	
Fluorene	ND	0.50	1.00	
Hexachloro-1,3-Butadiene	ND	0.50	1.00	
Hexachlorobenzene	ND	0.50	1.00	
Hexachlorocyclopentadiene	ND	2.5	1.00	
Hexachloroethane	ND	0.50	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1.00	
Isophorone	ND	0.50	1.00	
2-Methylnaphthalene	ND	0.50	1.00	
1-Methylnaphthalene	ND	0.50	1.00	
2-Methylphenol	ND	0.50	1.00	
3/4-Methylphenol	ND	0.50	1.00	
N-Nitroso-di-n-propylamine	ND	0.50	1.00	
N-Nitrosodimethylamine	ND	0.50	1.00	
N-Nitrosodiphenylamine	ND	0.50	1.00	
Naphthalene	ND	0.50	1.00	
4-Nitroaniline	ND	0.50	1.00	
3-Nitroaniline	ND	0.50	1.00	
2-Nitroaniline	ND	0.50	1.00	
Nitrobenzene	ND	2.5	1.00	
4-Nitrophenol	ND	0.50	1.00	
2-Nitrophenol	ND	0.50	1.00	
Pentachlorophenol	ND	2.5	1.00	
Phenanthrene	ND	0.50	1.00	
Phenol	ND	0.50	1.00	
Pyrene	ND	0.50	1.00	
Pyridine	ND	0.50	1.00	
1,2,4-Trichlorobenzene	ND	0.50	1.00	
2,4,6-Trichlorophenol	ND	0.50	1.00	
2,4,5-Trichlorophenol	ND	0.50	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorobiphenyl	89	27-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 3545  
Method: EPA 8270C  
Units: mg/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorophenol	92	25-120	
Nitrobenzene-d5	80	33-123	
p-Terphenyl-d14	91	27-159	
Phenol-d6	92	26-122	
2,4,6-Tribromophenol	88	18-138	

## Analytical Report

Brock International  
 2840 Wilderness Place  
 Boulder, CO 80301-5414

Date Received: 02/12/15  
 Work Order: 15-02-0865  
 Preparation: EPA 1312  
 Method: EPA 8270C  
 Units: ug/L

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
POWERBASE	15-02-0865-1-A	02/09/15 18:00	Solid	GC/MS TT	02/12/15	02/23/15 18:24	150220L11

Comment(s): - The analysis was performed on a SPLP extract of the sample.

Parameter	Result	RL	DF	Qualifiers
N-Nitrosodimethylamine	ND	250	1.00	
Aniline	ND	250	1.00	
Pyridine	ND	250	1.00	
Phenol	ND	250	1.00	
Bis(2-Chloroethyl) Ether	ND	250	1.00	
2-Chlorophenol	ND	250	1.00	
1,3-Dichlorobenzene	ND	250	1.00	
1,4-Dichlorobenzene	ND	250	1.00	
Benzyl Alcohol	ND	250	1.00	
1,2-Dichlorobenzene	ND	250	1.00	
2-Methylphenol	ND	250	1.00	
Bis(2-Chloroisopropyl) Ether	ND	250	1.00	
3/4-Methylphenol	ND	250	1.00	
N-Nitroso-di-n-propylamine	ND	250	1.00	
Hexachloroethane	ND	250	1.00	
Nitrobenzene	ND	250	1.00	
Isophorone	ND	250	1.00	
2-Nitrophenol	ND	250	1.00	
2,4-Dimethylphenol	ND	250	1.00	
Benzoic Acid	ND	500	1.00	
Bis(2-Chloroethoxy) Methane	ND	250	1.00	
2,4-Dichlorophenol	ND	250	1.00	
1,2,4-Trichlorobenzene	ND	250	1.00	
1-Methylnaphthalene	ND	250	1.00	
Naphthalene	ND	250	1.00	
4-Chloroaniline	ND	500	1.00	
Hexachloro-1,3-Butadiene	ND	250	1.00	
4-Chloro-3-Methylphenol	ND	250	1.00	
2-Methylnaphthalene	ND	250	1.00	
Hexachlorocyclopentadiene	ND	2500	1.00	
2,4,6-Trichlorophenol	ND	250	1.00	
2,4,5-Trichlorophenol	ND	250	1.00	
2-Chloronaphthalene	ND	250	1.00	
2-Nitroaniline	ND	250	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
 2840 Wilderness Place  
 Boulder, CO 80301-5414

Date Received: 02/12/15  
 Work Order: 15-02-0865  
 Preparation: EPA 1312  
 Method: EPA 8270C  
 Units: ug/L

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Dimethyl Phthalate	ND	250	1.00	
Acenaphthylene	ND	250	1.00	
3-Nitroaniline	ND	250	1.00	
Acenaphthene	ND	250	1.00	
2,4-Dinitrophenol	ND	500	1.00	
4-Nitrophenol	ND	500	1.00	
Dibenzofuran	ND	250	1.00	
2,4-Dinitrotoluene	ND	130	1.00	
2,6-Dinitrotoluene	ND	250	1.00	
Diethyl Phthalate	ND	250	1.00	
4-Chlorophenyl-Phenyl Ether	ND	250	1.00	
Fluorene	ND	250	1.00	
4-Nitroaniline	ND	250	1.00	
Azobenzene	ND	250	1.00	
4,6-Dinitro-2-Methylphenol	ND	500	1.00	
N-Nitrosodiphenylamine	ND	250	1.00	
4-Bromophenyl-Phenyl Ether	ND	250	1.00	
Hexachlorobenzene	ND	130	1.00	
Pentachlorophenol	ND	500	1.00	
Phenanthrene	ND	250	1.00	
Anthracene	ND	250	1.00	
Di-n-Butyl Phthalate	ND	250	1.00	
Fluoranthene	ND	250	1.00	
Benzidine	ND	500	1.00	
Pyrene	ND	250	1.00	
Butyl Benzyl Phthalate	ND	250	1.00	
3,3'-Dichlorobenzidine	ND	250	1.00	
Benzo (a) Anthracene	ND	250	1.00	
Bis(2-Ethylhexyl) Phthalate	ND	250	1.00	
Chrysene	ND	250	1.00	
Di-n-Octyl Phthalate	ND	250	1.00	
Benzo (k) Fluoranthene	ND	250	1.00	
Benzo (b) Fluoranthene	ND	250	1.00	
Benzo (a) Pyrene	ND	250	1.00	
Dibenz (a,h) Anthracene	ND	250	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	250	1.00	
Benzo (g,h,i) Perylene	ND	250	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 1312  
Method: EPA 8270C  
Units: ug/L

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorophenol	53	21-100	
Phenol-d6	34	10-94	
Nitrobenzene-d5	71	35-114	
2-Fluorobiphenyl	72	43-116	
2,4,6-Tribromophenol	83	10-123	
p-Terphenyl-d14	71	33-141	

## Analytical Report

Brock International	Date Received:	02/12/15
2840 Wilderness Place	Work Order:	15-02-0865
Boulder, CO 80301-5414	Preparation:	EPA 1312
	Method:	EPA 8270C
	Units:	ug/L

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SP	15-02-0865-2-A	02/09/15 18:00	Solid	GC/MS TT	02/12/15	02/23/15 18:43	150220L11

Comment(s): - The analysis was performed on a SPLP extract of the sample.

Parameter	Result	RL	DF	Qualifiers
N-Nitrosodimethylamine	ND	250	1.00	
Aniline	ND	250	1.00	
Pyridine	ND	250	1.00	
Phenol	ND	250	1.00	
Bis(2-Chloroethyl) Ether	ND	250	1.00	
2-Chlorophenol	ND	250	1.00	
1,3-Dichlorobenzene	ND	250	1.00	
1,4-Dichlorobenzene	ND	250	1.00	
Benzyl Alcohol	ND	250	1.00	
1,2-Dichlorobenzene	ND	250	1.00	
2-Methylphenol	ND	250	1.00	
Bis(2-Chloroisopropyl) Ether	ND	250	1.00	
3/4-Methylphenol	ND	250	1.00	
N-Nitroso-di-n-propylamine	ND	250	1.00	
Hexachloroethane	ND	250	1.00	
Nitrobenzene	ND	250	1.00	
Isophorone	ND	250	1.00	
2-Nitrophenol	ND	250	1.00	
2,4-Dimethylphenol	ND	250	1.00	
Benzoic Acid	ND	500	1.00	
Bis(2-Chloroethoxy) Methane	ND	250	1.00	
2,4-Dichlorophenol	ND	250	1.00	
1,2,4-Trichlorobenzene	ND	250	1.00	
1-Methylnaphthalene	ND	250	1.00	
Naphthalene	ND	250	1.00	
4-Chloroaniline	ND	500	1.00	
Hexachloro-1,3-Butadiene	ND	250	1.00	
4-Chloro-3-Methylphenol	ND	250	1.00	
2-Methylnaphthalene	ND	250	1.00	
Hexachlorocyclopentadiene	ND	2500	1.00	
2,4,6-Trichlorophenol	ND	250	1.00	
2,4,5-Trichlorophenol	ND	250	1.00	
2-Chloronaphthalene	ND	250	1.00	
2-Nitroaniline	ND	250	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International	Date Received:	02/12/15
2840 Wilderness Place	Work Order:	15-02-0865
Boulder, CO 80301-5414	Preparation:	EPA 1312
	Method:	EPA 8270C
	Units:	ug/L

