ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Oil Dispersants by EPA R5/6 LC

Case Narrative

Boston Chemical Corp

Gulf Coast

Work Order Number: 1008161

1. This report consists of 1 water sample. The sample was received cool and intact by ALS on 08/13/2010. As prescribed by the method, the aqueous sample contained headspace upon receipt.

2. This sample was prepared and analyzed according to EPA draft method R5/6 LC.

3. The preparation batch included a method blank, laboratory control sample, and laboratory control sample duplicate.

4. The laboratory control sample recovery was out of control high for di(propylene glycol) butyl ether. The laboratory control sample duplicate was within control. This may have been due to carry over or matrix effect from sample 1008161-1. The RPD for the laboratory control sample duplicate was outside of acceptance criteria for di(propylene glycol) butyl ether.

   All remaining preparation QC were within the acceptance criteria.

5. All samples are associated with one or more of the following analytical QC: initial calibration, initial calibration verification (ICV), continuing calibration verifications (CCV). In addition relative retention times (RRT) for each injection were monitored.

6. All analytical QC were within the acceptance criteria.

7. Sample dilutions were not required for the requested analysis.

8. The sample was prepared and analyzed within the established holding times.

9. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in SOP 939 Revision 3.

90095087

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Jean Anderson
Organics Primary Data Reviewer

8/30/10
Date

Organics Final Data Reviewer

8/31/10
Date

ALS
Data Qualifier Flags
Chromatography and Mass Spectrometry

U or ND:	**This flag indicates that the compound was analyzed for but not detected.**
J:	**This flag indicates an estimated value. This flag is used as follows : (1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the reporting limit (RL) but greater than the method detection limit (MDL); (3) when the data indicate the presence of a compound that meets the identification criteria, and the result is less than the RL but greater than the MDL; and (4) the reported value is estimated.**
B:	**This flag is used when the analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user. This flag shall be used for a tentatively identified compound (TIC) as well as for a positively identified target compound.**
E:	**This flag identifies compounds whose concentration exceeds the upper level of the calibration range.**
A:	**This flag indicates that a tentatively identified compound is a suspected aldol-condensation product.**
X:	**This flag indicates that the analyte was diluted below an accurate quantitation level.**
***:**	**This flag indicates that a spike recovery is outside the control criteria.**
+:	**This flag indicates that the relative percent difference (RPD) exceeds the control criteria.**

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 1008161
Client Name: Boston Chemical Corp
Client Project Name: Gulf Coast
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
DWH 151 W	1008161-1		WATER	10-Aug-10	6:35

Winnipeg, MB 745 Logan Avenue, R3E 3L5 Toll Free: 1-800-607-7555 Fax: 204-948-0763
Thunder Bay, ON 1081 Barton Street, P7B 5N3 Tel: 807-623-6463 Fax: 807-623-7596
London, ON, #29 - 309 Exeter Road, N6L 1C1 Tel: 519-652-6044 Fax: 519-652-0671
Burlington, ON #6 - 5420 Mainway Drive, L7L 6A4 Tel: 905-331-3111 Toll Free: 1-888-257-3664 Fax: 905-331-4567
Waterloo, ON #1 - 60 Northland Road, N2V 2B8 Toll Free: 1-800-668-9678 Fax: 519-886-9047
Ottawa, ON #13 - 210 Colonnade Road, K2E 7L6 Tel: 613-731-1005 Fax: 613-736-1107

1008161

ALS Environmental

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CHAIN OF CUSTODY FORM

SEND REPORT TO:

COMPANY:	Boston Chemical Data Corp.	ATTN:	M. Kaltofen
ADDRESS:	2 Summer Street Suite 14		
CITY:	Natick	STATE: MA	ZIP CODE: 01760
TEL:	508 651 1561	FAX:	SAMPLER: Strongbear Silva
PROJECT NAME AND NO:	Gulf Coast		QUOTE NO:
PO NO.:		ALS CONTACT:	Ron McLeod

