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[www.alsglobal.com](http://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 P1604528.

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](http://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**

By Sue Anderson at 2:29 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: P1604528

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## 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 Relative Percent Difference (RPD) for propene in the sample duplicate was outside control criteria. However, precision for these compounds was exhibited by the analysis of a Laboratory Control Sample (LCS) and Duplicate Laboratory Control Sample (DLCS). No further corrective action was required.

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*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	<a href="http://www.aihaaccreditedlabs.org">http://www.aihaaccreditedlabs.org</a>	101661
Arizona DHS	<a href="http://www.azdhs.gov/lab/license/env.htm">http://www.azdhs.gov/lab/license/env.htm</a>	AZ0694
PJLA (DoD ELAP)	<a href="http://www.pjlab.com/search-accredited-labs">http://www.pjlab.com/search-accredited-labs</a>	65818 (Testing)
Florida DOH (NELAP)	<a href="http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm">http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm</a>	E871020
Maine DHHS	<a href="http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm">http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm</a>	2014025
Minnesota DOH (NELAP)	<a href="http://www.health.state.mn.us/accreditation">http://www.health.state.mn.us/accreditation</a>	977273
New Jersey DEP (NELAP)	<a href="http://www.nj.gov/dep/oqa/">http://www.nj.gov/dep/oqa/</a>	CA009
New York DOH (NELAP)	<a href="http://www.wadsworth.org/labcert/elap/elap.html">http://www.wadsworth.org/labcert/elap/elap.html</a>	11221
Oregon PHD (NELAP)	<a href="http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx">http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx</a>	4068-003
Pennsylvania DEP	<a href="http://www.depweb.state.pa.us/labs">http://www.depweb.state.pa.us/labs</a>	68-03307 (Registration)
Texas CEQ (NELAP)	<a href="http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html">http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html</a>	T104704413- 16-7
Utah DOH (NELAP)	<a href="http://www.health.utah.gov/lab/labimp/certification/index.html">http://www.health.utah.gov/lab/labimp/certification/index.html</a>	CA01627201 6-6
Washington DOE	<a href="http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html">http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html</a>	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](http://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: P1604528

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)	
(1626738-01) - 54063	P1604528-001	Air	9/23/2016	00:00	-0.24	3.70	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

*71604528*

*Sent via GSD on 09/23/16 18:08*

Relinquished by	Received by	Firm/Agency	Date	Time
<i>[Signature]</i>	<i>[Signature]</i>	ALS ENV.	9/24/16	1000

**ALS Environmental  
Sample Acceptance Check Form**

Client: South Coast Air Quality Management District Work order: P1604528  
 Project: Torrance Refinery  
 Sample(s) received on: 9/24/16 Date opened: 9/24/16 by: KKELPE

*Note:* This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

- |   | <u>Yes</u>                          | <u>No</u>                           | <u>N/A</u>                          |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1 Were <b>sample containers</b> properly marked with client sample ID?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 2 Did <b>sample containers</b> arrive in good condition?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 3 Were <b>chain-of-custody</b> papers used and filled out?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 4 Did <b>sample container labels</b> and/or tags agree with custody papers?                                     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 5 Was <b>sample volume</b> received adequate for analysis?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 6 Are samples within specified holding times?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 7 Was proper <b>temperature</b> (thermal preservation) of cooler at receipt adhered to?                         | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 8 Were <b>custody seals</b> on outside of cooler/Box/Container?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Location of seal(s)? _____ Sealing Lid?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were signature and date included?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were seals intact?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 9 Do containers have appropriate <b>preservation</b> , according to method/SOP or Client specified information? | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Is there a client indication that the submitted samples are <b>pH</b> preserved?                                | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were <b>VOA vials</b> checked for presence/absence of air bubbles?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Does the client/method/SOP require that the analyst check the sample pH and <u>if necessary</u> alter it?       | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 10 <b>Tubes:</b> Are the tubes capped and intact?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 11 <b>Badges:</b> Are the badges properly capped and intact?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Are dual bed badges separated and individually capped and intact?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1604528-001.01	Acetic Detector Tube					

Explain any discrepancies: (include lab sample ID numbers): \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 4

**Client:** South Coast Air Quality Management District  
**Client Sample ID:** (1626738-01) - 54063  
**Client Project ID:** Torrance Refinery

