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www.alsglobal.com

LABORATORY REPORT

September 27, 2016

Stephen Dutz
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

RE: Torrance Refinery

Dear Stephen:

Enclosed are the results of the sample submitted to our laboratory on September 24, 2016. For your reference, this analysis has been assigned our service request number P1604527.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental



Sue Anderson

By Sue Anderson at 1:52 pm, Sep 27, 2016

For Samantha Henningsen
Project Manager



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Client: South Coast Air Quality Management District
Project: Torrance Refinery

Service Request No: P1604527

CASE NARRATIVE

The sample was received intact under chain of custody on September 24, 2016 and was stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the sample at the time of sample receipt.

Volatile Organic Compound Analysis

The sample was analyzed for volatile organic compounds and tentatively identified compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation, however it is not part of the AIHA-LAP, LLC accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.



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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
AIHA-LAP, LLC	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
PJLA (DoD ELAP)	http://www.pjlab.com/search-accredited-labs	65818 (Testing)
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2014025
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	977273
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-003
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413- 16-7
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA01627201 6-6
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: South Coast Air Quality Management District
Project ID: Torrance Refinery

Service Request: P1604527

Date Received: 9/24/2016
Time Received: 10:00

TO-15 - VOC Cans

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Pi1 (psig)	Pf1 (psig)	
(1626738-02) - 54599	P1604527-001	Air	9/23/2016	00:00	-0.51	3.83	X

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
SAMPLE ANALYSIS REQUEST**

DISTRICT INFORMATION
 INVOICE SOURCE
 LABORATORY NO. **1626738**



TO: SCAQMD LAB: OTHER:
 SOURCE NAME: Torrance Refinery I.D. No. _____
 Source Address: _____ City: _____
 Mailing Address: _____ City: _____ Zip: _____
 Contact Person: _____ Title: _____ Tel: _____

Analysis Requested by: _____ Date: 9/23/2016
 Approved by: Jason Low Office: _____ Budget #: _____

REASON REQUESTED: Court/Hearing Board Permit Pending Hazardous/Toxic Spill
 Suspected Violation Rule(s) Other

Sample Collected By: _____ Date: 09/23/2016 Time: _____

Sample Description: ([Sample Number] - Sample Name)

[1626738-01] - 54063

Analyses Requested:

TO-15

[1626738-02] - 54599

TO-15

11604527

*Sent via GSO
on 09/23/16
13:08*

Relinquished by	Received by	Firm/Agency	Date	Time
<i>Stephen Dub</i> SCAQMD Lab	<i>[Signature]</i>	ALS ENV	09/24/16	1000

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 4

Client: South Coast Air Quality Management District
Client Sample ID: (1626738-02) - 54599
Client Project ID: Torrance Refinery

ALS Project ID: P1604527
 ALS Sample ID: P1604527-001

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
 Analyst: Lusine Hakobyan
 Sample Type: Canister
 Test Notes:

Date Collected: 9/23/16
 Date Received: 9/24/16
 Date Analyzed: 9/26/16
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.51 Final Pressure (psig): 3.83

Canister Dilution Factor: 1.31

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.66	ND	0.38	
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	0.66	0.44	0.13	
74-87-3	Chloromethane	ND	0.66	ND	0.32	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.66	ND	0.094	
75-01-4	Vinyl Chloride	ND	0.66	ND	0.26	
106-99-0	1,3-Butadiene	ND	0.66	ND	0.30	
74-83-9	Bromomethane	ND	0.66	ND	0.17	
75-00-3	Chloroethane	ND	0.66	ND	0.25	
64-17-5	Ethanol	ND	6.6	ND	3.5	
75-05-8	Acetonitrile	ND	0.66	ND	0.39	
107-02-8	Acrolein	ND	2.6	ND	1.1	
67-64-1	Acetone	7.6	6.6	3.2	2.8	
75-69-4	Trichlorofluoromethane	1.2	0.66	0.21	0.12	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	6.6	ND	2.7	
107-13-1	Acrylonitrile	ND	0.66	ND	0.30	
75-35-4	1,1-Dichloroethene	ND	0.66	ND	0.17	
75-09-2	Methylene Chloride	ND	0.66	ND	0.19	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.66	ND	0.21	
76-13-1	Trichlorotrifluoroethane	ND	0.66	ND	0.086	
75-15-0	Carbon Disulfide	ND	6.6	ND	2.1	
156-60-5	trans-1,2-Dichloroethene	ND	0.66	ND	0.17	
75-34-3	1,1-Dichloroethane	ND	0.66	ND	0.16	
1634-04-4	Methyl tert-Butyl Ether	ND	0.66	ND	0.18	
108-05-4	Vinyl Acetate	ND	6.6	ND	1.9	
78-93-3	2-Butanone (MEK)	ND	6.6	ND	2.2	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 4