REPORT FORMAT: ☐ HARDCOPY ☒ EMAIL - ADDRESS: kaltofen@aol.com ☐ FAX ☒ EXCEL ☒ PDF ☐ OTHER:

ANALYSIS REQUESTED:

WO#	SAMPLE IDENTIFICATION	DATE / TIME COLLECTED YYYY-MM-DD	TIME	MATRIX	VOCs	PAH SIM	DRO	GRO	TPH	Biomarkers	TPH with Chromatogram	PAH	dispersive active ingredients					NOTES (sample specific comments, due dates, etc.)
1	DWH151W	2010-10-08	10:35	water														

FOR LAB USE ONLY

TURN AROUND REQUIRED: ◉ ROUTINE ○ RUSH SPECIFY DATE: _____ (surcharge may apply)

SEND INVOICE TO: Smith ☐ SAME AS REPORT ☒ DIFFERENT FROM REPORT (provide details below)

INVOICE FORMAT: Stag ☐ HARDCOPY ☐ PDF ☐ FAX

SPECIAL INSTRUCTIONS: Invoice to third party as agreed

RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
Strongbear Silva	TIME: 3:30PM		TIME: 12:00
RELINQUISHED BY:	DATE: 8-13-10	RECEIVED BY:	DATE: 8-13-10
	TIME: 0930		TIME: 0930

FOR LAB USE ONLY

Cooler Seal Intact? ✓ Yes ___ No ___ N/A | Sample Temperature: 2 °C Frozen? No | Cooling Method? ___ Icepacks ✓ Ice ___ None

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: ALC Burlington Workorder No: 1008161

Project Manager: JK Initials: CMO Date: 8-13-10

1. Does this project require any **special handling** in addition to standard Paragon procedures?		YES	NO
2. Are custody **seals** on **shipping containers** intact?	NONE	YES	NO
3. Are Custody seals on **sample containers** intact?	NONE	YES	NO
4. Is there a **COC (Chain-of-Custody) present** or other representative documents?		YES	NO
5. Are the **COC and bottle labels complete and legible**?		YES	NO
6. Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		YES	NO
7. Were **airbills / shipping documents** present and/or removable?	DROP OFF	YES	NO
8. Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	YES	NO
9. Are all aqueous **non-preserved samples pH 4-9**?	N/A	YES	NO
10. Is there **sufficient sample** for the requested analyses?		YES	NO
11. Were all samples placed in the **proper containers** for the requested analyses?		YES	NO
12. Are all samples within **holding times** for the requested analyses?		YES	NO
13. Were all sample containers received **intact**? (not broken or leaking, etc.)		YES	NO
14. Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble:** ____ < green pea ____ > green pea	N/A	YES	NO
15. Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	N/A	YES	NO
16. Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	N/A	YES	NO
17. Were the samples **shipped on ice**?		YES	NO
18. Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** #2 #4	RAD ONLY	YES	NO

Cooler #:	1
Temperature (°C):	5.4
No. of custody seals on cooler:	0
DOT Survey/ Acceptance Information — External µR/hr reading:	12
Background µR/hr reading:	11

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? YES / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

If applicable, was the client contacted? YES / NO / NA Contact: M. Kaltofen Date/Time: 8/12/10

Project Manager Signature / Date: [signature] 8/17/10

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

From: Origin ID: YATA (905) 331-3111
Brandon Gingrich
ALS Environmental
5420 Mainway Drive unit 5

Burlington, ON L7L6A4
CANADA

FedEx Express

J1020180525032S

Ship Date: 12AUG10
ActWgt: 17.0 LB
CAD: 8904531/INCA3060

Dims: 10 X 10 X 12 IN

REF:
DESC-1: Environmental Samples
DESC-2:
DESC-3:
DESC-4:

COUNTRY MFG: CA
CARRIAGE VALUE: 2.00 CAD
CUSTOMS VALUE: 2.00 CAD
T/C: S 311493060 D/T: S 311493060
SIGN: Brandon Gingrich
EIN/VAT:
PKG TYPE: CUSTOMER