ALS Project ID: P1604528  
 ALS Sample ID: P1604528-001

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): -0.24      Final Pressure (psig): 3.70

Canister Dilution Factor: 1.27

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	<b>0.78</b>	0.64	<b>0.46</b>	0.37	
75-71-8	Dichlorodifluoromethane (CFC 12)	<b>2.3</b>	0.64	<b>0.46</b>	0.13	
74-87-3	Chloromethane	ND	0.64	ND	0.31	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.64	ND	0.091	
75-01-4	Vinyl Chloride	ND	0.64	ND	0.25	
106-99-0	1,3-Butadiene	ND	0.64	ND	0.29	
74-83-9	Bromomethane	ND	0.64	ND	0.16	
75-00-3	Chloroethane	ND	0.64	ND	0.24	
64-17-5	Ethanol	ND	6.4	ND	3.4	
75-05-8	Acetonitrile	ND	0.64	ND	0.38	
107-02-8	Acrolein	ND	2.5	ND	1.1	
67-64-1	Acetone	<b>17</b>	6.4	<b>7.1</b>	2.7	
75-69-4	Trichlorofluoromethane	<b>1.3</b>	0.64	<b>0.22</b>	0.11	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	6.4	ND	2.6	
107-13-1	Acrylonitrile	ND	0.64	ND	0.29	
75-35-4	1,1-Dichloroethene	ND	0.64	ND	0.16	
75-09-2	Methylene Chloride	ND	0.64	ND	0.18	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.64	ND	0.20	
76-13-1	Trichlorotrifluoroethane	ND	0.64	ND	0.083	
75-15-0	Carbon Disulfide	ND	6.4	ND	2.0	
156-60-5	trans-1,2-Dichloroethene	ND	0.64	ND	0.16	
75-34-3	1,1-Dichloroethane	ND	0.64	ND	0.16	
1634-04-4	Methyl tert-Butyl Ether	ND	0.64	ND	0.18	
108-05-4	Vinyl Acetate	ND	6.4	ND	1.8	
78-93-3	2-Butanone (MEK)	ND	6.4	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:** (1626738-01) - 54063  
**Client Project ID:** Torrance Refinery

ALS Project ID: P1604528  
 ALS Sample ID: P1604528-001

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): -0.24      Final Pressure (psig): 3.70

Canister Dilution Factor: 1.27

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.64	ND	0.16	
141-78-6	Ethyl Acetate	ND	1.3	ND	0.35	
110-54-3	n-Hexane	ND	0.64	ND	0.18	
67-66-3	Chloroform	ND	0.64	ND	0.13	
109-99-9	Tetrahydrofuran (THF)	ND	0.64	ND	0.22	
107-06-2	1,2-Dichloroethane	ND	0.64	ND	0.16	
71-55-6	1,1,1-Trichloroethane	ND	0.64	ND	0.12	
71-43-2	Benzene	ND	0.64	ND	0.20	
56-23-5	Carbon Tetrachloride	ND	0.64	ND	0.10	
110-82-7	Cyclohexane	ND	1.3	ND	0.37	
78-87-5	1,2-Dichloropropane	ND	0.64	ND	0.14	
75-27-4	Bromodichloromethane	ND	0.64	ND	0.095	
79-01-6	Trichloroethene	ND	0.64	ND	0.12	
123-91-1	1,4-Dioxane	ND	0.64	ND	0.18	
80-62-6	Methyl Methacrylate	ND	1.3	ND	0.31	
142-82-5	n-Heptane	ND	0.64	ND	0.16	
10061-01-5	cis-1,3-Dichloropropene	ND	0.64	ND	0.14	
108-10-1	4-Methyl-2-pentanone	ND	0.64	ND	0.16	
10061-02-6	trans-1,3-Dichloropropene	ND	0.64	ND	0.14	
79-00-5	1,1,2-Trichloroethane	ND	0.64	ND	0.12	
108-88-3	Toluene	<b>0.94</b>	0.64	<b>0.25</b>	0.17	
591-78-6	2-Hexanone	ND	0.64	ND	0.16	
124-48-1	Dibromochloromethane	ND	0.64	ND	0.075	
106-93-4	1,2-Dibromoethane	ND	0.64	ND	0.083	
123-86-4	n-Butyl Acetate	ND	0.64	ND	0.13	

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:** (1626738-01) - 54063  
**Client Project ID:** Torrance Refinery

