WASTE STREAM IDENTIFICATION AND CHARACTERIZATION

Name of Waste Stream *(i.e., Spent Isopropyl Alcohol)*	29 Miles of Spill Containment Boom
Generating Location	Deer Park, Texas
Description of Waste *(i.e., used isopropyl alcohol solution)*	Used Spill Containment Boom
Generating Process	Spill containment boom used to minimize migration of firewater and spilled material following fire response.
Date of Initial Generation	May 2019
Hazardous Waste Criteria	• Listed (F, K, P or U) Waste? ☐Yes ☒No If yes, list EPA waste codes: See Waste Codes listed below. • Characteristic Waste? o Ignitability ☐Yes ☒No (D001): Flash Point <60°C (140° F) o Corrosivity ☐Yes ☒No (D002): pH ≤ 2 or pH ≥ 12.5 o Reactivity ☐Yes ☒No (D003) o Toxicity ☐Yes ☒No (D004 – D043)
Waste Classification *(Hazardous, Controlled, or Non-hazardous Class 1, 2, or 3)*	Nonhazardous Class 1
Waste Codes *(include EPA and State waste codes, if applicable)*	9901 319 1

Classification Rationale *(i.e., analytical testing, process knowledge, Safety Data Sheet [SDS])*

The used containment boom does not contain a listed waste per 40 CFR §261.30 - §261.33 and did not contact or mix with a listed hazardous waste. It does not exhibit characteristics of ignitibility, reactivity, corrosivity or toxicity per analytical testing and does not contain Class 1 constituents at or above the levels listed in Table 1, Appendix 1 of 30 TAC §335, Subchapter R when submitted to the Toxicity Characteristic Leaching Procedure (TCLP), but *does* contain the Class 1 constituent total petroleum hydrocarbon (TPH) above 1,500 parts per million (ppm).

90016298

Laboratory Analysis Report

Total Number of Pages: 20

Job ID : 19041820

10100 East Freeway, Suite 100, Houston, TX 77029 tel: 713-453-6060, fax: 713-453-6091, http://www.ablabs.com

Client Project Name :
B1902527 / ITC Waste Sampling

Report To :	Client Name:	Braun Intertec	P.O.#.:	
	Attn:	Austin Heider	Sample Collected By:	Josh Hale
	Client Address:	10075 Windfern Road	Date Collected:	04/29/19
	City, State, Zip:	Houston, Texas, 77064		

A&B Labs has analyzed the following samples...

Client Sample ID	Matrix	A&B Sample ID
ING2054042901	Solid	19041820.01
ING2054042901 DUP.01	Solid	19041820.02

Alisha Hughes

Released By: Alisha Hughes

Title: Project Manager

Date: 5/13/2019

This Laboratory is NELAP (T104704213-19-20) accredited. Effective: 04/01/2019; Expires: 3/31/2020

Scope: Non-Potable Water, Drinking Water, Air, Solid, Biological Tissue, Hazardous Waste

I am the laboratory manager, or his/her designee, and I am responsible for the release of this data package. This laboratory data package has been reviewed and is complete and technically compliant with the requirements of the methods used, except where noted in the attached exception reports. I affirm, to the best of my knowledge that all problems/anomalies observed by this laboratory (and if applicable, any and all laboratories subcontracted through this laboratory) that might affect the quality of the data, have been identified in the Laboratory Review Checklist, and that no information or data have been knowingly withheld that would affect the quality of the data.

This report cannot be reproduced, except in full, without prior written permission of A&B Labs. Results shown relate only to the items tested. Samples are assumed to be in acceptable condition unless otherwise noted. Blank correction is not made unless otherwise noted. Air concentrations reported are based on field sampling information provided by client. Soil samples are reported on a wet weight basis unless otherwise noted. Uncertainty estimates are available on request.

REVISED

Date Received : 04/29/2019 15:25

Laboratory Report: Case Narrative

A&B Job ID: 19041820

Date: 05/13/19

Client Name:	Braun Intertec	Attn: Austin Heider
Project Name:	B1902527 / ITC Waste Sampling	
Date Received:	04/29/19	
Collected By:	Josh Hale	

REVISED REPORT II:

Per client email, the attached report is revised for the sample ID's for both samples listed.

A&B Sample 19041820.01 ID: WGS2054042901 was updated to ING2054042901
A&B Sample 19041820.02 ID: WGS2054042901 DUP.01 was updated to ING2054042901 DUP.01

REVISED REPORT I:

The attached report was revised to include TPH TX1005, and TCLP Sb, Be, Ni, and V on your sample WG2054042901 per client email.

Released By: Alisha Hughes

Title: Project Manager

LABORATORY TERM AND QUALIFIER DEFINITION REPORT

Job ID : 19041820

Date: 5/13/2019

General Term Definition

Back-Wt	Back Weight	Post-Wt	Post Weight
BRL	Below Reporting Limit	ppm	parts per million
cfu	colony-forming units	Pre-Wt	Previous Weight
Conc.	Concentration	Q	Qualifier
D.F.	Dilution Factor	RegLimit	Regulatory Limit
Front-Wt	Front Weight	RPD	Relative Percent Difference
LCS	Laboratory Check Standard	RptLimit	Reporting Limit
LCSD	Laboratory Check Standard Duplicate	SDL	Sample Detection Limit
MS	Matrix Spike	surr	Surrogate
MSD	Matrix Spike Duplicate	T	Time
MW	Molecular Weight	TNTC	Too numerous to count
J	Estimation. Below calibration range but above MDL		

Qualifier Definition

S4	Surrogate not available due to dilution of sample extract for quantification.
S5	Target compounds caused elevation of baseline. Surrogate not calculated
U1	Undetected at RL (Reporting Limit)

LABORATORY TEST RESULTS

Job ID : 19041820

Date 5/13/2019

Client Name: Braun Intertec

Attn: Austin Heider

Project Name: B1902527 / ITC Waste Sampling

Client Sample ID: ING2054042901

Date Collected: 04/29/19

Time Collected: 14:30

Other Information:

Job Sample ID: 19041820.01

Sample Matrix Solid

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SM 2540G	% Moisture								
	% Moisture	BRL	%	1	0.1		U1	05/01/19 16:35	KRS
SW-846 1010A	Ignitability (Flash Point) up to 150 degrees F								
	Ignitability	>150	°F	1				04/30/19 10:00	YSK
SW-846 6010C	TCLP Metals								
	Antimony	BRL	mg/L	1	0.04		U1	04/30/19 15:26	BRR
	Arsenic	BRL	mg/L	1	0.04	5.0	U1	04/30/19 15:26	BRR
	Barium	0.139	mg/L	1	0.04	100.0		04/30/19 15:26	BRR
	Beryllium	BRL	mg/L	1	0.04		U1	04/30/19 15:26	BRR
	Cadmium	BRL	mg/L	1	0.04	1.0	U1	04/30/19 15:26	BRR
	Chromium	0.070	mg/L	1	0.04	5.0		04/30/19 15:26	BRR
	Lead	0.709	mg/L	1	0.04	5.0		04/30/19 15:26	BRR
	Nickel	BRL	mg/L	1	0.04		U1	04/30/19 15:26	BRR
	Selenium	BRL	mg/L	1	0.04	1.0	U1	04/30/19 15:26	BRR
	Silver	BRL	mg/L	1	0.04	5.0	U1	04/30/19 15:26	BRR
	Vanadium	BRL	mg/L	1	0.04		U1	04/30/19 15:26	BRR
SW-846 7470A	TCLP Mercury								
	Mercury	BRL	mg/L	1	0.0005	0.2	U1	04/30/19 14:28	LR
SW-846 8260C	TCLP VOC								
	1,1-Dichloroethylene	BRL	mg/L	1	0.13	0.6	U1	04/30/19 10:17	RT
	1,2-Dichloroethane	BRL	mg/L	1	0.13	0.5	U1	04/30/19 10:17	RT
	1,4-Dichlorobenzene	BRL	mg/L	1	0.15	7.5	U1	04/30/19 10:17	RT
	Benzene	BRL	mg/L	1	0.13	0.5	U1	04/30/19 10:17	RT
	Carbon tetrachloride	BRL	mg/L	1	0.13	0.5	U1	04/30/19 10:17	RT
	Chlorobenzene	BRL	mg/L	1	0.15	70	U1	04/30/19 10:17	RT
	Chloroform	BRL	mg/L	1	0.13	6	U1	04/30/19 10:17	RT
	MEK	BRL	mg/L	1	0.13	200	U1	04/30/19 10:17	RT
	Tetrachloroethylene	BRL	mg/L	1	0.13	0.7	U1	04/30/19 10:17	RT
	Trichloroethylene	BRL	mg/L	1	0.13	0.5	U1	04/30/19 10:17	RT
	Vinyl Chloride	BRL	mg/L	1	0.13	0.2	U1	04/30/19 10:17	RT
	1,2-Dichloroethane-d4(surr)	99.1	%	1	70-130			04/30/19 10:17	RT
	Dibromofluoromethane(surr)	99.6	%	1	70-130			04/30/19 10:17	RT
	p-Bromofluorobenzene(surr)	104	%	1	70-130			04/30/19 10:17	RT
	Toluene-d8(surr)	106	%	1	70-130			04/30/19 10:17	RT
SW-846 8270D	TCLP Semivolatiles								
	1,4-Dichlorobenzene	BRL	mg/L	1	0.05	7.5	U1	04/30/19 15:10	VMN
	2,4,5-Trichlorophenol	BRL	mg/L	1	0.05	400	U1	04/30/19 15:10	VMN
	2,4,6-Trichlorophenol	BRL	mg/L	1	0.05	2	U1	04/30/19 15:10	VMN

REVISED

LABORATORY TEST RESULTS

Job ID : 19041820

Date 5/13/2019

Client Name: Braun Intertec

Attn: Austin Heider

Project Name: B1902527 / ITC Waste Sampling

Client Sample ID: ING2054042901

Date Collected: 04/29/19

Time Collected: 14:30

Other Information:

Job Sample ID: 19041820.01

Sample Matrix Solid

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8270D	TCLP Semivolatiles								
	2,4-Dinitrotoluene	BRL	mg/L	1	0.05	0.13	U1	04/30/19 15:10	VMN
	2-Methylphenol	BRL	mg/L	1	0.05	200	U1	04/30/19 15:10	VMN
	3- & 4-Methylphenols	BRL	mg/L	1	0.1	200	U1	04/30/19 15:10	VMN
	Hexachlorobenzene	BRL	mg/L	1	0.05	0.13	U1	04/30/19 15:10	VMN
	Hexachlorobutadiene	BRL	mg/L	1	0.05	0.5	U1	04/30/19 15:10	VMN
	Hexachloroethane	BRL	mg/L	1	0.05	3	U1	04/30/19 15:10	VMN
	Nitrobenzene	BRL	mg/L	1	0.05	2	U1	04/30/19 15:10	VMN
	Pentachlorophenol	BRL	mg/L	1	0.25	100	U1	04/30/19 15:10	VMN
	Pyridine	BRL	mg/L	1	0.05	5	U1	04/30/19 15:10	VMN
	2,4,6-Tribromophenol(surr)	76.4	%	1	10-120			04/30/19 15:10	VMN
	2-Fluorobiphenyl(surr)	78.5	%	1	30-115			04/30/19 15:10	VMN
	2-Fluorophenol(surr)	72.7	%	1	17-115			04/30/19 15:10	VMN
	Nitrobenzene-d5(surr)	71.4	%	1	20-120			04/30/19 15:10	VMN
	Phenol-d6(surr)	67.6	%	1	15-120			04/30/19 15:10	VMN
	p-Terphenyl-d14(surr)	86.3	%	1	30-140			04/30/19 15:10	VMN
SW-846 9045D	Corrosivity, pH								
	pH	7.4	s.u.					04/30/19 10:00	KRS
	Temperature when read, °C[1]	23.4	s.u.					04/30/19 10:00	KRS
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12	BRL	mg/Kg	5	118.5		U1	05/02/19 16:10	JKD
	>C12-C28	123000	mg/Kg	1250	25375			05/02/19 17:31	JKD
	>C28-C35	26500	mg/Kg	250	4425			05/02/19 17:02	JKD
	Total C6-C35	149500	mg/Kg	1250	25375			05/02/19 17:31	JKD
	1-Chlorooctane(surr)	N/A	%	5	60-143		S5	05/02/19 16:10	JKD
	Chlorooctadecane(surr)	N/A	%	5	60-150		S4	05/02/19 16:10	JKD

REVISED

LABORATORY TEST RESULTS

Job ID : 19041820

Date 5/13/2019

Client Name: Braun Intertec

Attn: Austin Heider

Project Name: B1902527 / ITC Waste Sampling

Client Sample ID: ING2054042901 DUP.01

Date Collected: 04/29/19

Time Collected:

Other Information:

Job Sample ID: 19041820.02

Sample Matrix Solid

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 1010A	Ignitability (Flash Point) up to 150 degrees F								
	Ignitability	>150	°F	1				04/30/19 10:00	YSK
SW-846 6010C	TCLP Metals								
	Arsenic	BRL	mg/L	1	0.04	5.0	U1	04/30/19 15:30	BRR
	Barium	0.444	mg/L	1	0.04	100.0		04/30/19 15:30	BRR
	Cadmium	BRL	mg/L	1	0.04	1.0	U1	04/30/19 15:30	BRR
	Chromium	BRL	mg/L	1	0.04	5.0	U1	04/30/19 15:30	BRR
	Lead	0.205	mg/L	1	0.04	5.0		04/30/19 15:30	BRR
	Selenium	BRL	mg/L	1	0.04	1.0	U1	04/30/19 15:30	BRR
	Silver	BRL	mg/L	1	0.04	5.0	U1	04/30/19 15:30	BRR
SW-846 7470A	TCLP Mercury								
	Mercury	BRL	mg/L	1	0.0005	0.2	U1	04/30/19 14:31	LR
SW-846 8260C	TCLP VOC								
	1,1-Dichloroethylene	BRL	mg/L	1	0.13	0.6	U1	04/30/19 11:37	RT
	1,2-Dichloroethane	BRL	mg/L	1	0.13	0.5	U1	04/30/19 11:37	RT
	1,4-Dichlorobenzene	BRL	mg/L	1	0.15	7.5	U1	04/30/19 11:37	RT
	Benzene	BRL	mg/L	1	0.13	0.5	U1	04/30/19 11:37	RT
	Carbon tetrachloride	BRL	mg/L	1	0.13	0.5	U1	04/30/19 11:37	RT
	Chlorobenzene	BRL	mg/L	1	0.15	70	U1	04/30/19 11:37	RT
	Chloroform	BRL	mg/L	1	0.13	6	U1	04/30/19 11:37	RT
	MEK	BRL	mg/L	1	0.13	200	U1	04/30/19 11:37	RT
	Tetrachloroethylene	BRL	mg/L	1	0.13	0.7	U1	04/30/19 11:37	RT
	Trichloroethylene	BRL	mg/L	1	0.13	0.5	U1	04/30/19 11:37	RT
	Vinyl Chloride	BRL	mg/L	1	0.13	0.2	U1	04/30/19 11:37	RT
	1,2-Dichloroethane-d4(surr)	100	%	1	70-130			04/30/19 11:37	RT
	Dibromofluoromethane(surr)	101	%	1	70-130			04/30/19 11:37	RT
	p-Bromofluorobenzene(surr)	104	%	1	70-130			04/30/19 11:37	RT
	Toluene-d8(surr)	107	%	1	70-130			04/30/19 11:37	RT
SW-846 8270D	TCLP Semivolatiles								
	1,4-Dichlorobenzene	BRL	mg/L	1	0.05	7.5	U1	04/30/19 16:13	VMN
	2,4,5-Trichlorophenol	BRL	mg/L	1	0.05	400	U1	04/30/19 16:13	VMN
	2,4,6-Trichlorophenol	BRL	mg/L	1	0.05	2	U1	04/30/19 16:13	VMN
	2,4-Dinitrotoluene	BRL	mg/L	1	0.05	0.13	U1	04/30/19 16:13	VMN
	2-Methylphenol	BRL	mg/L	1	0.05	200	U1	04/30/19 16:13	VMN
	3- & 4-Methylphenols	BRL	mg/L	1	0.1	200	U1	04/30/19 16:13	VMN
	Hexachlorobenzene	BRL	mg/L	1	0.05	0.13	U1	04/30/19 16:13	VMN
	Hexachlorobutadiene	BRL	mg/L	1	0.05	0.5	U1	04/30/19 16:13	VMN
	Hexachloroethane	BRL	mg/L	1	0.05	3	U1	04/30/19 16:13	VMN
	Nitrobenzene	BRL	mg/L	1	0.05	2	U1	04/30/19 16:13	VMN

REVISED

LABORATORY TEST RESULTS

Job ID : 19041820

Date 5/13/2019

Client Name: Braun Intertec

Attn: Austin Heider

Project Name: B1902527 / ITC Waste Sampling

Client Sample ID: ING2054042901 DUP.01

Date Collected: 04/29/19

Time Collected:

Other Information:

Job Sample ID: 19041820.02

Sample Matrix Solid

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8270D	TCLP Semivolatiles								
	Pentachlorophenol	BRL	mg/L	1	0.25	100	U1	04/30/19 16:13	VMN
	Pyridine	BRL	mg/L	1	0.05	5	U1	04/30/19 16:13	VMN
	2,4,6-Tribromophenol(surr)	68.2	%	1	10-120			04/30/19 16:13	VMN
	2-Fluorobiphenyl(surr)	68.1	%	1	30-115			04/30/19 16:13	VMN
	2-Fluorophenol(surr)	68.3	%	1	17-115			04/30/19 16:13	VMN
	Nitrobenzene-d5(surr)	62	%	1	20-120			04/30/19 16:13	VMN
	Phenol-d6(surr)	59.6	%	1	15-120			04/30/19 16:13	VMN
	p-Terphenyl-d14(surr)	74.2	%	1	30-140			04/30/19 16:13	VMN
SW-846 9045D	Corrosivity, pH								
	pH	7.2	s.u.	1				04/30/19 10:00	KRS
	Temperature when read, °C[1]	23.0	s.u.	1				04/30/19 10:00	KRS

REVISED

[1]-Parameter not available for accreditation

QUALITY CONTROL CERTIFICATE

Job ID : 19041820 **Date :** 5/13/2019

Analysis : **TCLP VOC** **Method :** **SW-846 8260C** **Reporting Units :** **mg/L**

QC Batch ID : Qb19043039 **Created Date :** 04/30/19 **Created By :** Rajeev

Samples in This QC Batch : 19041820.01,02

Sample Preparation : PB19043033 **Prep Method :** SW-846 5030C **Prep Date :** 04/30/19 09:00 **Prep By :** Rajeev

TCLP Prep : PB19043001 **Prep Method :** SW-846 1311 **Prep Date :** 04/29/19 17:00 **Prep By :** Msoria

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
1,1-Dichloroethylene	75-35-4	BRL	mg/L	1	0.13		
1,2-Dichloroethane	107-06-2	BRL	mg/L	1	0.13		
1,4-Dichlorobenzene	106-46-7	BRL	mg/L	1	0.15		
Benzene	71-43-2	BRL	mg/L	1	0.13		
Carbon tetrachloride	56-23-5	BRL	mg/L	1	0.13		
Chlorobenzene	108-90-7	BRL	mg/L	1	0.15		
Chloroform	67-66-3	BRL	mg/L	1	0.13		
MEK	78-93-3	BRL	mg/L	1	0.13		
Tetrachloroethylene	127-18-4	BRL	mg/L	1	0.16		
Trichloroethylene	79-01-6	BRL	mg/L	1	0.13		
Vinyl Chloride	75-01-4	BRL	mg/L	1	0.1		
1,2-Dichloroethane-d4(surr	17060-07-0	100	%	1	70-130		
Dibromofluoromethane(surr	1868-53-7	104	%	1	70-130		
p-Bromofluorobenzene(surr	460-00-4	107	%	1	70-130		
Toluene-d8(surr)	2037-26-5	107	%	1	70-130		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
1,1-Dichloroethylene	0.5	0.521	104	0.5	0.555	111	6.2	35	70-130	
1,2-Dichloroethane	0.5	0.492	98.3	0.5	0.508	102	3.3	35	70-130	
1,4-Dichlorobenzene	0.5	0.449	89.9	0.5	0.472	94.3	4.9	35	70-130	
Benzene	0.5	0.488	97.7	0.5	0.500	100	2.4	35	70-130	
Carbon tetrachloride	0.5	0.498	99.7	0.5	0.507	101	1.7	35	70-130	
Chlorobenzene	0.5	0.502	100	0.5	0.510	102	1.6	35	70-130	
Chloroform	0.5	0.484	96.9	0.5	0.501	100	3.4	35	70-130	
MEK	0.5	0.385	76.9	0.5	0.426	85.2	10.2	35	70-130	
Tetrachloroethylene	0.5	0.553	111	0.5	0.573	115	3.5	35	70-130	
Trichloroethylene	0.5	0.495	99.1	0.5	0.514	103	3.7	35	70-130	
Vinyl Chloride	0.5	0.459	91.8	0.5	0.486	97.3	5.7	35	70-130	