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Dimethyl Phthalate	ND	250	1.00	
Acenaphthylene	ND	250	1.00	
3-Nitroaniline	ND	250	1.00	
Acenaphthene	ND	250	1.00	
2,4-Dinitrophenol	ND	500	1.00	
4-Nitrophenol	ND	500	1.00	
Dibenzofuran	ND	250	1.00	
2,4-Dinitrotoluene	ND	130	1.00	
2,6-Dinitrotoluene	ND	250	1.00	
Diethyl Phthalate	ND	250	1.00	
4-Chlorophenyl-Phenyl Ether	ND	250	1.00	
Fluorene	ND	250	1.00	
4-Nitroaniline	ND	250	1.00	
Azobenzene	ND	250	1.00	
4,6-Dinitro-2-Methylphenol	ND	500	1.00	
N-Nitrosodiphenylamine	ND	250	1.00	
4-Bromophenyl-Phenyl Ether	ND	250	1.00	
Hexachlorobenzene	ND	130	1.00	
Pentachlorophenol	ND	500	1.00	
Phenanthrene	ND	250	1.00	
Anthracene	ND	250	1.00	
Di-n-Butyl Phthalate	ND	250	1.00	
Fluoranthene	ND	250	1.00	
Benzidine	ND	500	1.00	
Pyrene	ND	250	1.00	
Butyl Benzyl Phthalate	ND	250	1.00	
3,3'-Dichlorobenzidine	ND	250	1.00	
Benzo (a) Anthracene	ND	250	1.00	
Bis(2-Ethylhexyl) Phthalate	ND	250	1.00	
Chrysene	ND	250	1.00	
Di-n-Octyl Phthalate	ND	250	1.00	
Benzo (k) Fluoranthene	ND	250	1.00	
Benzo (b) Fluoranthene	ND	250	1.00	
Benzo (a) Pyrene	ND	250	1.00	
Dibenz (a,h) Anthracene	ND	250	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	250	1.00	
Benzo (g,h,i) Perylene	ND	250	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 1312  
Method: EPA 8270C  
Units: ug/L

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorophenol	55	21-100	
Phenol-d6	36	10-94	
Nitrobenzene-d5	70	35-114	
2-Fluorobiphenyl	77	43-116	
2,4,6-Tribromophenol	85	10-123	
p-Terphenyl-d14	70	33-141	

## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 1312  
Method: EPA 8270C  
Units: ug/L

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-14-025-182</b>	<b>N/A</b>	<b>Aqueous</b>	<b>GC/MS TT</b>	<b>02/20/15</b>	<b>02/23/15 17:07</b>	<b>150220L11</b>

Parameter	Result	RL	DF	Qualifiers
N-Nitrosodimethylamine	ND	250	1.00	
Aniline	ND	250	1.00	
Pyridine	ND	250	1.00	
Phenol	ND	250	1.00	
Bis(2-Chloroethyl) Ether	ND	250	1.00	
2-Chlorophenol	ND	250	1.00	
1,3-Dichlorobenzene	ND	250	1.00	
1,4-Dichlorobenzene	ND	250	1.00	
Benzyl Alcohol	ND	250	1.00	
1,2-Dichlorobenzene	ND	250	1.00	
2-Methylphenol	ND	250	1.00	
Bis(2-Chloroisopropyl) Ether	ND	250	1.00	
3/4-Methylphenol	ND	250	1.00	
N-Nitroso-di-n-propylamine	ND	250	1.00	
Hexachloroethane	ND	250	1.00	
Nitrobenzene	ND	250	1.00	
Isophorone	ND	250	1.00	
2-Nitrophenol	ND	250	1.00	
2,4-Dimethylphenol	ND	250	1.00	
Benzoic Acid	ND	500	1.00	
Bis(2-Chloroethoxy) Methane	ND	250	1.00	
2,4-Dichlorophenol	ND	250	1.00	
1,2,4-Trichlorobenzene	ND	250	1.00	
1-Methylnaphthalene	ND	250	1.00	
Naphthalene	ND	250	1.00	
4-Chloroaniline	ND	500	1.00	
Hexachloro-1,3-Butadiene	ND	250	1.00	
4-Chloro-3-Methylphenol	ND	250	1.00	
2-Methylnaphthalene	ND	250	1.00	
Hexachlorocyclopentadiene	ND	2500	1.00	
2,4,6-Trichlorophenol	ND	250	1.00	
2,4,5-Trichlorophenol	ND	250	1.00	
2-Chloronaphthalene	ND	250	1.00	
2-Nitroaniline	ND	250	1.00	
Dimethyl Phthalate	ND	250	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
 2840 Wilderness Place  
 Boulder, CO 80301-5414

Date Received: 02/12/15  
 Work Order: 15-02-0865  
 Preparation: EPA 1312  
 Method: EPA 8270C  
 Units: ug/L

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Acenaphthylene	ND	250	1.00	
3-Nitroaniline	ND	250	1.00	
Acenaphthene	ND	250	1.00	
2,4-Dinitrophenol	ND	500	1.00	
4-Nitrophenol	ND	500	1.00	
Dibenzofuran	ND	250	1.00	
2,4-Dinitrotoluene	ND	130	1.00	
2,6-Dinitrotoluene	ND	250	1.00	
Diethyl Phthalate	ND	250	1.00	
4-Chlorophenyl-Phenyl Ether	ND	250	1.00	
Fluorene	ND	250	1.00	
4-Nitroaniline	ND	250	1.00	
Azobenzene	ND	250	1.00	
4,6-Dinitro-2-Methylphenol	ND	500	1.00	
N-Nitrosodiphenylamine	ND	250	1.00	
4-Bromophenyl-Phenyl Ether	ND	250	1.00	
Hexachlorobenzene	ND	130	1.00	
Pentachlorophenol	ND	500	1.00	
Phenanthrene	ND	250	1.00	
Anthracene	ND	250	1.00	
Di-n-Butyl Phthalate	ND	250	1.00	
Fluoranthene	ND	250	1.00	
Benzidine	ND	500	1.00	
Pyrene	ND	250	1.00	
Butyl Benzyl Phthalate	ND	250	1.00	
3,3'-Dichlorobenzidine	ND	250	1.00	
Benzo (a) Anthracene	ND	250	1.00	
Bis(2-Ethylhexyl) Phthalate	ND	250	1.00	
Chrysene	ND	250	1.00	
Di-n-Octyl Phthalate	ND	250	1.00	
Benzo (k) Fluoranthene	ND	250	1.00	
Benzo (b) Fluoranthene	ND	250	1.00	
Benzo (a) Pyrene	ND	250	1.00	
Dibenz (a,h) Anthracene	ND	250	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	250	1.00	
Benzo (g,h,i) Perylene	ND	250	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
2-Fluorophenol	53	21-100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 1312  
Method: EPA 8270C  
Units: ug/L

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Phenol-d6	33	10-94	
Nitrobenzene-d5	70	35-114	
2-Fluorobiphenyl	71	43-116	
2,4,6-Tribromophenol	82	10-123	
p-Terphenyl-d14	70	33-141	

## Analytical Report

Brock International  
 2840 Wilderness Place  
 Boulder, CO 80301-5414

Date Received: 02/12/15  
 Work Order: 15-02-0865  
 Preparation: EPA 5030C  
 Method: EPA 8260B  
 Units: ug/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
POWERBASE	15-02-0865-1-B	02/09/15 18:00	Solid	GC/MS Q	02/12/15	02/17/15 20:42	150217L009

Comment(s): - The reporting limit is elevated resulting from matrix interference.

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	62000	50.0	
Benzene	ND	2500	50.0	
Bromobenzene	ND	2500	50.0	
Bromochloromethane	ND	2500	50.0	
Bromodichloromethane	ND	2500	50.0	
Bromoform	ND	2500	50.0	
Bromomethane	ND	12000	50.0	
2-Butanone	ND	25000	50.0	
n-Butylbenzene	ND	2500	50.0	
sec-Butylbenzene	ND	2500	50.0	
tert-Butylbenzene	ND	2500	50.0	
Carbon Disulfide	ND	25000	50.0	
Carbon Tetrachloride	ND	2500	50.0	
Chlorobenzene	ND	2500	50.0	
Chloroethane	ND	2500	50.0	
Chloroform	ND	2500	50.0	
Chloromethane	ND	12000	50.0	
2-Chlorotoluene	ND	2500	50.0	
4-Chlorotoluene	ND	2500	50.0	
Dibromochloromethane	ND	2500	50.0	
1,2-Dibromo-3-Chloropropane	ND	5000	50.0	
1,2-Dibromoethane	ND	2500	50.0	
Dibromomethane	ND	2500	50.0	
1,2-Dichlorobenzene	ND	2500	50.0	
1,3-Dichlorobenzene	ND	2500	50.0	
1,4-Dichlorobenzene	ND	2500	50.0	
Dichlorodifluoromethane	ND	2500	50.0	
1,1-Dichloroethane	ND	2500	50.0	
1,2-Dichloroethane	ND	2500	50.0	
1,1-Dichloroethene	ND	2500	50.0	
c-1,2-Dichloroethene	ND	2500	50.0	
t-1,2-Dichloroethene	ND	2500	50.0	
1,2-Dichloropropane	ND	2500	50.0	
1,3-Dichloropropane	ND	2500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
 2840 Wilderness Place  
 Boulder, CO 80301-5414

Date Received: 02/12/15  
 Work Order: 15-02-0865  
 Preparation: EPA 5030C  
 Method: EPA 8260B  
 Units: ug/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	2500	50.0	
1,1-Dichloropropene	ND	2500	50.0	
c-1,3-Dichloropropene	ND	2500	50.0	
t-1,3-Dichloropropene	ND	2500	50.0	
Ethylbenzene	ND	2500	50.0	
2-Hexanone	ND	25000	50.0	
Isopropylbenzene	ND	2500	50.0	
p-Isopropyltoluene	ND	2500	50.0	
Methylene Chloride	ND	25000	50.0	
4-Methyl-2-Pentanone	ND	25000	50.0	
Naphthalene	ND	25000	50.0	
n-Propylbenzene	ND	2500	50.0	
Styrene	ND	2500	50.0	
1,1,1,2-Tetrachloroethane	ND	2500	50.0	
1,1,2,2-Tetrachloroethane	ND	2500	50.0	
Tetrachloroethene	ND	2500	50.0	
Toluene	ND	2500	50.0	
1,2,3-Trichlorobenzene	ND	5000	50.0	
1,2,4-Trichlorobenzene	ND	2500	50.0	
1,1,1-Trichloroethane	ND	2500	50.0	
1,1,2-Trichloroethane	ND	2500	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	25000	50.0	
Trichloroethene	ND	2500	50.0	
1,2,3-Trichloropropane	ND	2500	50.0	
1,2,4-Trimethylbenzene	ND	2500	50.0	
Trichlorofluoromethane	ND	25000	50.0	
1,3,5-Trimethylbenzene	ND	2500	50.0	
Vinyl Acetate	ND	25000	50.0	
Vinyl Chloride	ND	2500	50.0	
p/m-Xylene	ND	2500	50.0	
o-Xylene	ND	2500	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	2500	50.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	92	60-132		
Dibromofluoromethane	86	63-141		
1,2-Dichloroethane-d4	102	62-146		
Toluene-d8	95	80-120		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International	Date Received:	02/12/15
2840 Wilderness Place	Work Order:	15-02-0865
Boulder, CO 80301-5414	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SP	15-02-0865-2-B	02/09/15 18:00	Solid	GC/MS Q	02/12/15	02/17/15 21:09	150217L009

Comment(s): - The reporting limit is elevated resulting from matrix interference.