ALS Project ID: P1604528  
 ALS Sample ID: P1604528-001

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): -0.24      Final Pressure (psig): 3.70

Canister Dilution Factor: 1.27

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.64	ND	0.14	
127-18-4	Tetrachloroethene	ND	0.64	ND	0.094	
108-90-7	Chlorobenzene	ND	0.64	ND	0.14	
100-41-4	Ethylbenzene	ND	0.64	ND	0.15	
179601-23-1	m,p-Xylenes	ND	1.3	ND	0.29	
75-25-2	Bromoform	ND	0.64	ND	0.061	
100-42-5	Styrene	ND	0.64	ND	0.15	
95-47-6	o-Xylene	ND	0.64	ND	0.15	
111-84-2	n-Nonane	ND	0.64	ND	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.64	ND	0.093	
98-82-8	Cumene	ND	0.64	ND	0.13	
80-56-8	alpha-Pinene	ND	0.64	ND	0.11	
103-65-1	n-Propylbenzene	ND	0.64	ND	0.13	
622-96-8	4-Ethyltoluene	ND	0.64	ND	0.13	
108-67-8	1,3,5-Trimethylbenzene	ND	0.64	ND	0.13	
95-63-6	1,2,4-Trimethylbenzene	ND	0.64	ND	0.13	
100-44-7	Benzyl Chloride	ND	0.64	ND	0.12	
541-73-1	1,3-Dichlorobenzene	ND	0.64	ND	0.11	
106-46-7	1,4-Dichlorobenzene	ND	0.64	ND	0.11	
95-50-1	1,2-Dichlorobenzene	ND	0.64	ND	0.11	
5989-27-5	d-Limonene	ND	0.64	ND	0.11	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.64	ND	0.066	
120-82-1	1,2,4-Trichlorobenzene	ND	0.64	ND	0.086	
91-20-3	Naphthalene	ND	0.64	ND	0.12	
87-68-3	Hexachlorobutadiene	ND	0.64	ND	0.060	

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 4 of 4

**Client:** South Coast Air Quality Management District  
**Client Sample ID:** (1626738-01) - 54063  
**Client Project ID:** Torrance Refinery

ALS Project ID: P1604528  
ALS Sample ID: P1604528-001

**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): -0.24      Final Pressure (psig): 3.70

Canister Dilution Factor: 1.27

GC/MS Retention Time	Compound Identification	Concentration µg/m <sup>3</sup>	Data Qualifier
4.90	Acetaldehyde	3.3	

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: P1604528  
 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 <sup>3</sup>	µg/m <sup>3</sup>	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: P1604528  
 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 <sup>3</sup>	MRL µg/m <sup>3</sup>	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: P1604528  
 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 <sup>3</sup>	MRL µg/m <sup>3</sup>	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

Page 4 of 4

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

ALS Project ID: P1604528  
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: P1604528