Client: South Coast Air Quality Management District
Client Sample ID: (1626738-02) - 54599
Client Project ID: Torrance Refinery

ALS Project ID: P1604527
 ALS Sample ID: P1604527-001

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
 Analyst: Lusine Hakobyan
 Sample Type: Canister
 Test Notes:

Date Collected: 9/23/16
 Date Received: 9/24/16
 Date Analyzed: 9/26/16
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.51 Final Pressure (psig): 3.83

Canister Dilution Factor: 1.31

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.66	ND	0.17	
141-78-6	Ethyl Acetate	ND	1.3	ND	0.36	
110-54-3	n-Hexane	ND	0.66	ND	0.19	
67-66-3	Chloroform	ND	0.66	ND	0.13	
109-99-9	Tetrahydrofuran (THF)	ND	0.66	ND	0.22	
107-06-2	1,2-Dichloroethane	ND	0.66	ND	0.16	
71-55-6	1,1,1-Trichloroethane	ND	0.66	ND	0.12	
71-43-2	Benzene	ND	0.66	ND	0.21	
56-23-5	Carbon Tetrachloride	ND	0.66	ND	0.10	
110-82-7	Cyclohexane	ND	1.3	ND	0.38	
78-87-5	1,2-Dichloropropane	ND	0.66	ND	0.14	
75-27-4	Bromodichloromethane	ND	0.66	ND	0.098	
79-01-6	Trichloroethene	ND	0.66	ND	0.12	
123-91-1	1,4-Dioxane	ND	0.66	ND	0.18	
80-62-6	Methyl Methacrylate	ND	1.3	ND	0.32	
142-82-5	n-Heptane	ND	0.66	ND	0.16	
10061-01-5	cis-1,3-Dichloropropene	ND	0.66	ND	0.14	
108-10-1	4-Methyl-2-pentanone	ND	0.66	ND	0.16	
10061-02-6	trans-1,3-Dichloropropene	ND	0.66	ND	0.14	
79-00-5	1,1,2-Trichloroethane	ND	0.66	ND	0.12	
108-88-3	Toluene	ND	0.66	ND	0.17	
591-78-6	2-Hexanone	ND	0.66	ND	0.16	
124-48-1	Dibromochloromethane	ND	0.66	ND	0.077	
106-93-4	1,2-Dibromoethane	ND	0.66	ND	0.085	
123-86-4	n-Butyl Acetate	ND	0.66	ND	0.14	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 3 of 4

Client: South Coast Air Quality Management District
Client Sample ID: (1626738-02) - 54599
Client Project ID: Torrance Refinery

ALS Project ID: P1604527
 ALS Sample ID: P1604527-001

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
 Analyst: Lusine Hakobyan
 Sample Type: Canister
 Test Notes:

Date Collected: 9/23/16
 Date Received: 9/24/16
 Date Analyzed: 9/26/16
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.51 Final Pressure (psig): 3.83

Canister Dilution Factor: 1.31

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.66	ND	0.14	
127-18-4	Tetrachloroethene	ND	0.66	ND	0.097	
108-90-7	Chlorobenzene	ND	0.66	ND	0.14	
100-41-4	Ethylbenzene	ND	0.66	ND	0.15	
179601-23-1	m,p-Xylenes	ND	1.3	ND	0.30	
75-25-2	Bromoform	ND	0.66	ND	0.063	
100-42-5	Styrene	ND	0.66	ND	0.15	
95-47-6	o-Xylene	ND	0.66	ND	0.15	
111-84-2	n-Nonane	ND	0.66	ND	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.66	ND	0.095	
98-82-8	Cumene	ND	0.66	ND	0.13	
80-56-8	alpha-Pinene	ND	0.66	ND	0.12	
103-65-1	n-Propylbenzene	ND	0.66	ND	0.13	
622-96-8	4-Ethyltoluene	ND	0.66	ND	0.13	
108-67-8	1,3,5-Trimethylbenzene	ND	0.66	ND	0.13	
95-63-6	1,2,4-Trimethylbenzene	ND	0.66	ND	0.13	
100-44-7	Benzyl Chloride	ND	0.66	ND	0.13	
541-73-1	1,3-Dichlorobenzene	ND	0.66	ND	0.11	
106-46-7	1,4-Dichlorobenzene	ND	0.66	ND	0.11	
95-50-1	1,2-Dichlorobenzene	ND	0.66	ND	0.11	
5989-27-5	d-Limonene	ND	0.66	ND	0.12	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.66	ND	0.068	
120-82-1	1,2,4-Trichlorobenzene	ND	0.66	ND	0.088	
91-20-3	Naphthalene	ND	0.66	ND	0.13	
87-68-3	Hexachlorobutadiene	ND	0.66	ND	0.061	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: South Coast Air Quality Management District
Client Sample ID: (1626738-02) - 54599
Client Project ID: Torrance Refinery