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	64000	50.0	
Benzene	ND	2600	50.0	
Bromobenzene	ND	2600	50.0	
Bromochloromethane	ND	2600	50.0	
Bromodichloromethane	ND	2600	50.0	
Bromoform	ND	2600	50.0	
Bromomethane	ND	13000	50.0	
2-Butanone	ND	26000	50.0	
n-Butylbenzene	ND	2600	50.0	
sec-Butylbenzene	ND	2600	50.0	
tert-Butylbenzene	ND	2600	50.0	
Carbon Disulfide	ND	26000	50.0	
Carbon Tetrachloride	ND	2600	50.0	
Chlorobenzene	ND	2600	50.0	
Chloroethane	ND	2600	50.0	
Chloroform	ND	2600	50.0	
Chloromethane	ND	13000	50.0	
2-Chlorotoluene	ND	2600	50.0	
4-Chlorotoluene	ND	2600	50.0	
Dibromochloromethane	ND	2600	50.0	
1,2-Dibromo-3-Chloropropane	ND	5100	50.0	
1,2-Dibromoethane	ND	2600	50.0	
Dibromomethane	ND	2600	50.0	
1,2-Dichlorobenzene	ND	2600	50.0	
1,3-Dichlorobenzene	ND	2600	50.0	
1,4-Dichlorobenzene	ND	2600	50.0	
Dichlorodifluoromethane	ND	2600	50.0	
1,1-Dichloroethane	ND	2600	50.0	
1,2-Dichloroethane	ND	2600	50.0	
1,1-Dichloroethene	ND	2600	50.0	
c-1,2-Dichloroethene	ND	2600	50.0	
t-1,2-Dichloroethene	ND	2600	50.0	
1,2-Dichloropropane	ND	2600	50.0	
1,3-Dichloropropane	ND	2600	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: ug/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	2600	50.0	
1,1-Dichloropropene	ND	2600	50.0	
c-1,3-Dichloropropene	ND	2600	50.0	
t-1,3-Dichloropropene	ND	2600	50.0	
Ethylbenzene	ND	2600	50.0	
2-Hexanone	ND	26000	50.0	
Isopropylbenzene	ND	2600	50.0	
p-Isopropyltoluene	ND	2600	50.0	
Methylene Chloride	ND	26000	50.0	
4-Methyl-2-Pentanone	ND	26000	50.0	
Naphthalene	ND	26000	50.0	
n-Propylbenzene	ND	2600	50.0	
Styrene	ND	2600	50.0	
1,1,1,2-Tetrachloroethane	ND	2600	50.0	
1,1,2,2-Tetrachloroethane	ND	2600	50.0	
Tetrachloroethene	ND	2600	50.0	
Toluene	ND	2600	50.0	
1,2,3-Trichlorobenzene	ND	5100	50.0	
1,2,4-Trichlorobenzene	ND	2600	50.0	
1,1,1-Trichloroethane	ND	2600	50.0	
1,1,2-Trichloroethane	ND	2600	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	26000	50.0	
Trichloroethene	ND	2600	50.0	
1,2,3-Trichloropropane	ND	2600	50.0	
1,2,4-Trimethylbenzene	ND	2600	50.0	
Trichlorofluoromethane	ND	26000	50.0	
1,3,5-Trimethylbenzene	ND	2600	50.0	
Vinyl Acetate	ND	26000	50.0	
Vinyl Chloride	ND	2600	50.0	
p/m-Xylene	ND	2600	50.0	
o-Xylene	ND	2600	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	2600	50.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	91	60-132		
Dibromofluoromethane	83	63-141		
1,2-Dichloroethane-d4	99	62-146		
Toluene-d8	95	80-120		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.





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## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: ug/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-12-796-9401</b>	<b>N/A</b>	<b>Solid</b>	<b>GC/MS Q</b>	<b>02/17/15</b>	<b>02/17/15 14:30</b>	<b>150217L009</b>

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	12000	50.0	
Benzene	ND	500	50.0	
Bromobenzene	ND	500	50.0	
Bromochloromethane	ND	500	50.0	
Bromodichloromethane	ND	500	50.0	
Bromoform	ND	500	50.0	
Bromomethane	ND	2500	50.0	
2-Butanone	ND	5000	50.0	
n-Butylbenzene	ND	500	50.0	
sec-Butylbenzene	ND	500	50.0	
tert-Butylbenzene	ND	500	50.0	
Carbon Disulfide	ND	5000	50.0	
Carbon Tetrachloride	ND	500	50.0	
Chlorobenzene	ND	500	50.0	
Chloroethane	ND	500	50.0	
Chloroform	ND	500	50.0	
Chloromethane	ND	2500	50.0	
2-Chlorotoluene	ND	500	50.0	
4-Chlorotoluene	ND	500	50.0	
Dibromochloromethane	ND	500	50.0	
1,2-Dibromo-3-Chloropropane	ND	1000	50.0	
1,2-Dibromoethane	ND	500	50.0	
Dibromomethane	ND	500	50.0	
1,2-Dichlorobenzene	ND	500	50.0	
1,3-Dichlorobenzene	ND	500	50.0	
1,4-Dichlorobenzene	ND	500	50.0	
Dichlorodifluoromethane	ND	500	50.0	
1,1-Dichloroethane	ND	500	50.0	
1,2-Dichloroethane	ND	500	50.0	
1,1-Dichloroethene	ND	500	50.0	
c-1,2-Dichloroethene	ND	500	50.0	
t-1,2-Dichloroethene	ND	500	50.0	
1,2-Dichloropropane	ND	500	50.0	
1,3-Dichloropropane	ND	500	50.0	
2,2-Dichloropropane	ND	500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
 2840 Wilderness Place  
 Boulder, CO 80301-5414

Date Received: 02/12/15  
 Work Order: 15-02-0865  
 Preparation: EPA 5030C  
 Method: EPA 8260B  
 Units: ug/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	500	50.0	
c-1,3-Dichloropropene	ND	500	50.0	
t-1,3-Dichloropropene	ND	500	50.0	
Ethylbenzene	ND	500	50.0	
2-Hexanone	ND	5000	50.0	
Isopropylbenzene	ND	500	50.0	
p-Isopropyltoluene	ND	500	50.0	
Methylene Chloride	ND	5000	50.0	
4-Methyl-2-Pentanone	ND	5000	50.0	
Naphthalene	ND	5000	50.0	
n-Propylbenzene	ND	500	50.0	
Styrene	ND	500	50.0	
1,1,1,2-Tetrachloroethane	ND	500	50.0	
1,1,2,2-Tetrachloroethane	ND	500	50.0	
Tetrachloroethene	ND	500	50.0	
Toluene	ND	500	50.0	
1,2,3-Trichlorobenzene	ND	1000	50.0	
1,2,4-Trichlorobenzene	ND	500	50.0	
1,1,1-Trichloroethane	ND	500	50.0	
1,1,2-Trichloroethane	ND	500	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	5000	50.0	
Trichloroethene	ND	500	50.0	
1,2,3-Trichloropropane	ND	500	50.0	
1,2,4-Trimethylbenzene	ND	500	50.0	
Trichlorofluoromethane	ND	5000	50.0	
1,3,5-Trimethylbenzene	ND	500	50.0	
Vinyl Acetate	ND	5000	50.0	
Vinyl Chloride	ND	500	50.0	
p/m-Xylene	ND	500	50.0	
o-Xylene	ND	500	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	500	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	93	60-132	
Dibromofluoromethane	90	63-141	
1,2-Dichloroethane-d4	101	62-146	
Toluene-d8	95	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International	Date Received:	02/12/15
2840 Wilderness Place	Work Order:	15-02-0865
Boulder, CO 80301-5414	Preparation:	EPA 1312
	Method:	EPA 8260B
	Units:	ug/L

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
POWERBASE	15-02-0865-1-A	02/09/15 18:00	Solid	GC/MS V V	02/12/15	02/21/15 13:59	150221L012

Comment(s): - The analysis was performed on a SPLP extract of the sample.

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1.00	
Benzene	ND	0.50	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	1.0	1.00	
Bromomethane	ND	10	1.00	
2-Butanone	ND	10	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	10	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	1.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
 2840 Wilderness Place  
 Boulder, CO 80301-5414

Date Received: 02/12/15  
 Work Order: 15-02-0865  
 Preparation: EPA 1312  
 Method: EPA 8260B  
 Units: ug/L

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	1.00	
1,1-Dichloropropene	ND	1.0	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	10	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	1.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	1.0	1.00	
1,2,4-Trichlorobenzene	ND	1.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
Trichloroethene	ND	1.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trimethylbenzene	ND	1.0	1.00	
1,3,5-Trimethylbenzene	ND	1.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	0.50	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	96	80-120	
Dibromofluoromethane	109	78-126	
1,2-Dichloroethane-d4	116	75-135	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 1312  
Method: EPA 8260B  
Units: ug/L

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SP	15-02-0865-2-A	02/09/15 18:00	Solid	GC/MS V V	02/12/15	02/21/15 19:13	150221L012

Comment(s): - The analysis was performed on a SPLP extract of the sample.