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	<b>101</b>	<b>101</b>	<b>98</b>	70-130	
Lab Control Sample	P160926-LCS	<b>99</b>	<b>100</b>	<b>98</b>	70-130	
(1626738-01) - 54063	P1604528-001	<b>103</b>	<b>101</b>	<b>98</b>	70-130	
(1626738-01) - 54063	P1604528-001DUP	<b>102</b>	<b>102</b>	<b>100</b>	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: P1604528  
 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 <sup>3</sup>	Result µg/m <sup>3</sup>	% 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: P1604528  
 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 <sup>3</sup>	Result µg/m <sup>3</sup>	% 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: P1604528  
 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 <sup>3</sup>	Result µg/m <sup>3</sup>	% Recovery	ALS	Data Qualifier
					Acceptance Limits	
111-65-9	n-Octane	210	<b>196</b>	<b>93</b>	67-124	
127-18-4	Tetrachloroethene	202	<b>198</b>	<b>98</b>	65-126	
108-90-7	Chlorobenzene	220	<b>211</b>	<b>96</b>	68-120	
100-41-4	Ethylbenzene	218	<b>211</b>	<b>97</b>	69-123	
179601-23-1	m,p-Xylenes	428	<b>400</b>	<b>93</b>	67-125	
75-25-2	Bromoform	228	<b>230</b>	<b>101</b>	68-153	
100-42-5	Styrene	222	<b>215</b>	<b>97</b>	68-132	
95-47-6	o-Xylene	210	<b>199</b>	<b>95</b>	67-124	
111-84-2	n-Nonane	204	<b>189</b>	<b>93</b>	60-130	
79-34-5	1,1,2,2-Tetrachloroethane	210	<b>217</b>	<b>103</b>	72-128	
98-82-8	Cumene	208	<b>189</b>	<b>91</b>	67-124	
80-56-8	alpha-Pinene	212	<b>210</b>	<b>99</b>	67-129	
103-65-1	n-Propylbenzene	204	<b>187</b>	<b>92</b>	67-125	
622-96-8	4-Ethyltoluene	214	<b>200</b>	<b>93</b>	66-128	
108-67-8	1,3,5-Trimethylbenzene	214	<b>189</b>	<b>88</b>	65-125	
95-63-6	1,2,4-Trimethylbenzene	218	<b>190</b>	<b>87</b>	62-134	
100-44-7	Benzyl Chloride	220	<b>232</b>	<b>105</b>	74-145	
541-73-1	1,3-Dichlorobenzene	228	<b>216</b>	<b>95</b>	63-133	
106-46-7	1,4-Dichlorobenzene	208	<b>192</b>	<b>92</b>	62-129	
95-50-1	1,2-Dichlorobenzene	220	<b>198</b>	<b>90</b>	62-134	
5989-27-5	d-Limonene	210	<b>203</b>	<b>97</b>	66-137	
96-12-8	1,2-Dibromo-3-chloropropane	218	<b>229</b>	<b>105</b>	71-147	
120-82-1	1,2,4-Trichlorobenzene	230	<b>208</b>	<b>90</b>	60-145	
91-20-3	Naphthalene	218	<b>191</b>	<b>88</b>	56-158	
87-68-3	Hexachlorobutadiene	230	<b>220</b>	<b>96</b>	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.

# ALS ENVIRONMENTAL

## LABORATORY DUPLICATE SUMMARY RESULTS

Page 1 of 3

**Client:** South Coast Air Quality Management District  
**Client Sample ID:** (1626738-01) - 54063  
**Client Project ID:** Torrance Refinery

ALS Project ID: P1604528  
 ALS Sample ID: P1604528-001DUP

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): -0.24

Final Pressure (psig): 3.70

Canister Dilution Factor: 1.27

Compound	Sample Result		Duplicate Sample Result		Average µg/m <sup>3</sup>	% RPD	RPD Limit	Data Qualifier
	µg/m <sup>3</sup>	ppbV	µg/m <sup>3</sup>	ppbV				
Propene	0.785	0.456	1.36	0.790	1.0725	<b>54</b>	25	<b>R, M1</b>
Dichlorodifluoromethane (CFC 12)	2.28	0.462	2.26	0.456	2.27	<b>0.9</b>	25	
Chloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	ND	ND	ND	-	-	25	
Vinyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Butadiene	ND	ND	ND	ND	-	-	25	
Bromomethane	ND	ND	ND	ND	-	-	25	
Chloroethane	ND	ND	ND	ND	-	-	25	
Ethanol	ND	ND	ND	ND	-	-	25	
Acetonitrile	ND	ND	ND	ND	-	-	25	
Acrolein	ND	ND	ND	ND	-	-	25	
Acetone	16.9	7.10	19.7	8.30	18.3	<b>15</b>	25	
Trichlorofluoromethane	1.25	0.223	1.23	0.219	1.24	<b>2</b>	25	
2-Propanol (Isopropyl Alcohol)	ND	ND	ND	ND	-	-	25	
Acrylonitrile	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethene	ND	ND	ND	ND	-	-	25	
Methylene Chloride	ND	ND	ND	ND	-	-	25	
3-Chloro-1-propene (Allyl Chloride)	ND	ND	ND	ND	-	-	25	
Trichlorotrifluoroethane	ND	ND	ND	ND	-	-	25	
Carbon Disulfide	ND	ND	ND	ND	-	-	25	
trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethane	ND	ND	ND	ND	-	-	25	
Methyl tert-Butyl Ether	ND	ND	ND	ND	-	-	25	
Vinyl Acetate	ND	ND	ND	ND	-	-	25	
2-Butanone (MEK)	ND	ND	ND	ND	-	-	25	

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

M1 = Matrix interference due to coelution with a non-target compound; results may be biased high.

R = Duplicate precision not met.