ALS Project ID: P1604527
ALS Sample ID: P1604527-001

Tentatively Identified Compounds

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: Canister
Test Notes: T

Date Collected: 9/23/16
Date Received: 9/24/16
Date Analyzed: 9/26/16
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.51 Final Pressure (psig): 3.83

Canister Dilution Factor: 1.31

GC/MS Retention Time	Compound Identification	Concentration µg/m ³	Data Qualifier
11.12	Acetic Acid	6.7	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 4

Client: South Coast Air Quality Management District
Client Sample ID: Method Blank
Client Project ID: Torrance Refinery

ALS Project ID: P1604527
 ALS Sample ID: P160926-MB

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
 Analyst: Lusine Hakobyan
 Sample Type: Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 9/26/16
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result	MRL	Result	MRL	Data Qualifier
		µg/m ³	µg/m ³	ppbV	ppbV	
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	0.50	ND	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	ND	0.16	
76-13-1	Trichlorotrifluoroethane	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 4

Client: South Coast Air Quality Management District
Client Sample ID: Method Blank
Client Project ID: Torrance Refinery

ALS Project ID: P1604527
 ALS Sample ID: P160926-MB

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
 Analyst: Lusine Hakobyan
 Sample Type: Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 9/26/16
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.0	ND	0.24	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
123-86-4	n-Butyl Acetate	ND	0.50	ND	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 3 of 4

Client: South Coast Air Quality Management District
Client Sample ID: Method Blank
Client Project ID: Torrance Refinery

ALS Project ID: P1604527
 ALS Sample ID: P160926-MB

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
 Analyst: Lusine Hakobyan
 Sample Type: Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 9/26/16
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: South Coast Air Quality Management District
Client Sample ID: Method Blank
Client Project ID: Torrance Refinery

ALS Project ID: P1604527
ALS Sample ID: P160926-MB

Tentatively Identified Compounds

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 9/26/16
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

GC/MS Retention Time	Compound Identification	Concentration $\mu\text{g}/\text{m}^3$	Data Qualifier
<hr/> No Compounds Detected <hr/>			

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Page 1 of 1

Client: South Coast Air Quality Management District
Client Project ID: Torrance Refinery

ALS Project ID: P1604527

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
 Analyst: Lusine Hakobyan
 Sample Type: Canister(s)
 Test Notes:

Date(s) Collected: 9/23/16

Date(s) Received: 9/24/16

Date(s) Analyzed: 9/26/16

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4	Toluene-d8	Bromofluorobenzene	Acceptance Limits	Data Qualifier
		Percent Recovered	Percent Recovered	Percent Recovered		
Method Blank	P160926-MB	101	101	98	70-130	
Lab Control Sample	P160926-LCS	99	100	98	70-130	
(1626738-02) - 54599	P1604527-001	103	101	99	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 3

Client: South Coast Air Quality Management District
Client Sample ID: Lab Control Sample
Client Project ID: Torrance Refinery

ALS Project ID: P1604527
 ALS Sample ID: P160926-LCS

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
 Analyst: Lusine Hakobyan
 Sample Type: Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 9/26/16
 Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS	Data Qualifier
					Acceptance Limits	
115-07-1	Propene	196	210	107	49-131	
75-71-8	Dichlorodifluoromethane (CFC 12)	188	192	102	65-117	
74-87-3	Chloromethane	200	224	112	48-132	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	204	196	96	65-122	
75-01-4	Vinyl Chloride	200	222	111	65-128	
106-99-0	1,3-Butadiene	206	231	112	62-143	
74-83-9	Bromomethane	202	222	110	65-130	
75-00-3	Chloroethane	200	232	116	69-126	
64-17-5	Ethanol	998	1030	103	57-126	
75-05-8	Acetonitrile	212	212	100	51-134	
107-02-8	Acrolein	214	204	95	55-146	
67-64-1	Acetone	1,080	1100	102	57-120	
75-69-4	Trichlorofluoromethane	216	198	92	59-139	
67-63-0	2-Propanol (Isopropyl Alcohol)	418	441	106	59-129	
107-13-1	Acrylonitrile	212	234	110	64-136	
75-35-4	1,1-Dichloroethene	216	234	108	72-123	
75-09-2	Methylene Chloride	222	229	103	63-117	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	218	246	113	50-141	
76-13-1	Trichlorotrifluoroethane	220	221	100	68-118	
75-15-0	Carbon Disulfide	210	184	88	55-143	
156-60-5	trans-1,2-Dichloroethene	210	230	110	69-129	
75-34-3	1,1-Dichloroethane	212	220	104	66-122	
1634-04-4	Methyl tert-Butyl Ether	216	217	100	55-128	
108-05-4	Vinyl Acetate	1,040	1110	107	66-140	
78-93-3	2-Butanone (MEK)	220	226	103	62-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result. Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 2 of 3