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1.00	
Benzene	ND	0.50	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	1.0	1.00	
Bromomethane	ND	10	1.00	
2-Butanone	ND	10	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	10	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	1.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
 2840 Wilderness Place  
 Boulder, CO 80301-5414

Date Received: 02/12/15  
 Work Order: 15-02-0865  
 Preparation: EPA 1312  
 Method: EPA 8260B  
 Units: ug/L

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	1.00	
1,1-Dichloropropene	ND	1.0	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	10	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	1.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	1.0	1.00	
1,2,4-Trichlorobenzene	ND	1.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
Trichloroethene	ND	1.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trimethylbenzene	ND	1.0	1.00	
1,3,5-Trimethylbenzene	ND	1.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	0.50	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	94	80-120	
Dibromofluoromethane	107	78-126	
1,2-Dichloroethane-d4	110	75-135	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 1312  
Method: EPA 8260B  
Units: ug/L

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-14-001-16449</b>	<b>N/A</b>	<b>Aqueous</b>	<b>GC/MS V V</b>	<b>02/12/15</b>	<b>02/21/15 13:07</b>	<b>150221L012</b>

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1.00	
Benzene	ND	0.50	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	1.0	1.00	
Bromomethane	ND	10	1.00	
2-Butanone	ND	10	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	10	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	1.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
 2840 Wilderness Place  
 Boulder, CO 80301-5414

Date Received: 02/12/15  
 Work Order: 15-02-0865  
 Preparation: EPA 1312  
 Method: EPA 8260B  
 Units: ug/L

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.0	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	10	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	1.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	1.0	1.00	
1,2,4-Trichlorobenzene	ND	1.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
Trichloroethene	ND	1.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trimethylbenzene	ND	1.0	1.00	
1,3,5-Trimethylbenzene	ND	1.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	0.50	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	80-120	
Dibromofluoromethane	111	78-126	
1,2-Dichloroethane-d4	115	75-135	
Toluene-d8	101	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.





Calscience

**Quality Control - Spike/Spike Duplicate**

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 3050B  
Method: EPA 6010B

Project: POWERBASE / SP ANALYTICAL TESTING

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
15-02-0982-1	Sample	Solid	ICP 7300	02/17/15	02/18/15 20:39	150217S04
15-02-0982-1	Matrix Spike	Solid	ICP 7300	02/17/15	02/18/15 20:40	150217S04
15-02-0982-1	Matrix Spike Duplicate	Solid	ICP 7300	02/17/15	02/18/15 20:41	150217S04

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	25.00	4.524	18	3.579	14	50-115	23	0-20	3,4
Arsenic	4.678	25.00	27.64	92	30.42	103	75-125	10	0-20	
Barium	70.67	25.00	100.2	118	96.51	103	75-125	4	0-20	
Beryllium	ND	25.00	24.42	98	27.29	109	75-125	11	0-20	
Cadmium	ND	25.00	24.04	96	26.41	106	75-125	9	0-20	
Chromium	10.95	25.00	33.98	92	36.36	102	75-125	7	0-20	
Cobalt	5.267	25.00	29.41	97	33.07	111	75-125	12	0-20	
Copper	139.3	25.00	149.5	4X	140.4	4X	75-125	4X	0-20	Q
Lead	7.992	25.00	28.22	81	31.44	94	75-125	11	0-20	
Molybdenum	0.3190	25.00	20.13	79	23.19	91	75-125	14	0-20	
Nickel	24.90	25.00	47.16	89	47.80	92	75-125	1	0-20	
Selenium	ND	25.00	22.37	89	25.36	101	75-125	13	0-20	
Silver	ND	12.50	13.30	106	14.26	114	75-125	7	0-20	
Thallium	ND	25.00	22.06	88	23.69	95	75-125	7	0-20	
Vanadium	31.84	25.00	52.08	81	55.79	96	75-125	7	0-20	
Zinc	29.33	25.00	51.15	87	58.80	118	75-125	14	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

## Quality Control - Spike/Spike Duplicate

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 1312  
Method: EPA 6010B

Project: POWERBASE / SP ANALYTICAL TESTING

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
<b>POWERBASE</b>	<b>Sample</b>	<b>Solid</b>	<b>ICP 7300</b>	<b>02/12/15</b>	<b>02/16/15 22:43</b>	<b>150216SA3</b>				
<b>POWERBASE</b>	<b>Matrix Spike</b>	<b>Solid</b>	<b>ICP 7300</b>	<b>02/12/15</b>	<b>02/16/15 22:45</b>	<b>150216SA3</b>				
<b>POWERBASE</b>	<b>Matrix Spike Duplicate</b>	<b>Solid</b>	<b>ICP 7300</b>	<b>02/12/15</b>	<b>02/16/15 22:46</b>	<b>150216SA3</b>				
<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Antimony	ND	0.5000	0.4326	87	0.4386	88	72-132	1	0-10	
Arsenic	ND	0.5000	0.4201	84	0.4081	82	80-140	3	0-11	
Barium	ND	0.5000	0.3749	75	0.3516	70	87-123	6	0-6	3
Beryllium	ND	0.5000	0.4362	87	0.4338	87	89-119	1	0-8	3
Cadmium	ND	0.5000	0.4515	90	0.4465	89	82-124	1	0-7	
Chromium	ND	0.5000	0.4517	90	0.4484	90	86-122	1	0-8	
Cobalt	ND	0.5000	0.4652	93	0.4639	93	83-125	0	0-7	
Copper	ND	0.5000	0.4635	93	0.4705	94	78-126	1	0-7	
Lead	ND	0.5000	0.4500	90	0.4489	90	84-120	0	0-7	
Molybdenum	ND	0.5000	0.4316	86	0.4296	86	78-126	0	0-7	
Nickel	ND	0.5000	0.4490	90	0.4451	89	84-120	1	0-7	
Selenium	ND	0.5000	0.4140	83	0.4202	84	79-127	1	0-9	
Silver	ND	0.2500	0.1773	71	0.1650	66	86-128	7	0-7	3
Thallium	ND	0.5000	0.4822	96	0.4791	96	79-121	1	0-8	
Vanadium	ND	0.5000	0.4477	90	0.4423	88	88-118	1	0-7	
Zinc	0.08159	0.5000	0.5544	95	0.5513	94	89-131	1	0-8	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

## Quality Control - Spike/Spike Duplicate

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 1312  
Method: EPA 7470A

Project: POWERBASE / SP ANALYTICAL TESTING

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
POWERBASE	Sample	Solid	Mercury 04	02/12/15	02/18/15 18:57	150218S05
POWERBASE	Matrix Spike	Solid	Mercury 04	02/12/15	02/18/15 18:59	150218S05
POWERBASE	Matrix Spike Duplicate	Solid	Mercury 04	02/12/15	02/18/15 19:06	150218S05

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.05000	0.04945	99	0.04934	99	71-134	0	0-14	

  
Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

## Quality Control - Spike/Spike Duplicate

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 7471A Total  
Method: EPA 7471A

Project: POWERBASE / SP ANALYTICAL TESTING

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
15-02-0850-1	Sample	Solid	Mercury 05	02/18/15	02/18/15 13:25	150218S01
15-02-0850-1	Matrix Spike	Solid	Mercury 05	02/18/15	02/18/15 13:27	150218S01
15-02-0850-1	Matrix Spike Duplicate	Solid	Mercury 05	02/18/15	02/18/15 13:29	150218S01

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.8350	0.8959	107	0.8939	107	71-137	0	0-14	

  
Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

## Quality Control - Spike/Spike Duplicate

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 3545  
Method: EPA 8270C

Project: POWERBASE / SP ANALYTICAL TESTING

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
15-02-1583-5	Sample	Solid	GC/MS CCC	02/21/15	02/23/15 16:28	150221S09
15-02-1583-5	Matrix Spike	Solid	GC/MS CCC	02/21/15	02/23/15 15:51	150221S09
15-02-1583-5	Matrix Spike Duplicate	Solid	GC/MS CCC	02/21/15	02/23/15 16:09	150221S09

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acenaphthene	ND	10.00	10.29	103	10.47	105	34-148	2	0-20	
Acenaphthylene	ND	10.00	10.36	104	10.49	105	53-120	1	0-20	
Butyl Benzyl Phthalate	ND	10.00	11.14	111	11.47	115	15-189	3	0-20	
4-Chloro-3-Methylphenol	ND	10.00	9.062	91	9.158	92	32-120	1	0-20	
2-Chlorophenol	ND	10.00	8.993	90	9.273	93	53-120	3	0-20	
1,4-Dichlorobenzene	ND	10.00	8.795	88	9.131	91	43-120	4	0-26	
Dimethyl Phthalate	ND	10.00	10.05	100	10.14	101	44-122	1	0-20	
2,4-Dinitrotoluene	ND	10.00	10.09	101	10.02	100	28-120	1	0-20	
Fluorene	ND	10.00	10.17	102	10.34	103	12-186	2	0-20	
N-Nitroso-di-n-propylamine	ND	10.00	9.282	93	9.446	94	38-140	2	0-20	
Naphthalene	ND	10.00	8.981	90	9.206	92	20-140	2	0-20	
4-Nitrophenol	ND	10.00	8.991	90	8.970	90	14-128	0	0-59	
Pentachlorophenol	ND	10.00	5.400	54	5.622	56	10-124	4	0-20	
Phenol	ND	10.00	8.890	89	9.024	90	22-124	1	0-20	
Pyrene	ND	10.00	10.26	103	10.53	105	31-169	3	0-20	
1,2,4-Trichlorobenzene	ND	10.00	9.384	94	9.526	95	56-120	1	0-20	