QC Type: MS and MSD
QC Sample ID: 19041820.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
1,1-Dichloroethylene	BRL	0.5	0.596	119						70-130	

REVISED

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 19041820 **Date :** 5/13/2019

Analysis : TCLP VOC **Method : SW-846 8260C** **Reporting Units : mg/L**

QC Batch ID : Qb19043039 **Created Date :** 04/30/19 **Created By :** Rajeev

Samples in This QC Batch : 19041820.01,02

QC Type: MS and MSD
QC Sample ID: 19041820.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
1,2-Dichloroethane	BRL	0.5	0.496	99.1						70-130	
1,4-Dichlorobenzene	BRL	0.5	0.511	102						70-130	
Benzene	BRL	0.5	0.529	106						70-130	
Carbon tetrachloride	BRL	0.5	0.558	112						70-130	
Chlorobenzene	BRL	0.5	0.535	107						70-130	
Chloroform	BRL	0.5	0.504	101						70-130	
MEK	BRL	0.5	0.351	70.2						70-130	
Tetrachloroethylene	BRL	0.5	0.492	98.4						70-130	
Trichloroethylene	BRL	0.5	0.529	106						70-130	
Vinyl Chloride	BRL	0.5	0.448	89.6						70-130	

REVISED

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 19041820 **Date :** 5/13/2019

Analysis : **Corrosivity, pH** **Method :** **SW-846 9045D** **Reporting Units :** **s.u.**

QC Batch ID : Qb19043045 **Created Date :** 04/30/19 **Created By :** KRSaranya

Samples in This QC Batch : 19041820.01,02

QC Type: Duplicate

QC Sample ID: 19041821.01

Parameter	QCSample Result	Sample Result	Units	RPD	RPD CtrlLimit		Qual
pH	8.1	8.1	s.u.	0	5		

QC Type: LCS and LCSD

Parameter	LCS Assigned	LCS Result		LCSD Assigned	LCSD Result		RPD	RPD CtrlLimit	Tolerance	Qual
pH	4.0	4.00							98.75-101.25	

REVISED

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 19041820 **Date :** 5/13/2019

Analysis : **TCLP Metals, Mercury** **Method :** **SW-846 7470A** **Reporting Units :** **mg/L**

QC Batch ID : Qb19043061 **Created Date :** 04/30/19 **Created By :** LRapushi

Samples in This QC Batch : 19041820.01,02

Digestion :	PB19043061	**Prep Method :**	SW-846 7470A	**Prep Date :**	04/30/19 11:25	**Prep By :**	LRapushi
TCLP Prep :	PB19043001	**Prep Method :**	SW-846 1311	**Prep Date :**	04/29/19 17:00	**Prep By :**	Msoria

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Mercury	7439-97-6	BRL	mg/L	1	0.0005		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Mercury	0.005	0.00487	97.4	0.005	0.00494	98.8	1.4	20.5	78-117	

QC Type: MS and MSD
QC Sample ID: 19041820.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Mercury	BRL	0.005	0.00467	93.4						80-120	

REVISED

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 19041820 **Date :** 5/13/2019

Analysis : **Ignitability (Flash Point) up to 150 degrees F** **Method :** **SW-846 1010A** **Reporting Units :** **°F**

QC Batch ID : Qb19043074 **Created Date :** 04/30/19 **Created By :** SKYanduru

Samples in This QC Batch : 19041820.01,02

QC Type: Duplicate

QC Sample ID: 19041737.01

Parameter	QCSample Result	Sample Result	Units	RPD	RPD CtrlLimit		Qual
Ignitability	>150	>150	°F		12		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Ignitability	85	86	101	85	83	97.6	3.6	12	96-104	

QUALITY CONTROL CERTIFICATE

Job ID : 19041820 **Date :** 5/13/2019

Analysis : **TCLP Metals** **Method :** **SW-846 6010C** **Reporting Units :** **mg/L**

QC Batch ID : Qb19043085 **Created Date :** 04/30/19 **Created By :** BRena

Samples in This QC Batch : 19041820.01,02

Digestion :	PB19043041	**Prep Method :**	SW-846 3010A	**Prep Date :**	04/30/19 10:40	**Prep By :**	Mwissman
TCLP Prep :	PB19043001	**Prep Method :**	SW-846 1311	**Prep Date :**	04/29/19 17:00	**Prep By :**	Msoria

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Antimony	7440-36-0	BRL	mg/L	1	0.04		
Arsenic	7440-38-2	BRL	mg/L	1	0.04		
Barium	7440-39-3	BRL	mg/L	1	0.04		
Beryllium	7440-41-7	BRL	mg/L	1	0.04		
Cadmium	7440-43-9	BRL	mg/L	1	0.04		
Chromium	7440-47-3	BRL	mg/L	1	0.04		
Lead	7439-92-1	BRL	mg/L	1	0.04		
Nickel	7440-02-0	BRL	mg/L	1	0.04		
Selenium	7782-49-2	BRL	mg/L	1	0.04		
Silver	7440-22-4	BRL	mg/L	1	0.04		
Vanadium	7440-62-2	BRL	mg/L	1	0.04		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Antimony	2	2.01	101	2	1.97	98.7	2	20	80-120	
Arsenic	2	2.10	105	2	2.06	103	1.8	20	80-120	
Barium	2	2.02	101	2	1.97	98.5	2.3	20	80-120	
Beryllium	2	2.03	102	2	2.00	100	1.7	20	80-120	
Cadmium	2	1.93	96.5	2	1.90	94.9	1.6	20	80-120	
Chromium	2	1.95	97.6	2	1.92	96.1	1.6	20	80-120	
Lead	2	1.88	93.9	2	1.85	92.5	1.4	20	80-120	
Nickel	2	1.89	94.5	2	1.86	93.1	1.6	20	80-120	
Selenium	2	2.05	103	2	2.02	101	1.6	20	80-120	
Silver	2	2.01	101	2	1.98	99.2	1.7	20	80-120	
Vanadium	2	2.07	104	2	2.04	102	1.5	20	80-120	

QC Type: MS and MSD
QC Sample ID: 19041820.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Antimony	BRL	2	2.05	102						70-130	
Arsenic	BRL	2	2.11	106						45-138	
Barium	0.139	2	2.17	101						39-135	
Beryllium	BRL	2	2.08	104						70-130	
Cadmium	BRL	2	1.95	97.3						56-125	

REVISED

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 19041820 **Date :** 5/13/2019