SHIP TO: (970) 490-1511 BILL SENDER

Jeff Kujawa
ALS Environmental
225 COMMERCE DR

FORT COLLINS, CO 80524
US

TRK# 0430 7938 1823 2090

A2
INTL PRIORITY
ISR

80524
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Oil Dispersants by EPA R5/6 LC

Method EPA.R5/6LC

Method Blank

Lab Name: **ALS Environmental -- FC**
Work Order Number: 1008161
Client Name: Boston Chemical Corp
ClientProject ID: Gulf Coast

Lab ID: LM100816-2MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 16-Aug-10
Date Analyzed: 17-Aug-10
Prep Method: METHOD

Prep Batch: LM100816-2
QCBatchID: LM100816-2-1
Run ID: LM100816-2A
Cleanup: NONE
Basis: N/A
File Name: DISP081610

Sample Aliquot: 4 ml
Final Volume: 4 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
111-76-2	2-BUTOXY-ETHANOL	1	125	125	U	
29911-28-2	DI(PROPYLENE GLYCOL) BUTYL ETHE	1	1	1	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
20427-84-3	normal-NONYLPHENOL DIETHOXYLATE	18.369		37.5	49	25 - 125

Data Package ID: *LM1008161-2*

Oil Dispersants by EPA R5/6 LC

Method EPA.R5/6LC

Sample Results

Lab Name: **ALS Environmental -- FC**
Work Order Number: 1008161
Client Name: Boston Chemical Corp
ClientProject ID: Gulf Coast

Field ID: DWH 151 W
Lab ID: 1008161-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 10-Aug-10
Date Extracted: 16-Aug-10
Date Analyzed: 17-Aug-10
Prep Method: METHOD

Prep Batch: LM100816-2
QCBatchID: LM100816-2-1
Run ID: LM100816-2A
Cleanup: NONE
Basis: As Received
File Name: DISP081610

Sample Aliquot: 4 ml
Final Volume: 4 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
111-76-2	2-BUTOXY-ETHANOL	1	125	125	U	
29911-28-2	DI(PROPYLENE GLYCOL) BUTYL ETHER	1	2.4628	1		

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
20427-84-3	normal-NONYLPHENOL DIETHOXYLATE	11.142		37.5	30	25 - 125

Data Package ID: *LM1008161-2*

Oil Dispersants by EPA R5/6 LC

Method EPA.R5/6LC

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: **ALS Environmental -- FC**
Work Order Number: 1008161
Client Name: Boston Chemical Corp
ClientProject ID: Gulf Coast

Lab ID: LM100816-2LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 08/16/2010
Date Analyzed: 08/17/2010
Prep Method: METHOD

Prep Batch: LM100816-2
QCBatchID: LM100816-2-1
Run ID: LM100816-2A
Cleanup: NONE
Basis: N/A
File Name: DISP081610

Sample Aliquot: 4 ml
Final Volume: 4 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
111-76-2	2-BUTOXY-ETHANOL	300	335.73	125		112	50 - 150%
29911-28-2	DI(PROPYLENE GLYCOL) BUTYL ETHER	2.4	10.608	1	*	442	50 - 150%

Lab ID: LM100816-2LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 08/16/2010
Date Analyzed: 08/17/2010
Prep Method: METHOD

Prep Batch: LM100816-2
QCBatchID: LM100816-2-1
Run ID: LM100816-2A
Cleanup: NONE
Basis: N/A
File Name: DISP081610

Sample Aliquot: 4 ml
Final Volume: 4 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
111-76-2	2-BUTOXY-ETHANOL	300	284.22	125		95	30	17
29911-28-2	DI(PROPYLENE GLYCOL) BUTYL ETHER	2.4	1.8528	1	+	77	30	141

Surrogate Recovery LCS/LCSD

CASNO	Target Analyte	Spike Added	LCS % Rec.	LCS Flag	LCSD % Rec.	LCSD Flag	Control Limits
20427-84-3	normal-NONYLPHENOL DIETHOXYLA	37.5	80		77		25 - 125

Data Package ID: *LM1008161-2*