Client: South Coast Air Quality Management District
Client Sample ID: Lab Control Sample
Client Project ID: Torrance Refinery

ALS Project ID: P1604527
 ALS Sample ID: P160926-LCS

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
 Analyst: Lusine Hakobyan
 Sample Type: Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 9/26/16
 Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS	Data Qualifier
					Acceptance Limits	
156-59-2	cis-1,2-Dichloroethene	218	233	107	65-125	
141-78-6	Ethyl Acetate	428	433	101	64-132	
110-54-3	n-Hexane	212	187	88	58-126	
67-66-3	Chloroform	224	223	100	68-117	
109-99-9	Tetrahydrofuran (THF)	220	220	100	64-123	
107-06-2	1,2-Dichloroethane	214	217	101	63-124	
71-55-6	1,1,1-Trichloroethane	210	214	102	68-120	
71-43-2	Benzene	226	207	92	61-110	
56-23-5	Carbon Tetrachloride	230	222	97	65-137	
110-82-7	Cyclohexane	424	412	97	68-122	
78-87-5	1,2-Dichloropropane	216	221	102	67-122	
75-27-4	Bromodichloromethane	218	227	104	71-124	
79-01-6	Trichloroethene	216	205	95	71-121	
123-91-1	1,4-Dioxane	210	224	107	67-122	
80-62-6	Methyl Methacrylate	422	426	101	76-130	
142-82-5	n-Heptane	216	206	95	67-125	
10061-01-5	cis-1,3-Dichloropropene	208	219	105	73-131	
108-10-1	4-Methyl-2-pentanone	220	224	102	66-132	
10061-02-6	trans-1,3-Dichloropropene	210	227	108	76-135	
79-00-5	1,1,2-Trichloroethane	216	218	101	73-121	
108-88-3	Toluene	218	203	93	67-117	
591-78-6	2-Hexanone	220	220	100	59-128	
124-48-1	Dibromochloromethane	220	238	108	73-132	
106-93-4	1,2-Dibromoethane	218	222	102	73-128	
123-86-4	n-Butyl Acetate	226	229	101	61-136	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
 Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 3 of 3

Client: South Coast Air Quality Management District
Client Sample ID: Lab Control Sample
Client Project ID: Torrance Refinery

ALS Project ID: P1604527
 ALS Sample ID: P160926-LCS

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
 Analyst: Lusine Hakobyan
 Sample Type: Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 9/26/16
 Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS	Data Qualifier
					Acceptance Limits	
111-65-9	n-Octane	210	196	93	67-124	
127-18-4	Tetrachloroethene	202	198	98	65-126	
108-90-7	Chlorobenzene	220	211	96	68-120	
100-41-4	Ethylbenzene	218	211	97	69-123	
179601-23-1	m,p-Xylenes	428	400	93	67-125	
75-25-2	Bromoform	228	230	101	68-153	
100-42-5	Styrene	222	215	97	68-132	
95-47-6	o-Xylene	210	199	95	67-124	
111-84-2	n-Nonane	204	189	93	60-130	
79-34-5	1,1,2,2-Tetrachloroethane	210	217	103	72-128	
98-82-8	Cumene	208	189	91	67-124	
80-56-8	alpha-Pinene	212	210	99	67-129	
103-65-1	n-Propylbenzene	204	187	92	67-125	
622-96-8	4-Ethyltoluene	214	200	93	66-128	
108-67-8	1,3,5-Trimethylbenzene	214	189	88	65-125	
95-63-6	1,2,4-Trimethylbenzene	218	190	87	62-134	
100-44-7	Benzyl Chloride	220	232	105	74-145	
541-73-1	1,3-Dichlorobenzene	228	216	95	63-133	
106-46-7	1,4-Dichlorobenzene	208	192	92	62-129	
95-50-1	1,2-Dichlorobenzene	220	198	90	62-134	
5989-27-5	d-Limonene	210	203	97	66-137	
96-12-8	1,2-Dibromo-3-chloropropane	218	229	105	71-147	
120-82-1	1,2,4-Trichlorobenzene	230	208	90	60-145	
91-20-3	Naphthalene	218	191	88	56-158	
87-68-3	Hexachlorobutadiene	230	220	96	56-139	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
 Reported results are shown in concentration units and as a result of the calculation, may vary slightly.