# ALS ENVIRONMENTAL

## LABORATORY DUPLICATE SUMMARY RESULTS

Page 2 of 3

**Client:** South Coast Air Quality Management District  
**Client Sample ID:** (1626738-01) - 54063  
**Client Project ID:** Torrance Refinery

ALS Project ID: P1604528  
 ALS Sample ID: P1604528-001DUP

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): -0.24

Final Pressure (psig): 3.70

Canister Dilution Factor: 1.27

Compound	Sample Result		Duplicate Sample Result		Average µg/m <sup>3</sup>	% RPD	RPD Limit	Data Qualifier
	µg/m <sup>3</sup>	ppbV	µg/m <sup>3</sup>	ppbV				
cis-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
Ethyl Acetate	ND	ND	ND	ND	-	-	25	
n-Hexane	ND	ND	ND	ND	-	-	25	
Chloroform	ND	ND	ND	ND	-	-	25	
Tetrahydrofuran (THF)	ND	ND	ND	ND	-	-	25	
1,2-Dichloroethane	ND	ND	ND	ND	-	-	25	
1,1,1-Trichloroethane	ND	ND	ND	ND	-	-	25	
Benzene	ND	ND	ND	ND	-	-	25	
Carbon Tetrachloride	ND	ND	ND	ND	-	-	25	
Cyclohexane	ND	ND	ND	ND	-	-	25	
1,2-Dichloropropane	ND	ND	ND	ND	-	-	25	
Bromodichloromethane	ND	ND	ND	ND	-	-	25	
Trichloroethene	ND	ND	ND	ND	-	-	25	
1,4-Dioxane	ND	ND	ND	ND	-	-	25	
Methyl Methacrylate	ND	ND	ND	ND	-	-	25	
n-Heptane	ND	ND	ND	ND	-	-	25	
cis-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
4-Methyl-2-pentanone	ND	ND	ND	ND	-	-	25	
trans-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
1,1,2-Trichloroethane	ND	ND	ND	ND	-	-	25	
Toluene	0.936	0.248	0.922	0.245	0.929	2	25	
2-Hexanone	ND	ND	ND	ND	-	-	25	
Dibromochloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dibromoethane	ND	ND	ND	ND	-	-	25	
n-Butyl Acetate	ND	ND	ND	ND	-	-	25	

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

# ALS ENVIRONMENTAL

## LABORATORY DUPLICATE SUMMARY RESULTS

Page 3 of 3

**Client:** South Coast Air Quality Management District  
**Client Sample ID:** (1626738-01) - 54063  
**Client Project ID:** Torrance Refinery

ALS Project ID: P1604528  
 ALS Sample ID: P1604528-001DUP

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): -0.24

Final Pressure (psig): 3.70

Canister Dilution Factor: 1.27

Compound	Sample Result		Duplicate Sample Result		Average µg/m <sup>3</sup>	% RPD	RPD Limit	Data Qualifier
	µg/m <sup>3</sup>	ppbV	µg/m <sup>3</sup>	ppbV				
n-Octane	ND	ND	ND	ND	-	-	25	
Tetrachloroethene	ND	ND	ND	ND	-	-	25	
Chlorobenzene	ND	ND	ND	ND	-	-	25	
Ethylbenzene	ND	ND	ND	ND	-	-	25	
m,p-Xylenes	ND	ND	ND	ND	-	-	25	
Bromoform	ND	ND	ND	ND	-	-	25	
Styrene	ND	ND	ND	ND	-	-	25	
o-Xylene	ND	ND	ND	ND	-	-	25	
n-Nonane	ND	ND	ND	ND	-	-	25	
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	-	-	25	
Cumene	ND	ND	ND	ND	-	-	25	
alpha-Pinene	ND	ND	ND	ND	-	-	25	
n-Propylbenzene	ND	ND	ND	ND	-	-	25	
4-Ethyltoluene	ND	ND	ND	ND	-	-	25	
1,3,5-Trimethylbenzene	ND	ND	ND	ND	-	-	25	
1,2,4-Trimethylbenzene	ND	ND	ND	ND	-	-	25	
Benzyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,4-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,2-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
d-Limonene	ND	ND	ND	ND	-	-	25	
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	-	-	25	
1,2,4-Trichlorobenzene	ND	ND	ND	ND	-	-	25	
Naphthalene	ND	ND	ND	ND	-	-	25	
Hexachlorobutadiene	ND	ND	ND	ND	-	-	25	

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