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

## Quality Control - Spike/Spike Duplicate

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 1312  
Method: EPA 8270C

Project: POWERBASE / SP ANALYTICAL TESTING

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
<b>POWERBASE</b>	<b>Sample</b>	<b>Solid</b>	<b>GC/MS TT</b>	<b>02/12/15</b>	<b>02/23/15 18:24</b>	<b>150220S11</b>
<b>POWERBASE</b>	<b>Matrix Spike</b>	<b>Solid</b>	<b>GC/MS TT</b>	<b>02/12/15</b>	<b>02/23/15 17:47</b>	<b>150220S11</b>
<b>POWERBASE</b>	<b>Matrix Spike Duplicate</b>	<b>Solid</b>	<b>GC/MS TT</b>	<b>02/12/15</b>	<b>02/23/15 18:05</b>	<b>150220S11</b>

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Phenol	ND	2000	717.3	36	722.0	36	20-120	1	0-42	
2-Chlorophenol	ND	2000	1560	78	1581	79	23-134	1	0-40	
1,4-Dichlorobenzene	ND	2000	1633	82	1675	84	20-124	3	0-28	
N-Nitroso-di-n-propylamine	ND	2000	1519	76	1574	79	0-230	4	0-38	
1,2,4-Trichlorobenzene	ND	2000	1632	82	1686	84	44-142	3	0-28	
Naphthalene	ND	2000	1626	81	1689	84	50-150	4	0-20	
4-Chloro-3-Methylphenol	ND	2000	1437	72	1480	74	22-147	3	0-20	
Dimethyl Phthalate	ND	2000	1770	88	1807	90	50-150	2	0-20	
Acenaphthylene	ND	2000	1771	89	1847	92	50-150	4	0-20	
Acenaphthene	ND	2000	1880	94	1952	98	47-145	4	0-31	
4-Nitrophenol	ND	2000	523.5	26	531.2	27	0-132	1	0-20	
2,4-Dinitrotoluene	ND	2000	1757	88	1775	89	39-139	1	0-38	
Fluorene	ND	2000	1878	94	1941	97	50-150	3	0-20	
Pentachlorophenol	ND	2000	1099	55	1154	58	14-176	5	0-20	
Pyrene	ND	2000	1657	83	1714	86	52-115	3	0-20	
Butyl Benzyl Phthalate	ND	2000	1759	88	1823	91	50-150	4	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



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## Quality Control - Spike/Spike Duplicate

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 5030C  
Method: EPA 8260B

Project: POWERBASE / SP ANALYTICAL TESTING

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
15-02-1169-1	Sample	Solid	GC/MS Q	02/17/15	02/17/15 14:56	150217S007
15-02-1169-1	Matrix Spike	Solid	GC/MS Q	02/17/15	02/17/15 16:16	150217S007
15-02-1169-1	Matrix Spike Duplicate	Solid	GC/MS Q	02/17/15	02/17/15 16:42	150217S007

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	42.12	84	42.61	85	61-127	1	0-20	
Carbon Tetrachloride	ND	50.00	47.79	96	50.50	101	51-135	6	0-29	
Chlorobenzene	ND	50.00	45.85	92	44.20	88	57-123	4	0-20	
1,2-Dibromoethane	ND	50.00	47.29	95	46.21	92	64-124	2	0-20	
1,2-Dichlorobenzene	ND	50.00	45.92	92	41.43	83	35-131	10	0-25	
1,2-Dichloroethane	ND	50.00	45.50	91	45.19	90	80-120	1	0-20	
1,1-Dichloroethene	ND	50.00	43.23	86	45.39	91	47-143	5	0-25	
Ethylbenzene	ND	50.00	44.51	89	43.19	86	57-129	3	0-22	
Toluene	ND	50.00	42.66	85	42.83	86	63-123	0	0-20	
Trichloroethene	ND	50.00	43.10	86	44.49	89	44-158	3	0-20	
Vinyl Chloride	ND	50.00	41.47	83	42.80	86	49-139	3	0-47	
p/m-Xylene	ND	100.0	94.52	95	90.19	90	70-130	5	0-30	
o-Xylene	ND	50.00	47.51	95	46.22	92	70-130	3	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	43.77	88	43.65	87	57-123	0	0-21	

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

## Quality Control - Spike/Spike Duplicate

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 1312  
Method: EPA 8260B

Project: POWERBASE / SP ANALYTICAL TESTING

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
POWERBASE	Sample	Solid	GC/MS V V	02/12/15	02/21/15 13:59	150221S006
POWERBASE	Matrix Spike	Solid	GC/MS V V	02/12/15	02/21/15 15:46	150221S006
POWERBASE	Matrix Spike Duplicate	Solid	GC/MS V V	02/12/15	02/21/15 16:09	150221S006

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	42.65	85	43.15	86	74-122	1	0-21	
Carbon Tetrachloride	ND	50.00	51.03	102	50.20	100	60-144	2	0-21	
Chlorobenzene	ND	50.00	48.13	96	46.93	94	73-120	3	0-22	
1,2-Dibromoethane	ND	50.00	52.50	105	50.48	101	80-122	4	0-20	
1,2-Dichlorobenzene	ND	50.00	52.23	104	51.62	103	70-120	1	0-26	
1,2-Dichloroethane	ND	50.00	47.81	96	48.75	98	64-142	2	0-20	
1,1-Dichloroethene	ND	50.00	39.80	80	40.66	81	52-136	2	0-21	
Ethylbenzene	ND	50.00	45.82	92	44.52	89	77-125	3	0-24	
Toluene	ND	50.00	44.98	90	44.96	90	72-126	0	0-23	
Trichloroethene	ND	50.00	44.07	88	43.50	87	74-128	1	0-22	
Vinyl Chloride	ND	50.00	40.43	81	41.17	82	67-133	2	0-20	
p/m-Xylene	ND	100.0	96.64	97	94.37	94	63-129	2	0-25	
o-Xylene	ND	50.00	50.69	101	49.90	100	62-128	2	0-24	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	52.90	106	50.57	101	68-134	5	0-21	

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RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 3050B  
Method: EPA 6010B

Project: POWERBASE / SP ANALYTICAL TESTING

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
<b>097-01-002-20403</b>	<b>LCS</b>	<b>Solid</b>	<b>ICP 7300</b>	<b>02/17/15</b>	<b>02/18/15 19:25</b>	<b>150217L04</b>	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Antimony		25.00	22.86	91	80-120	73-127	
Arsenic		25.00	21.93	88	80-120	73-127	
Barium		25.00	23.89	96	80-120	73-127	
Beryllium		25.00	21.53	86	80-120	73-127	
Cadmium		25.00	22.99	92	80-120	73-127	
Chromium		25.00	22.12	88	80-120	73-127	
Cobalt		25.00	22.80	91	80-120	73-127	
Copper		25.00	22.88	92	80-120	73-127	
Lead		25.00	22.47	90	80-120	73-127	
Molybdenum		25.00	22.24	89	80-120	73-127	
Nickel		25.00	22.50	90	80-120	73-127	
Selenium		25.00	22.01	88	80-120	73-127	
Silver		12.50	11.58	93	80-120	73-127	
Thallium		25.00	22.21	89	80-120	73-127	
Vanadium		25.00	22.16	89	80-120	73-127	
Zinc		25.00	23.08	92	80-120	73-127	

Total number of LCS compounds: 16

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

## Quality Control - LCS

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 1312  
Method: EPA 6010B

Project: POWERBASE / SP ANALYTICAL TESTING

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
<b>099-14-021-1471</b>	<b>LCS</b>	<b>Aqueous</b>	<b>ICP 7300</b>	<b>02/12/15</b>	<b>02/16/15 20:29</b>	<b>150216LA3</b>	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Antimony		0.5000	0.4863	97	80-120	73-127	
Arsenic		0.5000	0.4732	95	80-120	73-127	
Barium		0.5000	0.5051	101	80-120	73-127	
Beryllium		0.5000	0.4967	99	80-120	73-127	
Cadmium		0.5000	0.5092	102	80-120	73-127	
Chromium		0.5000	0.5161	103	80-120	73-127	
Cobalt		0.5000	0.5268	105	80-120	73-127	
Copper		0.5000	0.5024	100	80-120	73-127	
Lead		0.5000	0.5109	102	80-120	73-127	
Molybdenum		0.5000	0.4835	97	80-120	73-127	
Nickel		0.5000	0.5120	102	80-120	73-127	
Selenium		0.5000	0.4895	98	80-120	73-127	
Silver		0.2500	0.2379	95	80-120	73-127	
Thallium		0.5000	0.5401	108	80-120	73-127	
Vanadium		0.5000	0.5067	101	80-120	73-127	
Zinc		0.5000	0.5466	109	80-120	73-127	

Total number of LCS compounds: 16

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

## Quality Control - LCS

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 1312  
Method: EPA 7470A

Project: POWERBASE / SP ANALYTICAL TESTING

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
<b>099-04-005-921</b>	<b>LCS</b>	<b>Aqueous</b>	<b>Mercury 04</b>	<b>02/12/15</b>	<b>02/18/15 18:54</b>	<b>150218L05</b>
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Mercury		0.05000	0.04942	99	90-122	

## Quality Control - LCS

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 7471A Total  
Method: EPA 7471A

Project: POWERBASE / SP ANALYTICAL TESTING

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
<b>099-16-272-989</b>	<b>LCS</b>	<b>Solid</b>	<b>Mercury 05</b>	<b>02/18/15</b>	<b>02/18/15 13:22</b>	<b>150218L01</b>
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Mercury		0.8350	0.8828	106	85-121	

## Quality Control - LCS

Brock International  
 2840 Wilderness Place  
 Boulder, CO 80301-5414

Date Received: 02/12/15  
 Work Order: 15-02-0865  
 Preparation: EPA 3545  
 Method: EPA 8270C