Analysis : TCLP Metals **Method : SW-846 6010C** **Reporting Units : mg/L**

QC Batch ID : Qb19043085 **Created Date :** 04/30/19 **Created By :** BRena

Samples in This QC Batch : 19041820.01,02

QC Type: MS and MSD
QC Sample ID: 19041820.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Chromium	0.070	2	2.05	99						52-125	
Lead	0.709	2	2.67	98.2						55-125	
Nickel	BRL	2	1.90	95.1						70-130	
Selenium	BRL	2	2.05	102						70-130	
Silver	BRL	2	2.05	102						26-148	
Vanadium	BRL	2	2.12	106						70-125	

REVISED

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 19041820 **Date :** 5/13/2019

Analysis : **TCLP Semivolatiles** **Method :** **SW-846 8270D** **Reporting Units :** **mg/L**

QC Batch ID : Qb19043091 **Created Date :** 04/30/19 **Created By :** VNair

Samples in This QC Batch : 19041820.01,02

Extraction :	PB19043026	**Prep Method :**	SW-846 3510C	**Prep Date :**	04/30/19 10:00	**Prep By :**	MMuteen
TCLP Prep :	PB19043001	**Prep Method :**	SW-846 1311	**Prep Date :**	04/29/19 17:00	**Prep By :**	Msoria

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
1,4-Dichlorobenzene	106-46-7	BRL	mg/L	1	0.05		
2,4,5-Trichlorophenol	95-95-4	BRL	mg/L	1	0.05		
2,4,6-Trichlorophenol	88-06-2	BRL	mg/L	1	0.05		
2,4-Dinitrotoluene	121-14-2	BRL	mg/L	1	0.05		
2-Methylphenol	95-48-7	BRL	mg/L	1	0.05		
3- & 4-Methylphenols	108-39-4 & 106-44-5	BRL	mg/L	1	0.1		
Hexachlorobenzene	118-74-1	BRL	mg/L	1	0.05		
Hexachlorobutadiene	87-68-3	BRL	mg/L	1	0.05		
Hexachloroethane	67-72-1	BRL	mg/L	1	0.05		
Nitrobenzene	98-95-3	BRL	mg/L	1	0.05		
Pentachlorophenol	87-86-5	BRL	mg/L	1	1.25		
Pyridine	110-86-1	BRL	mg/L	1	0.075		
2-Fluorophenol(surr)	367-12-4	80	%	1	17-115		
Phenol-d6(surr)	13127-88-3	70.3	%	1	15-120		
Nitrobenzene-d5(surr)	4165-60-0	74.6	%	1	20-120		
2-Fluorobiphenyl(surr)	132-60-8	79.4	%	1	30-115		
2,4,6-Tribromophenol(surr)	118-79-6	84	%	1	10-120		
p-Terphenyl-d14(surr)	1718-51-0	91.9	%	1	30-140		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
1,4-Dichlorobenzene	0.25	0.165	66.1	0.25	0.185	74	11.2	35	24-134	
2,4,5-Trichlorophenol	0.25	0.219	87.8	0.25	0.236	94.2	7.3	35	6-115	
2,4,6-Trichlorophenol	0.25	0.191	76.5	0.25	0.214	85.6	11.2	35	4-138	
2,4-Dinitrotoluene	0.25	0.176	70.4	0.25	0.182	72.8	3.4	35	32-114	
2-Methylphenol	0.25	0.184	73.5	0.25	0.214	85.5	15.2	35	6-132	
3- & 4-Methylphenols	0.5	0.353	70.5	0.5	0.397	79.4	11.8	35	29-132	
Hexachlorobenzene	0.25	0.195	78.2	0.25	0.209	83.5	6.7	35	44-142	
Hexachlorobutadiene	0.25	0.166	66.3	0.25	0.175	70	5.5	35	20-124	
Hexachloroethane	0.25	0.147	58.9	0.25	0.176	70.3	17.8	35	14-136	
Nitrobenzene	0.25	0.185	74.2	0.25	0.215	85.9	14.8	35	38-146	
Pentachlorophenol	0.25	0.17	68.5	0.25	0.19	76.4	10.4	35	25-125	
Pyridine	0.25	0.154	61.5	0.25	0.167	66.6	8.3	35	6-112	

REVISED

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 19041820 **Date :** 5/13/2019

Analysis : TCLP Semivolatiles **Method : SW-846 8270D** **Reporting Units : mg/L**

QC Batch ID : Qb19043091 **Created Date :** 04/30/19 **Created By :** VNair

Samples in This QC Batch : 19041820.01,02

QC Type: MS and MSD
QC Sample ID: 19041820.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
1,4-Dichlorobenzene	BRL	0.25	0.182	73						24-134	
2,4,5-Trichlorophenol	BRL	0.25	0.193	77						6-115	
2,4,6-Trichlorophenol	BRL	0.25	0.184	73.7						4-138	
2,4-Dinitrotoluene	BRL	0.25	0.181	72.4						32-114	
2-Methylphenol	BRL	0.25	0.193	77						6-132	
3- & 4-Methylphenols	BRL	0.5	0.348	69.7						29-132	
Hexachlorobenzene	BRL	0.25	0.195	77.8						44-142	
Hexachlorobutadiene	BRL	0.25	0.180	72.1						20-124	
Hexachloroethane	BRL	0.25	0.180	72.1						14-136	
Nitrobenzene	BRL	0.25	0.204	81.7						38-146	
Pentachlorophenol	BRL	0.25	0.23	92.3						25-125	
Pyridine	BRL	0.25	0.192	76.7						6-112	

REVISED

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 19041820 **Date :** 5/13/2019

Analysis : **% Moisture** **Method :** **SM 2540G** **Reporting Units :** **%**

QC Batch ID : Qb19050204 **Created Date :** 05/01/19 **Created By :** KRSaranya

Samples in This QC Batch : 19041820.01

Sample Preparation : PB19050204 **Prep Method :** SM 2540G **Prep Date :** 05/01/19 16:30 **Prep By :** KRSaranya

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
% Moisture		BRL	%	1	0.1		

QC Type: Duplicate

QC Sample ID: 19041784.02

Parameter	QCSample Result	Sample Result	Units	RPD	RPD CtrlLimit		Qual
% Moisture	62.7	62.6	%	0.2	20		

QUALITY CONTROL CERTIFICATE

Job ID : 19041820 **Date :** 5/13/2019

Analysis : **Total Petroleum Hydrocarbons** **Method :** **TX 1005** **Reporting Units :** **mg/Kg**

QC Batch ID : Qb190502108 **Created Date :** 05/02/19 **Created By :** Jdongre

Samples in This QC Batch : 19041820.01

Sample Preparation : PB19050249 **Prep Method :** TX 1005 **Prep Date :** 05/02/19 10:00 **Prep By :** Jdongre

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
C6-C12	TPH-1005-1	BRL	mg/Kg	1	23.7		
>C12-C28	TPH-1005-2	BRL	mg/Kg	1	20.3		
>C28-C35	TPH-1005-4	BRL	mg/Kg	1	17.7		
Total C6-C35		BRL	mg/Kg	1	17.7		
Chlorooctadecane(surr)	3386-33-2	126	%	1	60-150		
1-Chlorooctane(surr)	111-85-3	121	%	1	60-143		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
C6-C12	500	528	106	500	549	110	3.8	20	75-125	
>C12-C28	500	565	113	500	562	112	0.6	20	75-125	
>C28-C35	500	550	110	500	549	110	0.1	20	75-125	

QC Type: MS and MSD
QC Sample ID: 19050117.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
C6-C12	BRL	500	482	95.7	500	588	117	19.9	20	75-125	
>C12-C28	BRL	500	527	102	500	569	111	8	20	75-125	
>C28-C35	BRL	500	484	95.9	500	525	104	8.1	20	75-125	

REVISED

Refer to the Definition page for terms.

A & B Labs *Chain of Custody*

The Chain of Custody is a Legal Document

Page _____ of _____

10100 East Fwy (I-10)
Suite 100
Houston, TX 77029
713-453-6060
1-877-478-6060 Toll Free
713-453-6091 Fax
ablabs.com

A&B JOB ID # 1904 1820

5. Project # B1902527

1. REPORT TO:
Company: W&M Environmental
Address: 10075 Windfern Rd
Houston, TX
Contact: Austin Heider
Phone: 713-316-0025
Fax: ☐
E-mail: ☐ aheider@brauninterlec.com

2. INVOICE TO:
Company:
Address:
Contact:
Phone:
Fax: ☐
E-mail: ☐

3. PO #
3a. A&B Quote #
4. Turnaround Time (Business Days)
☒ 1 Day* ☐ Other:
☐ 2 Days*
☐ 3 Days* *Surcharge applies
☐ 7 Days - Standard

6. Project Name/Location: MC Waste Sampling

7. Reporting Requirement:
☐ TRRP Limits only ☒ TRRP Rpt. Package ☐ See Attached ☐ Standard Level II ☐ PST ☐ MDL ☒ EDD

8. Sampler's Name & Company (PLEASE PRINT): Josh Hale W&M Environmental
Sampler's Signature & Date: Josh Hale 4/29/19

13. No. of Containers
14. Containers*: 5
15. Preservatives**
16. PH-Lab Only
17. Analyses/Methods: TCLP VOCs; TCLP Metals; TCLP SVOCs; TCLP C&I

LAB USE ONLY	9. Sample ID and Description	10. Sampling Date	Time 24hr	11. Comp.	Grab	12. Matrix: Water	Soil	Sludge	Oil	Drinking Water	Air	Other	No. of Containers	TCLP VOCs	TCLP Metals	TCLP SVOCs	TCLP C&I				18. REMARKS
01AC	WG2054042901	4-29-19	1430	X								X	3	X	X	X	X				
02AB	WG2054042 9 DUP-01	4-29-19	-	X								X	2	X	X	X	X				

19. RELINQUISHED BY	DATE	TIME	20. RECEIVED BY	DATE	TIME
1 Josh Hale	4-29-19	1525	[signature]	4/29/19	1525
2					
3					

21. KNOWN HAZARDS/COMMENTS

Temperature 17-0.5 = °C 0.9°C
Thermometer ID 170762
Intact: Y or N Initials

A&B cannot accept verbal changes
Please FAX written changes to 713-453-6091

Samples will be disposed of after 30 days
A&B reserves the right to return samples

*Containers: VOA - 40 ml vial; 4 oz/8 oz - glass wide mouth; A/G - Amber/Glass 1 Liter; P/O - Plastic/other _____

**Preservatives: C - Cool; OH - NaOH; H - HCl; T - $NA_2S_2O_3$; N - HNO_3; X - Other; S - H_2SO_4

METHOD OF SHIPMENT

BILL OF LADING/TRACKING #

LAB USE ONLY SAMPLING _____ RENTAL _____ P/U _____ Supplies _____ Field Work _____

Sample Condition Checklist

A&B JobID : **19041820**	Date Received : **04/29/2019**	Time Received : **3:25PM**
Client Name : **Braun Intertec**		
Temperature : **1.4-0.5cf=0.9°C**	Sample pH : **N/A**	
Thermometer ID : **1707629**	pH Paper ID : **N/A**	

	Check Points	Yes	No	N/A
1.	**Cooler seal present and signed.**		X	
2.	**Sample(s) in a cooler.**	X		
3.	**If yes, ice in cooler.**	X		
4.	**Sample(s) received with chain-of-custody.**	X		
5.	**C-O-C signed and dated.**	X		
6.	**Sample(s) received with signed sample custody seal.**		X	
7.	**Sample containers arrived intact. (If no comment).**	X		
8.	**Matrix :** Water ☐ Soil ☐ Liquid ☐ Sludge ☐ Solid ☑ Cassette ☐ Tube ☐ Bulk ☐ Badge ☐ Food ☐ Other ☐			
9.	**Sample(s) were received in appropriate container(s).**	X		
10.	**Sample(s) were received with proper preservative**			X
11.	**All samples were logged or labeled.**	X		
12.	**Sample ID labels match C-O-C ID's**	X		
13.	**Bottle count on C-O-C matches bottles found.**	X		
14.	**Sample volume is sufficient for analyses requested.**	X		
15.	**Samples were received within the hold time.**	X		
16.	**VOA vials completely filled.**			X
17.	**Sample accepted.**	X		
18	**Has client been contacted about sub-out**			X

Comments : Include actions taken to resolve discrepancies/problem:

Received by : JMontemayor

Check in by/date : JMontemayor / 04/29/2019

Laboratory Analysis Report

Total Number of Pages: 10

Job ID : 19041820

10100 East Freeway, Suite 100, Houston, TX 77029 tel: 713-453-6060, fax: 713-453-6091, http://www.ablabs.com

Client Project Name :
B1902527 / ITC Waste Sampling

Report To :	Client Name:	Braun Intertec	P.O.#.:	
	Attn:	Austin Heider	Sample Collected By:	Josh Hale
	Client Address:	10075 Windfern Road	Date Collected:	04/29/19
	City, State, Zip:	Houston, Texas, 77064		

A&B Labs has analyzed the following samples...

Client Sample ID	Matrix	A&B Sample ID
WG2054042901	Solid	19041820.01

Released By: Senthilkumar Sevukan
Title: Assistant Lab Manager
Date: 05/02/2019

This Laboratory is NELAP (T104704213-19-20) accredited. Effective: 04/01/2019; Expires: 3/31/2020
Scope: Non-Potable Water, Drinking Water, Air, Solid, Biological Tissue, Hazardous Waste

I am the laboratory manager, or his/her designee, and I am responsible for the release of this data package. This laboratory data package has been reviewed and is complete and technically compliant with the requirements of the methods used, except where noted in the attached exception reports. I affirm, to the best of my knowledge that all problems/anomalies observed by this laboratory (and if applicable, any and all laboratories subcontracted through this laboratory) that might affect the quality of the data, have been identified in the Laboratory Review Checklist, and that no information or data have been knowingly withheld that would affect the quality of the data.

This report cannot be reproduced, except in full, without prior written permission of A&B Labs. Results shown relate only to the items tested. Samples are assumed to be in acceptable condition unless otherwise noted. Blank correction is not made unless otherwise noted. Air concentrations reported are based on field sampling information provided by client. Soil samples are reported on a wet weight basis unless otherwise noted. Uncertainty estimates are available on request.

Date Received : 04/29/2019 15:25

Laboratory Report: Case Narrative

A&B Job ID: 19041820

Date: 05/02/19

Client Name:	Braun Intertec	Attn: Austin Heider
Project Name:	B1902527 / ITC Waste Sampling	
Date Received:	04/29/19	
Collected By:	Josh Hale	

The attached sample was analyzed for TPH TX1005 and additional metals including Sb, Be, Ni, and V per client email.

Released By: Alisha Hughes

Title: Project Manager

LABORATORY TERM AND QUALIFIER DEFINITION REPORT

Job ID : 19041820

Date: 5/2/2019

General Term Definition

Back-Wt	Back Weight	Post-Wt	Post Weight
BRL	Below Reporting Limit	ppm	parts per million
cfu	colony-forming units	Pre-Wt	Previous Weight
Conc.	Concentration	Q	Qualifier
D.F.	Dilution Factor	RegLimit	Regulatory Limit
Front-Wt	Front Weight	RPD	Relative Percent Difference
LCS	Laboratory Check Standard	RptLimit	Reporting Limit
LCSD	Laboratory Check Standard Duplicate	SDL	Sample Detection Limit
MS	Matrix Spike	surr	Surrogate
MSD	Matrix Spike Duplicate	T	Time
MW	Molecular Weight	TNTC	Too numerous to count
J	Estimation. Below calibration range but above MDL		

Qualifier Definition

S4	Surrogate not available due to dilution of sample extract for quantification.
S5	Target compounds caused elevation of baseline. Surrogate not calculated
U1	Undetected at RL (Reporting Limit)

LABORATORY TEST RESULTS

Job ID : 19041820

Date 5/2/2019

Client Name: Braun Intertec

Attn: Austin Heider

Project Name: B1902527 / ITC Waste Sampling

Client Sample ID: WG2054042901

Date Collected: 04/29/19

Time Collected: 14:30

Other Information:

Job Sample ID: 19041820.01

Sample Matrix Solid

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SM 2540G	% Moisture								
	% Moisture	BRL	%	1	0.1			05/01/19 16:35	KRS
SW-846 6010C	TCLP Metals								
	Antimony	BRL	mg/L	1	0.04			04/30/19 15:26	BRR
	Arsenic	BRL	mg/L	1	0.04	5.0	U1	04/30/19 15:26	BRR
	Barium	0.139	mg/L	1	0.04	100.0		04/30/19 15:26	BRR
	Beryllium	BRL	mg/L	1	0.04			04/30/19 15:26	BRR
	Cadmium	BRL	mg/L	1	0.04	1.0	U1	04/30/19 15:26	BRR
	Chromium	0.070	mg/L	1	0.04	5.0		04/30/19 15:26	BRR
	Lead	0.709	mg/L	1	0.04	5.0		04/30/19 15:26	BRR
	Nickel	BRL	mg/L	1	0.04			04/30/19 15:26	BRR
	Selenium	BRL	mg/L	1	0.04	1.0	U1	04/30/19 15:26	BRR
	Silver	BRL	mg/L	1	0.04	5.0	U1	04/30/19 15:26	BRR
	Vanadium	BRL	mg/L	1	0.04			04/30/19 15:26	BRR
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12	BRL	mg/Kg	5	118.5			05/02/19 16:10	JKD
	>C12-C28	123000	mg/Kg	1250	25375			05/02/19 17:31	JKD
	>C28-C35	26500	mg/Kg	250	4425			05/02/19 17:02	JKD
	Total C6-C35	149500	mg/Kg	1250				05/02/19 17:31	JKD
	1-Chlorooctane(surr)	N/A	%	5	60-143		S5	05/02/19 16:10	JKD
	Chlorooctadecane(surr)	N/A	%	5	60-150		S4	05/02/19 16:10	JKD

QUALITY CONTROL CERTIFICATE

Job ID : 19041820 **Date :** 5/2/2019

Analysis : **TCLP Metals** **Method :** **SW-846 6010C** **Reporting Units :** **mg/L**

QC Batch ID : Qb19043085 **Created Date :** 04/30/19 **Created By :** BRena

Samples in This QC Batch : 19041820.01

Digestion :	PB19043041	**Prep Method :**	SW-846 3010A	**Prep Date :**	04/30/19 10:40	**Prep By :**	Mwissman
TCLP Prep :	PB19043001	**Prep Method :**	SW-846 1311	**Prep Date :**	04/29/19 17:00	**Prep By :**	Msoria

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Antimony	7440-36-0	BRL	mg/L	1	0.04		
Arsenic	7440-38-2	BRL	mg/L	1	0.04		
Barium	7440-39-3	BRL	mg/L	1	0.04		
Beryllium	7440-41-7	BRL	mg/L	1	0.04		
Cadmium	7440-43-9	BRL	mg/L	1	0.04		
Chromium	7440-47-3	BRL	mg/L	1	0.04		
Lead	7439-92-1	BRL	mg/L	1	0.04		
Nickel	7440-02-0	BRL	mg/L	1	0.04		
Selenium	7782-49-2	BRL	mg/L	1	0.04		
Silver	7440-22-4	BRL	mg/L	1	0.04		
Vanadium	7440-62-2	BRL	mg/L	1	0.04		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Antimony	2	2.01	101	2	1.97	98.7	2	20	80-120	
Arsenic	2	2.10	105	2	2.06	103	1.8	20	80-120	
Barium	2	2.02	101	2	1.97	98.5	2.3	20	80-120	
Beryllium	2	2.03	102	2	2.00	100	1.7	20	80-120	
Cadmium	2	1.93	96.5	2	1.90	94.9	1.6	20	80-120	
Chromium	2	1.95	97.6	2	1.92	96.1	1.6	20	80-120	
Lead	2	1.88	93.9	2	1.85	92.5	1.4	20	80-120	
Nickel	2	1.89	94.5	2	1.86	93.1	1.6	20	80-120	
Selenium	2	2.05	103	2	2.02	101	1.6	20	80-120	
Silver	2	2.01	101	2	1.98	99.2	1.7	20	80-120	
Vanadium	2	2.07	104	2	2.04	102	1.5	20	80-120	

QC Type: MS and MSD
QC Sample ID: 19041820.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Antimony	BRL	2	2.05	102						70-130	
Arsenic	BRL	2	2.11	106						45-138	
Barium	0.139	2	2.17	101						39-135	
Beryllium	BRL	2	2.08	104						70-130	
Cadmium	BRL	2	1.95	97.3						56-125	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 19041820 **Date :** 5/2/2019

Analysis : TCLP Metals **Method : SW-846 6010C** **Reporting Units : mg/L**

QC Batch ID : Qb19043085 **Created Date :** 04/30/19 **Created By :** BRena

Samples in This QC Batch : 19041820.01

QC Type: MS and MSD
QC Sample ID: 19041820.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Chromium	0.070	2	2.05	99						52-125	
Lead	0.709	2	2.67	98.2						55-125	
Nickel	BRL	2	1.90	95.1						70-130	
Selenium	BRL	2	2.05	102						70-130	
Silver	BRL	2	2.05	102						26-148	
Vanadium	BRL	2	2.12	106						70-125	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 19041820 **Date :** 5/2/2019

Analysis : % Moisture **Method : SM 2540G** **Reporting Units : %**

QC Batch ID : Qb19050204 **Created Date :** 05/01/19 **Created By :** KRSaranya

Samples in This QC Batch : 19041820.01

Sample Preparation : PB19050204 **Prep Method :** SM 2540G **Prep Date :** 05/01/19 16:30 **Prep By :** KRSaranya

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
% Moisture		BRL	%	1	0.1		

QC Type: Duplicate

QC Sample ID: 19041784.02

Parameter	QCSample Result	Sample Result	Units	RPD	RPD CtrlLimit		Qual
% Moisture	62.7	62.6	%	0.2	20		

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 19041820 **Date :** 5/2/2019

Analysis : **Total Petroleum Hydrocarbons** **Method :** **TX 1005** **Reporting Units :** **mg/Kg**

QC Batch ID : Qb190502108 **Created Date :** 05/02/19 **Created By :** Jdongre

Samples in This QC Batch : 19041820.01

Sample Preparation : PB19050249 **Prep Method :** TX 1005 **Prep Date :** 05/02/19 10:00 **Prep By :** Jdongre

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
C6-C12	TPH-1005-1	BRL	mg/Kg	1	23.7		
>C12-C28	TPH-1005-2	BRL	mg/Kg	1	20.3		
>C28-C35	TPH-1005-4	BRL	mg/Kg	1	17.7		
Total C6-C35		BRL	mg/Kg	1	17.7		
Chlorooctadecane(surr)	3386-33-2	126	%	1	60-150		
1-Chlorooctane(surr)	111-85-3	121	%	1	60-143		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
C6-C12	500	528	106	500	549	110	3.8	20	75-125	
>C12-C28	500	565	113	500	562	112	0.6	20	75-125	
>C28-C35	500	550	110	500	549	110	0.1	20	75-125	

Refer to the Definition page for terms.

A & B Labs *Chain of Custody*

The Chain of Custody is a Legal Document

Page _____ of _____

10100 East Fwy (I-10)
Suite 100
Houston, TX 77029
713-453-6060
1-877-478-6060 Toll Free
713-453-6091 Fax
ablabs.com

A&B JOB ID # 1904 1820

5. Project # B1902527

1. REPORT TO:
Company: W&M Environmental
Address: 10075 Windfern Rd Houston TX
Contact: Austin Heider
Phone: 713-316-0025
Fax: ☐
E-mail: ☐ aheider@brauninterfec.com

2. INVOICE TO:
Company:
Address:
Contact:
Phone:
Fax: ☐
E-mail: ☐

3. PO #
3a. A&B Quote #
4. Turnaround Time (Business Days)
☒ 1 Day* ☐ Other:
☐ 2 Days*
☐ 3 Days* *Surcharge applies
☐ 7 Days - Standard

6. Project Name/Location: MC Waste Sampling

7. Reporting Requirement:
☐ TRRP Limits only ☒ TRRP Rpt. Package ☐ See Attached ☐ Standard Level II ☐ PST ☐ MDL ☒ EDD

8. Sampler's Name & Company (PLEASE PRINT): Josh Hale W&M Environmental
Sampler's Signature & Date: Josh Hale 4/29/19

13. 14. Containers*: 5
15. Preservatives**
16. PH-Lab Only

LAB USE ONLY	9. Sample ID and Description	10. Sampling Date	Time 24hr	11. Comp.	Grab	12. Matrix: Water	Soil	Sludge	Oil	Drinking Water	Air	Other	No. of Containers	17. Analyses/Methods: TCLP VOCs	TCLP Metals	TCLP SVOCs	TCLP C&I				18. REMARKS
01AC	WG2054042901	4-29-19	1430	X								X	3	X	X	X	X				
02AB	WG2054042 9 DUP-01	4-29-19	-	X								X	2	X	X	X	X				

19. RELINQUISHED BY	DATE	TIME	20. RECEIVED BY	DATE	TIME
1 Josh Hale	4-29-19	1525	[signature]	4/29/19	1525
2					
3					

21. KNOWN HAZARDS/COMMENTS

Temperature 1.7-0.5 = °C 0.9°C
Thermometer ID 170762
Intact: Y or N Initials

A&B cannot accept verbal changes
Please FAX written changes to 713-453-6091

Samples will be disposed of after 30 days
A&B reserves the right to return samples

*Containers: VOA - 40 ml vial; 4 oz/8 oz - glass wide mouth; A/G - Amber/Glass 1 Liter; P/O - Plastic/other _____

**Preservatives: C - Cool; OH - NaOH; H - HCl; T - $NA_2S_2O_3$; N - HNO_3; X - Other; S - H_2SO_4

METHOD OF SHIPMENT

BILL OF LADING/TRACKING #

LAB USE ONLY SAMPLING _____ RENTAL _____ P/U _____ Supplies _____ Field Work _____

Sample Condition Checklist

A&B JobID : **19041820**	Date Received : **04/29/2019**	Time Received : **3:25PM**
Client Name : **Braun Intertec**		
Temperature : **1.4-0.5cf=0.9°C**	Sample pH : **N/A**	
Thermometer ID : **1707629**	pH Paper ID : **N/A**	

	Check Points	Yes	No	N/A
1.	**Cooler seal present and signed.**		X	
2.	**Sample(s) in a cooler.**	X		
3.	**If yes, ice in cooler.**	X		
4.	**Sample(s) received with chain-of-custody.**	X		
5.	**C-O-C signed and dated.**	X		
6.	**Sample(s) received with signed sample custody seal.**		X	
7.	**Sample containers arrived intact. (If no comment).**	X		
8.	**Matrix :** Water ☐ Soil ☐ Liquid ☐ Sludge ☐ Solid ☑ Cassette ☐ Tube ☐ Bulk ☐ Badge ☐ Food ☐ Other ☐			
9.	**Sample(s) were received in appropriate container(s).**	X		
10.	**Sample(s) were received with proper preservative**			X
11.	**All samples were logged or labeled.**	X		
12.	**Sample ID labels match C-O-C ID's**	X		
13.	**Bottle count on C-O-C matches bottles found.**	X		
14.	**Sample volume is sufficient for analyses requested.**	X		
15.	**Samples were received within the hold time.**	X		
16.	**VOA vials completely filled.**			X
17.	**Sample accepted.**	X		
18	**Has client been contacted about sub-out**			X

Comments : Include actions taken to resolve discrepancies/problem:

Received by : JMontemayor

Check in by/date : JMontemayor / 04/29/2019