Project: POWERBASE / SP ANALYTICAL TESTING

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
<b>099-12-549-3208</b>	<b>LCS</b>	<b>Solid</b>	<b>GC/MS CCC</b>	<b>02/21/15</b>	<b>02/23/15 15:26</b>	<b>150221L09</b>	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Acenaphthene		10.00	10.12	101	51-123	39-135	
Acenaphthylene		10.00	10.15	101	52-120	41-131	
Butyl Benzyl Phthalate		10.00	11.22	112	43-139	27-155	
4-Chloro-3-Methylphenol		10.00	9.037	90	55-121	44-132	
2-Chlorophenol		10.00	8.783	88	58-124	47-135	
1,4-Dichlorobenzene		10.00	8.120	81	42-132	27-147	
Dimethyl Phthalate		10.00	10.25	102	51-123	39-135	
2,4-Dinitrotoluene		10.00	10.09	101	51-129	38-142	
Fluorene		10.00	10.11	101	54-126	42-138	
N-Nitroso-di-n-propylamine		10.00	9.134	91	40-136	24-152	
Naphthalene		10.00	8.746	87	32-146	13-165	
4-Nitrophenol		10.00	8.721	87	24-126	7-143	
Pentachlorophenol		10.00	4.209	42	23-131	5-149	
Phenol		10.00	8.686	87	40-130	25-145	
Pyrene		10.00	10.34	103	47-143	31-159	
1,2,4-Trichlorobenzene		10.00	8.865	89	45-129	31-143	

Total number of LCS compounds: 16

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

## Quality Control - LCS

Brock International  
 2840 Wilderness Place  
 Boulder, CO 80301-5414

Date Received: 02/12/15  
 Work Order: 15-02-0865  
 Preparation: EPA 1312  
 Method: EPA 8270C

Project: POWERBASE / SP ANALYTICAL TESTING

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
<b>099-14-025-182</b>	<b>LCS</b>	<b>Aqueous</b>	<b>GC/MS TT</b>	<b>02/20/15</b>	<b>02/23/15 17:26</b>	<b>150220L11</b>	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Phenol		2000	727.0	36	20-120	3-137	
2-Chlorophenol		2000	1553	78	23-134	4-152	
1,4-Dichlorobenzene		2000	1592	80	20-124	3-141	
N-Nitroso-di-n-propylamine		2000	1529	76	0-230	0-268	
1,2,4-Trichlorobenzene		2000	1618	81	44-142	28-158	
Naphthalene		2000	1644	82	21-133	2-152	
4-Chloro-3-Methylphenol		2000	1435	72	22-147	1-168	
Dimethyl Phthalate		2000	1781	89	0-112	0-131	
Acenaphthylene		2000	1840	92	33-145	14-164	
Acenaphthene		2000	1889	94	47-145	31-161	
4-Nitrophenol		2000	522.1	26	0-132	0-154	
2,4-Dinitrotoluene		2000	1742	87	39-139	22-156	
Fluorene		2000	1883	94	59-121	49-131	
Pentachlorophenol		2000	1081	54	14-176	0-203	
Pyrene		2000	1665	83	52-115	42-126	
Butyl Benzyl Phthalate		2000	1780	89	0-152	0-177	

Total number of LCS compounds: 16

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

## Quality Control - LCS

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 5030C  
Method: EPA 8260B

Project: POWERBASE / SP ANALYTICAL TESTING

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
<b>099-12-796-9401</b>	<b>LCS</b>	<b>Solid</b>	<b>GC/MS Q</b>	<b>02/17/15</b>	<b>02/17/15 13:06</b>	<b>150217L009</b>	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Benzene		50.00	46.43	93	78-120	71-127	
Carbon Tetrachloride		50.00	55.13	110	49-139	34-154	
Chlorobenzene		50.00	51.10	102	79-120	72-127	
1,2-Dibromoethane		50.00	49.32	99	80-120	73-127	
1,2-Dichlorobenzene		50.00	50.97	102	75-120	68-128	
1,2-Dichloroethane		50.00	48.00	96	80-120	73-127	
1,1-Dichloroethene		50.00	47.90	96	74-122	66-130	
Ethylbenzene		50.00	50.03	100	76-120	69-127	
Toluene		50.00	47.61	95	77-120	70-127	
Trichloroethene		50.00	47.04	94	80-120	73-127	
Vinyl Chloride		50.00	43.91	88	68-122	59-131	
p/m-Xylene		100.0	105.8	106	75-125	67-133	
o-Xylene		50.00	53.32	107	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)		50.00	45.01	90	77-120	70-127	

Total number of LCS compounds: 14

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents 

## Quality Control - LCS

Brock International	Date Received:	02/12/15
2840 Wilderness Place	Work Order:	15-02-0865
Boulder, CO 80301-5414	Preparation:	EPA 5030C
	Method:	EPA 8260B

Project: POWERBASE / SP ANALYTICAL TESTING Page 8 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
<b>099-14-001-16449</b>	<b>LCS</b>	<b>Aqueous</b>	<b>GC/MS V V</b>	<b>02/21/15</b>	<b>02/21/15 11:22</b>	<b>150221L012</b>	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Benzene		50.00	43.32	87	80-120	73-127	
Carbon Tetrachloride		50.00	53.00	106	67-139	55-151	
Chlorobenzene		50.00	48.84	98	78-120	71-127	
1,2-Dibromoethane		50.00	53.03	106	80-120	73-127	
1,2-Dichlorobenzene		50.00	51.55	103	63-129	52-140	
1,2-Dichloroethane		50.00	47.89	96	70-130	60-140	
1,1-Dichloroethene		50.00	39.68	79	66-126	56-136	
Ethylbenzene		50.00	46.09	92	80-123	73-130	
Toluene		50.00	45.70	91	80-120	73-127	
Trichloroethene		50.00	44.07	88	80-122	73-129	
Vinyl Chloride		50.00	41.58	83	70-130	60-140	
p/m-Xylene		100.0	95.99	96	75-123	67-131	
o-Xylene		50.00	50.79	102	74-122	66-130	
Methyl-t-Butyl Ether (MTBE)		50.00	55.35	111	69-129	59-139	

Total number of LCS compounds: 14  
Total number of ME compounds: 0  
Total number of ME compounds allowed: 1  
LCS ME CL validation result: Pass


  
Return to Contents



## Sample Analysis Summary Report

Work Order: 15-02-0865

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 6010B	EPA 3050B	935	ICP 7300	1
EPA 6010B	EPA 1312	935	ICP 7300	1
EPA 7470A	EPA 1312	915	Mercury 04	1
EPA 7471A	EPA 7471A Total	915	Mercury 05	1
EPA 8260B	EPA 1312	905	GC/MS V V	2
EPA 8260B	EPA 1312	927	GC/MS V V	2
EPA 8260B	EPA 5030C	905	GC/MS Q	2
EPA 8270C	EPA 3545	923	GC/MS CCC	1
EPA 8270C	EPA 1312	923	GC/MS TT	1

  
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Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Location 2: 7445 Lampson Avenue, Garden Grove, CA 92841

## Glossary of Terms and Qualifiers

Work Order: 15-02-0865

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



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7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494  
For courier service / sample drop off information, contact us26\_sales@eurofins.com or call us.

CHAIN-OF-CUSTODY RECORD

DATE: 2/11/15

PAGE: 1 OF 1

WO NO. / LAB USE ONLY

15-02-0865

LABORATORY CLIENT:

BROCK INTERNATIONAL  
ADDRESS: 2840 WILDERNESS PLACE, SUITE C  
CITY: BOULDER CO STATE: ZIP: 8031  
TEL: 303 544 5800 E-MAIL: KKOPELA@BROCK-INTERNATIONAL.COM  
TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):  
 SAME DAY  24 HR  48 HR  72 HR  5 DAYS  STANDARD

CLIENT PROJECT NAME / NO.:

POWERBASE / SP ANALYTICAL TESTING

PROJECT CONTACT:

RICHARD RUNKLES

GLOBAL ID:

LOG CODE:

LAB CONTACT OR QUOTE NO.:

959457

SAMPLER(S): (PRINT)

STEVE SAWYER

REQUESTED ANALYSES

Please check box or fill in blank as needed.

SPECIAL INSTRUCTIONS:  
POWERBASE = WHITE  
SP = BLACK / WHITE

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	Field Filtered	Preserved	Unpreserved	TPH <input type="checkbox"/> C6-C36 <input type="checkbox"/> C6-C44	TPH	BTEX / MTBE <input type="checkbox"/> 8260 <input type="checkbox"/>	VOCs (8260)	Oxygenates (8260)	Prep (5035) <input type="checkbox"/> En Core <input type="checkbox"/> Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs <input type="checkbox"/> 8270 <input type="checkbox"/> 8270 SIM	T22 Metals <input type="checkbox"/> 6010/747X <input type="checkbox"/> 6020/747X	Cr(VI) <input type="checkbox"/> 7196 <input type="checkbox"/> 7199 <input type="checkbox"/> 218.6	Time:	
		DATE	TIME																			
1	POWERBASE	2/9/15	1800	S	3																	
2	SP	2/9/15	1800	S	1																	X See attached Austin

Relinquished by: (Signature)

*[Signature]*

Relinquished by: (Signature)

Received by: (Signature/Affiliation)

*[Signature]* BA

Received by: (Signature/Affiliation)

Date:

2/12/15

Date:

Time:

1100

Time:

Relinquished by: (Signature)

Received by: (Signature/Affiliation)

Date:

Time:



Environmental  
Calscience

Supplemental Report 1

The original report has been revised/corrected.



**WORK ORDER NUMBER: 15-02-0865**

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

**Analytical Report For**

**Client:** Brock International

**Client Project Name:** POWERBASE / SP ANALYTICAL TESTING

**Attention:** Richard Runkles  
2840 Wilderness Place  
Boulder, CO 80301-5414

Approved for release on 04/09/2015 by:  
Don Burley  
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Client Project Name: POWERBASE / SP ANALYTICAL TESTING  
Work Order Number: 15-02-0865

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4	Quality Control Sample Data. . . . .	11
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	4.2 LCS/LCSD. . . . .	12
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**Condition Upon Receipt:**

Samples were received under Chain-of-Custody (COC) on 02/12/15. They were assigned to Work Order 15-02-0865.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

**Additional Comments:**

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

EPA 8260B VOCs results are reported to the MDLs (Method Detection Limits).

## Sample Summary

Client: Brock International	Work Order: 15-02-0865
2840 Wilderness Place	Project Name: POWERBASE / SP ANALYTICAL TESTING
Boulder, CO 80301-5414	PO Number:
	Date/Time Received: 02/12/15 11:00
	Number of Containers: 4

Attn: Richard Runkles

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
POWERBASE	15-02-0865-1	02/09/15 18:00	3	Solid
SP	15-02-0865-2	02/09/15 18:00	1	Solid

## Analytical Report

Brock International  
 2840 Wilderness Place  
 Boulder, CO 80301-5414

Date Received: 02/12/15  
 Work Order: 15-02-0865  
 Preparation: EPA 5030C  
 Method: EPA 8260B  
 Units: ug/kg

Project: POWERBASE / SP ANALYTICAL TESTING

Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
POWERBASE	15-02-0865-1-B	02/09/15 18:00	Solid	GC/MS Q	02/12/15	02/17/15 20:42	150217L009

Comment(s): - The reporting limit is elevated resulting from matrix interference.  
 - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	62000	3100	50.0	
Benzene	ND	2500	65	50.0	
Bromobenzene	ND	2500	100	50.0	
Bromochloromethane	ND	2500	350	50.0	
Bromodichloromethane	ND	2500	120	50.0	
Bromoform	ND	2500	400	50.0	
Bromomethane	ND	12000	4700	50.0	
2-Butanone	ND	25000	1900	50.0	
n-Butylbenzene	ND	2500	78	50.0	
sec-Butylbenzene	ND	2500	290	50.0	
tert-Butylbenzene	ND	2500	75	50.0	
Carbon Disulfide	ND	25000	150	50.0	
Carbon Tetrachloride	ND	2500	140	50.0	
Chlorobenzene	ND	2500	110	50.0	
Chloroethane	ND	2500	750	50.0	
Chloroform	ND	2500	120	50.0	
Chloromethane	240	12000	150	50.0	B,J
2-Chlorotoluene	ND	2500	120	50.0	
4-Chlorotoluene	ND	2500	110	50.0	
Dibromochloromethane	ND	2500	290	50.0	
1,2-Dibromo-3-Chloropropane	ND	5000	870	50.0	
1,2-Dibromoethane	ND	2500	130	50.0	
Dibromomethane	ND	2500	390	50.0	
1,2-Dichlorobenzene	ND	2500	110	50.0	
1,3-Dichlorobenzene	ND	2500	88	50.0	
1,4-Dichlorobenzene	ND	2500	110	50.0	
Dichlorodifluoromethane	ND	2500	220	50.0	
1,1-Dichloroethane	ND	2500	110	50.0	
1,2-Dichloroethane	ND	2500	160	50.0	
1,1-Dichloroethene	ND	2500	170	50.0	
c-1,2-Dichloroethene	ND	2500	140	50.0	
t-1,2-Dichloroethene	ND	2500	250	50.0	
1,2-Dichloropropane	ND	2500	220	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: ug/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
1,3-Dichloropropane	ND	2500	130	50.0	
2,2-Dichloropropane	ND	2500	170	50.0	
1,1-Dichloropropene	ND	2500	160	50.0	
c-1,3-Dichloropropene	ND	2500	130	50.0	
t-1,3-Dichloropropene	ND	2500	300	50.0	
Ethylbenzene	ND	2500	76	50.0	
2-Hexanone	ND	25000	880	50.0	
Isopropylbenzene	ND	2500	270	50.0	
p-Isopropyltoluene	ND	2500	310	50.0	
Methylene Chloride	ND	25000	670	50.0	
4-Methyl-2-Pentanone	ND	25000	2200	50.0	
Naphthalene	ND	25000	410	50.0	
n-Propylbenzene	ND	2500	250	50.0	
Styrene	ND	2500	300	50.0	
1,1,1,2-Tetrachloroethane	ND	2500	120	50.0	
1,1,2,2-Tetrachloroethane	ND	2500	170	50.0	
Tetrachloroethene	ND	2500	100	50.0	
Toluene	ND	2500	260	50.0	
1,2,3-Trichlorobenzene	ND	5000	460	50.0	
1,2,4-Trichlorobenzene	ND	2500	160	50.0	
1,1,1-Trichloroethane	ND	2500	110	50.0	
1,1,2-Trichloroethane	ND	2500	180	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	25000	180	50.0	
Trichloroethene	ND	2500	150	50.0	
1,2,3-Trichloropropane	ND	2500	420	50.0	
1,2,4-Trimethylbenzene	ND	2500	290	50.0	
Trichlorofluoromethane	ND	25000	190	50.0	
1,3,5-Trimethylbenzene	ND	2500	270	50.0	
Vinyl Acetate	ND	25000	2400	50.0	
Vinyl Chloride	ND	2500	250	50.0	
p/m-Xylene	ND	2500	130	50.0	
o-Xylene	ND	2500	280	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	2500	150	50.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	92	60-132			
Dibromofluoromethane	86	63-141			
1,2-Dichloroethane-d4	102	62-146			
Toluene-d8	95	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: ug/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SP	15-02-0865-2-B	02/09/15 18:00	Solid	GC/MS Q	02/12/15	02/17/15 21:09	150217L009

Comment(s): - The reporting limit is elevated resulting from matrix interference.

- Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	64000	3200	50.0	
Benzene	ND	2600	66	50.0	
Bromobenzene	ND	2600	110	50.0	
Bromochloromethane	ND	2600	350	50.0	
Bromodichloromethane	ND	2600	120	50.0	
Bromoform	ND	2600	410	50.0	
Bromomethane	ND	13000	4800	50.0	
2-Butanone	ND	26000	1900	50.0	
n-Butylbenzene	ND	2600	80	50.0	
sec-Butylbenzene	ND	2600	290	50.0	
tert-Butylbenzene	ND	2600	77	50.0	
Carbon Disulfide	ND	26000	160	50.0	
Carbon Tetrachloride	ND	2600	140	50.0	
Chlorobenzene	ND	2600	110	50.0	
Chloroethane	ND	2600	760	50.0	
Chloroform	ND	2600	120	50.0	
Chloromethane	200	13000	160	50.0	B,J
2-Chlorotoluene	ND	2600	120	50.0	
4-Chlorotoluene	ND	2600	110	50.0	
Dibromochloromethane	ND	2600	290	50.0	
1,2-Dibromo-3-Chloropropane	ND	5100	890	50.0	
1,2-Dibromoethane	ND	2600	130	50.0	
Dibromomethane	ND	2600	400	50.0	
1,2-Dichlorobenzene	ND	2600	120	50.0	
1,3-Dichlorobenzene	ND	2600	90	50.0	
1,4-Dichlorobenzene	ND	2600	110	50.0	
Dichlorodifluoromethane	ND	2600	230	50.0	
1,1-Dichloroethane	ND	2600	110	50.0	
1,2-Dichloroethane	ND	2600	160	50.0	
1,1-Dichloroethene	ND	2600	180	50.0	
c-1,2-Dichloroethene	ND	2600	140	50.0	
t-1,2-Dichloroethene	ND	2600	260	50.0	
1,2-Dichloropropane	ND	2600	220	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International	Date Received:	02/12/15
2840 Wilderness Place	Work Order:	15-02-0865
Boulder, CO 80301-5414	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
1,3-Dichloropropane	ND	2600	130	50.0	
2,2-Dichloropropane	ND	2600	170	50.0	
1,1-Dichloropropene	ND	2600	170	50.0	
c-1,3-Dichloropropene	ND	2600	130	50.0	
t-1,3-Dichloropropene	ND	2600	310	50.0	
Ethylbenzene	ND	2600	77	50.0	
2-Hexanone	ND	26000	900	50.0	
Isopropylbenzene	ND	2600	280	50.0	
p-Isopropyltoluene	ND	2600	320	50.0	
Methylene Chloride	ND	26000	680	50.0	
4-Methyl-2-Pentanone	ND	26000	2200	50.0	
Naphthalene	ND	26000	420	50.0	
n-Propylbenzene	ND	2600	260	50.0	
Styrene	ND	2600	310	50.0	
1,1,1,2-Tetrachloroethane	ND	2600	120	50.0	
1,1,2,2-Tetrachloroethane	ND	2600	180	50.0	
Tetrachloroethene	ND	2600	110	50.0	
Toluene	ND	2600	260	50.0	
1,2,3-Trichlorobenzene	ND	5100	470	50.0	
1,2,4-Trichlorobenzene	ND	2600	160	50.0	
1,1,1-Trichloroethane	ND	2600	110	50.0	
1,1,2-Trichloroethane	ND	2600	180	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	26000	180	50.0	
Trichloroethene	ND	2600	150	50.0	
1,2,3-Trichloropropane	ND	2600	420	50.0	
1,2,4-Trimethylbenzene	ND	2600	300	50.0	
Trichlorofluoromethane	ND	26000	190	50.0	
1,3,5-Trimethylbenzene	ND	2600	280	50.0	
Vinyl Acetate	ND	26000	2400	50.0	
Vinyl Chloride	ND	2600	260	50.0	
p/m-Xylene	ND	2600	140	50.0	
o-Xylene	ND	2600	280	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	2600	150	50.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	91	60-132			
Dibromofluoromethane	83	63-141			
1,2-Dichloroethane-d4	99	62-146			
Toluene-d8	95	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: ug/kg

Project: POWERBASE / SP ANALYTICAL TESTING

Page 5 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-12-796-9401</b>	<b>N/A</b>	<b>Solid</b>	<b>GC/MS Q</b>	<b>02/17/15</b>	<b>02/17/15 14:30</b>	<b>150217L009</b>

Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Acetone	ND	12000	620	50.0	
Benzene	ND	500	13	50.0	
Bromobenzene	ND	500	21	50.0	
Bromochloromethane	ND	500	69	50.0	
Bromodichloromethane	ND	500	23	50.0	
Bromoform	ND	500	79	50.0	
Bromomethane	ND	2500	940	50.0	
2-Butanone	ND	5000	380	50.0	
n-Butylbenzene	ND	500	16	50.0	
sec-Butylbenzene	ND	500	58	50.0	
tert-Butylbenzene	ND	500	15	50.0	
Carbon Disulfide	ND	5000	31	50.0	
Carbon Tetrachloride	ND	500	28	50.0	
Chlorobenzene	ND	500	22	50.0	
Chloroethane	ND	500	150	50.0	
Chloroform	ND	500	24	50.0	
Chloromethane	36	2500	30	50.0	J
2-Chlorotoluene	ND	500	23	50.0	
4-Chlorotoluene	ND	500	21	50.0	
Dibromochloromethane	ND	500	57	50.0	
1,2-Dibromo-3-Chloropropane	ND	1000	170	50.0	
1,2-Dibromoethane	ND	500	26	50.0	
Dibromomethane	ND	500	77	50.0	
1,2-Dichlorobenzene	ND	500	23	50.0	
1,3-Dichlorobenzene	ND	500	18	50.0	
1,4-Dichlorobenzene	ND	500	22	50.0	
Dichlorodifluoromethane	ND	500	44	50.0	
1,1-Dichloroethane	ND	500	21	50.0	
1,2-Dichloroethane	ND	500	31	50.0	
1,1-Dichloroethene	ND	500	35	50.0	
c-1,2-Dichloroethene	ND	500	28	50.0	
t-1,2-Dichloroethene	ND	500	51	50.0	
1,2-Dichloropropane	ND	500	44	50.0	
1,3-Dichloropropane	ND	500	25	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 5030C  
Method: EPA 8260B  
Units: ug/kg

Project: POWERBASE / SP ANALYTICAL TESTING

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	500	33	50.0	
1,1-Dichloropropene	ND	500	33	50.0	
c-1,3-Dichloropropene	ND	500	25	50.0	
t-1,3-Dichloropropene	ND	500	61	50.0	
Ethylbenzene	ND	500	15	50.0	
2-Hexanone	ND	5000	180	50.0	
Isopropylbenzene	ND	500	55	50.0	
p-Isopropyltoluene	ND	500	63	50.0	
Methylene Chloride	ND	5000	130	50.0	
4-Methyl-2-Pentanone	ND	5000	430	50.0	
Naphthalene	ND	5000	81	50.0	
n-Propylbenzene	ND	500	50	50.0	
Styrene	ND	500	60	50.0	
1,1,1,2-Tetrachloroethane	ND	500	24	50.0	
1,1,2,2-Tetrachloroethane	ND	500	35	50.0	
Tetrachloroethene	ND	500	21	50.0	
Toluene	ND	500	52	50.0	
1,2,3-Trichlorobenzene	ND	1000	91	50.0	
1,2,4-Trichlorobenzene	ND	500	31	50.0	
1,1,1-Trichloroethane	ND	500	23	50.0	
1,1,2-Trichloroethane	ND	500	35	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	5000	35	50.0	
Trichloroethene	ND	500	30	50.0	
1,2,3-Trichloropropane	ND	500	83	50.0	
1,2,4-Trimethylbenzene	ND	500	59	50.0	
Trichlorofluoromethane	ND	5000	38	50.0	
1,3,5-Trimethylbenzene	ND	500	55	50.0	
Vinyl Acetate	ND	5000	470	50.0	
Vinyl Chloride	ND	500	50	50.0	
p/m-Xylene	ND	500	27	50.0	
o-Xylene	ND	500	56	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	500	30	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	93	60-132	
Dibromofluoromethane	90	63-141	
1,2-Dichloroethane-d4	101	62-146	
Toluene-d8	95	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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## Quality Control - Spike/Spike Duplicate

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 5030C  
Method: EPA 8260B

Project: POWERBASE / SP ANALYTICAL TESTING

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
15-02-1169-1	Sample	Solid	GC/MS Q	02/17/15	02/17/15 14:56	150217S007
15-02-1169-1	Matrix Spike	Solid	GC/MS Q	02/17/15	02/17/15 16:16	150217S007
15-02-1169-1	Matrix Spike Duplicate	Solid	GC/MS Q	02/17/15	02/17/15 16:42	150217S007

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	42.12	84	42.61	85	61-127	1	0-20	
Carbon Tetrachloride	ND	50.00	47.79	96	50.50	101	51-135	6	0-29	
Chlorobenzene	ND	50.00	45.85	92	44.20	88	57-123	4	0-20	
1,2-Dibromoethane	ND	50.00	47.29	95	46.21	92	64-124	2	0-20	
1,2-Dichlorobenzene	ND	50.00	45.92	92	41.43	83	35-131	10	0-25	
1,2-Dichloroethane	ND	50.00	45.50	91	45.19	90	80-120	1	0-20	
1,1-Dichloroethene	ND	50.00	43.23	86	45.39	91	47-143	5	0-25	
Ethylbenzene	ND	50.00	44.51	89	43.19	86	57-129	3	0-22	
Toluene	ND	50.00	42.66	85	42.83	86	63-123	0	0-20	
Trichloroethene	ND	50.00	43.10	86	44.49	89	44-158	3	0-20	
Vinyl Chloride	ND	50.00	41.47	83	42.80	86	49-139	3	0-47	
p/m-Xylene	ND	100.0	94.52	95	90.19	90	70-130	5	0-30	
o-Xylene	ND	50.00	47.51	95	46.22	92	70-130	3	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	43.77	88	43.65	87	57-123	0	0-21	

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RPD: Relative Percent Difference. CL: Control Limits

## Quality Control - LCS

Brock International  
2840 Wilderness Place  
Boulder, CO 80301-5414

Date Received: 02/12/15  
Work Order: 15-02-0865  
Preparation: EPA 5030C  
Method: EPA 8260B

Project: POWERBASE / SP ANALYTICAL TESTING

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
<b>099-12-796-9401</b>	<b>LCS</b>	<b>Solid</b>	<b>GC/MS Q</b>	<b>02/17/15</b>	<b>02/17/15 13:06</b>	<b>150217L009</b>	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Benzene		50.00	46.43	93	78-120	71-127	
Carbon Tetrachloride		50.00	55.13	110	49-139	34-154	
Chlorobenzene		50.00	51.10	102	79-120	72-127	
1,2-Dibromoethane		50.00	49.32	99	80-120	73-127	
1,2-Dichlorobenzene		50.00	50.97	102	75-120	68-128	
1,2-Dichloroethane		50.00	48.00	96	80-120	73-127	
1,1-Dichloroethene		50.00	47.90	96	74-122	66-130	
Ethylbenzene		50.00	50.03	100	76-120	69-127	
Toluene		50.00	47.61	95	77-120	70-127	
Trichloroethene		50.00	47.04	94	80-120	73-127	
Vinyl Chloride		50.00	43.91	88	68-122	59-131	
p/m-Xylene		100.0	105.8	106	75-125	67-133	
o-Xylene		50.00	53.32	107	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)		50.00	45.01	90	77-120	70-127	

Total number of LCS compounds: 14

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

## Sample Analysis Summary Report

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Work Order: 15-02-0865

Page 1 of 1

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<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8260B	EPA 5030C	905	GC/MS Q	2

  
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## Glossary of Terms and Qualifiers

Work Order: 15-02-0865

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<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



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7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494  
For courier service / sample drop off information, contact us2@eurofins.com or call us.

CHAIN-OF-CUSTODY RECORD

DATE: 2/14/15

PAGE: 1 OF 1

WO NO. / LAB USE ONLY

15-02-0865

CLIENT PROJECT NAME / NO.:

LABORATORY CLIENT: BROCK INTERNATIONAL  
ADDRESS: 2840 WILDERNESS PLACE, SUITE C  
CITY: BOULDER CO STATE: ZIP: 8031  
TEL: 303 544 5800 E-MAIL: KKOPERA@BROCK-INTERNATIONAL.COM  
TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):  
 SAME DAY  24 HR  48 HR  72 HR  5 DAYS  STANDARD  
EED:  
 COELT EDF  OTHER

P.O. NO.:

POWERBASE / SP ANALYTICAL TESTING

PROJECT CONTACT:

RICHARD RUNKLES

GLOBAL ID:

LOG CODE:

LAB CONTACT OR QUOTE NO.: 959457  
SAMPLER(S): (PRINT) STEVE SAWYER

REQUESTED ANALYSES

Please check box or fill in blank as needed.

SPECIAL INSTRUCTIONS:  
POWERBASE = WHITE  
SP = BLACK / WHITE

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	Field Filtered	Preserved	Unpreserved	TPH <input type="checkbox"/> C6-C36 <input type="checkbox"/> C6-C44	TPH	BTEX / MTBE <input type="checkbox"/> 8260 <input type="checkbox"/>	VOCs (8260)	Oxygenates (8260)	Prep (5035) <input type="checkbox"/> En Core <input type="checkbox"/> Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs <input type="checkbox"/> 8270 <input type="checkbox"/> 8270 SIM	T22 Metals <input type="checkbox"/> 6010/747X <input type="checkbox"/> 6020/747X	Cr(VI) <input type="checkbox"/> 7196 <input type="checkbox"/> 7199 <input type="checkbox"/> 218.6	Time:	
		DATE	TIME																			
1	POWERBASE	2/9/15	1800	S	3																	
2	SP			S	1																	

Received by: (Signature/Affiliation) *[Signature]* Date: 2/12/15 Time: 1100

Received by: (Signature/Affiliation) *[Signature]* Date: Date: Time:

Received by: (Signature/Affiliation) *[Signature]* Date: Date: Time: