

# Texas Commission on Environmental Quality

## Investigation Report

Devon Gas Services, L.P.

CN601320484

### EAST RHOME COMPRESSOR STATION

RN100212539

RECEIVED

DEC 02 2013

TCEQ  
CENTRAL FILE ROOM

Investigation # 1105545

Incident #

Investigator: ASHOK DEVKOTA

Site Classification

MAJOR SOURCE

Conducted: 07/30/2013 – 08/12/2013

NAIC Code: 211111

SIC Code: 1311

Program(s): AIR OPERATING PERMITS  
AIR NEW SOURCE  
PERMITS

Investigation Type : Compliance Invest File Review

Location : FROM THE INTERSECTION  
OF HWY 114 AND HWY 506 IN RHOME  
TRAVEL EAST ON HWY 114  
APPROXIMATELY 3.9 MILES FACILITY  
IS NORTH OF HWY 114

Additional ID(s) : 2406  
WN0217K  
83910

Address: 6867 E HWY 114; RHOME,  
TX 76078

Activity Type : REGION 04 - DFW METROPLEX  
RPFT - AIR RPFT - REVIEW OF  
PERFORMANCE TEST OR MONITOR

#### Principal(s) :

| Role       | Name                  |
|------------|-----------------------|
| RESPONDENT | DEVON GAS SERVICES LP |

#### Contact(s) :

| Role                     | Title          | Name                 | Phone          |
|--------------------------|----------------|----------------------|----------------|
| Regulated Entity Contact | EHS SPECIALIST | MR WARREN<br>HINKLEY | (940) 394-2548 |

#### Other Staff Member(s) :

| Role        | Name        |
|-------------|-------------|
| Supervisor  | NEAL PENNEY |
| QA Reviewer | NEAL PENNEY |

#### Associated Check List

##### Checklist Name

AIR STACK TEST REPORT  
AIR STACK TEST REPORT  
AIR STACK TEST REPORT

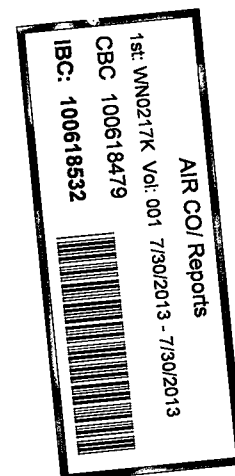
##### Unit Name

E-18 Unit DV081005 ZZZZ  
E-16 Unit DV071013LB ZZZZ  
E-16 Unit DV071013RB ZZZZ

#### Investigation Comments :

##### I. INTRODUCTION

This report summarizes the findings of an in-house Review of Performance Test (RPFT) investigation associated with performance tests conducted on two natural-gas fired



engines-identified by their emission point numbers (EPNs) E-16 and E-18 located at the East Rhome Compressor Station (ERCS or the facility). ERCS is operated by Devon Gas Services, LP (Devon), and is located at 6867 E Hwy 114, Rhome, Wise County, Texas. The facility is a major source of Hazardous Air Pollutants (HAP), and is authorized to operate under Federal Operating Permit number (FOP#) O-02406 and Standard Permit Registration number (SP#) 83910. ERCS is an oil and gas handling and production facility subject to the requirements of the Title 30 of Texas Administrative Code Chapter 116 (30 TAC 116), Title 40 of Code of Federal Regulation Part 60 (40 CFR 60) Subpart JJJJ, and 40 CFR 63 Subpart ZZZZ.

This report was prepared by Mr. Ashok Devkota, an Emission Evaluator with the Texas Commission on Environmental Quality (TCEQ), DFW Region, Air Section. The purpose of this review is to determine compliance with applicable TCEQ and Environmental Protection Agency (EPA) guidelines regarding the stack test.

**Daily Narrative:**

Devon contracted Mechanical Equipment Inc., (MEI) to accomplish the testing. MEI conducted sampling of formaldehyde (HCHO) on the EPNs E-16 and E-18 on 06/18/2013 and 06/17/2013, respectively, to demonstrate compliance with 40 CFR 63.6600(b) (Table 2a). The sampling was performed in accordance with the procedures set forth in the following test methods:

1. Method 3A published on 40 CFR 60 Appendix A:  
"Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources (Instrumental Analyzer Procedure)", and,
2. American Society for Testing and Materials (ASTM) method D 6348-03 published by ASTM:  
"Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy".

The tester conducted analyzer calibration error checks before the tests, and bias checks before and after and each run as per the requirements of the test methods. The analyzers used during the testing were leak-checked and demonstrated to be leak-free. Each test consisted of three 60-minutes runs. The writer was not present during the performance tests. The writer reviewed the tests on 07/30/2013.

**Exit Interview:**

No exit interview was conducted for this investigation.

**II. GENERAL FACILITY AND PROCESS INFORMATION**

**Process Description:**

ERCS is an Oil and Gas Production facility. In the facility, inlet gas enters the compressor station via pipeline and is sent to an inlet separator to remove any entrained liquids. Separated liquids are sent to one of the atmospheric 210-bbl or 300-bbl produced water tanks and eventually trucked off site. The gas is very dry, as can be seen from the analysis and liquids are not anticipated to occur in any substantial amount. The gas continues to be compressed and dehydrated prior to leaving the site by pipeline.

Source Tested: Two natural-gas-fired, Spark-Ignited, Reciprocating Internal Combustion Engines.

EPNs: E-16 and E-18

**Unit Numbers:**

E-16: E-16 is a dual stack engine with two emission sources identified by unit numbers DV071013LB, and DV071013RB  
E-18: DV081005

Serial Number: E-16: BKE00461, and E-18: BKE00419

**EAST RHOME COMPRESSOR STATION - RHOME**

**7/30/2013 to 8/12/2013 Inv. # - 1105545**

**Page 3 of 5**

---

Location: 6867 E HWY 114, Rhome, Wise County, TX

**Test Requirements and Regulatory Drivers**

Permits: SP# 83910, and FOP# O-02406

National Emission Standards for Hazardous Air Pollutants (NESHAP): 40 CFR 63 Subpart ZZZZ, Rule 63.6650 (Table 7)

Name of Testing Organization (s): Mechanical Equipment Inc., (MEI). Mr. Namon Jennings of MEI coordinated the emission testing, while Mr. Bruce Freeby of Devon Gas Services coordinated the facility corporation during the testing.

Notification Dates: A notification regarding the tests was received on 04/01/2013. The notification date provided sufficient time to comply with the requirement of 40 CFR 63.9(e).

**Average Operating Rate of Source during Tests:**

EPN E-16:

Unit DV071013RB: 1606 bhp at the average engine speed of 1000 rpm.

Unit DV071013LB: 1606 bhp at the average engine speed of 1000 rpm.

EPN E-18: 3222 bhp at the average engine speed of 1000 rpm.

**Maximum Operating Rate:**

EPN E-16: 3550 bhp at the engine speed of 1000 rpm. The engine was operating with 90.5% load during the test.

EPN E-18: 3550 bhp at the engine speed of 1000 rpm. The engine was operating with 90.8% load during the test.

**III. BACKGROUND**

County: Wise

Region: DFW Region 4

Test Date: E-16 was tested on 06/18/2013, and E-18 was tested on 06/17/2013

Date report received: TCEQ-DFW received the test reports regarding the tests on E-16 on 07/15/2013. The test report regarding the test on E-18 was received on 07/05/2013.

**Compliance History**

RE Name: East Rhome Compressor Station RN: RN100212539

Classification: High Rating: 0.00 Publication Date: 11/15/2012

Customer Name: Devon Gas Services L.P. CN: CN601320484

Classification: Satisfactory Rating: 2.64 Publication Date: 08/13/2013

**Current Enforcement Actions:**

There is no current enforcement actions associated with this investigation.

**Agreed Orders, Court Orders, and Other Compliance Agreements:**

There have been no agreed orders, court orders, or other compliance agreements in the past five years for this facility regarding air quality.

**Prior Enforcement Issues:**

There has been one prior Notice of Violations (NOV) issued to this regulated entity in the five years prior to this investigation. There was a violation of 40 CFR 63.6645(g) and 40 CFR 63.7(b) (1). This was a resolved category C3 violation and was resolved with the receipt of testing notification received July 22, 2011. There was also a violation of 30 TAC 116.115(b)(2)(F). This was a resolved category B19.g.1 violation and was resolved with the issuance of a modification to permit 83910 effective December 22, 2010. See investigation 1002006 for further details.

**Complaints:**

There have been two complaints in the past five years regarding air quality at this facility.

1. On 12/29/2010 TCEQ-DFW office received a complaint (Incident number: 148928) about "a natural gas type odor" coming from the site that caused respiratory problem on the complainant.

## EAST RHOME COMPRESSOR STATION - RHOME

7/30/2013 to 8/12/2013 Inv. # - 1105545

Page 4 of 5

An investigation (investigation number: 886754) was initiated on 12/29/2010 pertaining to the complaint. No violations were noted during the investigation.

2. 12/14/2010 TCEQ-DFW office received a complaint (Incident number: 148555) about a hose from the facility running into a pond that was discharging a black-green odorless slime. An investigation (Investigation number: 891036) was conducted on 12/14/2010 pertaining to the complaint. No violation was discovered during the investigation.

### IV. ADDITIONAL INFORMATION

#### RESULTS SUMMARY

EPN: E-16

Unit DV071013RB

Pollutant: Formaldehyde (HCHO)

Pollutant Concentrations (in parts per million (ppm), runs 1, 2 and 3): 2.0, 1.9, 1.9.

Pollutant Concentrations (in ppm, corrected to 15% of Oxygen): 1.3, 1.2, 1.2.

EPN: E-16

Unit: DV071013LB

Pollutant: Formaldehyde (HCHO)

Pollutant Concentrations (in ppm): 1.7, 1.6, 1.6.

Pollutant Concentrations (in ppm, corrected to 15% of Oxygen): 1.1, 1.0, 1.0

Average of both halves:

Pollutant: Formaldehyde (HCHO)

Pollutant Concentration: 1.2 ppm (corrected to 15% Oxygen)

NESHAP Regulation: 40 CFR 63.6600(b) (Table 2a)

Allowable NESHAP: 14 ppm (corrected to 15% Oxygen)

Exceeded: No

#### COMPLIANCE DETERMINATION:

Report Deficiency Letter (RDL) Sent: No

Verbal Notice Of Violation (NOV) given in Regards to RDL: No

Test Report Acceptable: Yes.

EPN: E-18

Unit DV081005

Pollutant: Formaldehyde (HCHO)

Pollutant Concentrations (in parts per million (ppm), runs 1, 2 and 3): 3.7, 3.7, 3.7

Pollutant Concentrations (in ppm, corrected to 15% of Oxygen): 2.4, 2.4, 2.4

NESHAP Regulation: 40 CFR 63.6600(b) (Table 2a)

Allowable NESHAP: 14 ppm (corrected to 15% Oxygen)

Exceeded: No

#### COMPLIANCE DETERMINATION:

Report Deficiency Letter (RDL) Sent: No

Verbal NOV given in Regards to RDL: No

Test Report Acceptable: Yes.

#### Conclusions and Recommendations:

The writer did not find any considerable error, inconsistency, or inadequacy in the reports during this review. The reports appear to contain all the minimum contents listed in chapter 14 of TCEQ Sampling Procedure Manual. The calculated emission rates were below the regulatory limits, which implied that the facility complied with the applicable and stipulated TCEQ and EPA regulations.

Based on the review of the performance tests, the writer finds the performance test reports are consummate and acceptable. The writer recommends that the RE, East Rhome Compressor Station, be placed in a compliant status with its applicable 40 CFR 63 Subpart ZZZZ stack test

**EAST RHOME COMPRESSOR STATION - RHOME**

**7/30/2013 to 8/12/2013 Inv. # - 1105545**

**Page 5 of 5**

requirements pertaining to the emission sources E-16 and E-18.

**Additional Issues:**

No additional Issues were noted during this investigation.

**No Violations Associated to this Investigation**

Signed \_\_\_\_\_

  
Environmental Investigator

Date \_\_\_\_\_

10/10/13

Signed \_\_\_\_\_

  
Supervisor

Date \_\_\_\_\_

10/10/13

**Attachments: (in order of final report submittal)**

\_\_\_ Enforcement Action Request (EAR)

\_\_\_ Letter to Facility (specify type) : \_\_\_\_\_

\_\_\_ Investigation Report

\_\_\_ Sample Analysis Results

\_\_\_ Manifests

\_\_\_ NOR

\_\_\_ Maps, Plans, Sketches

\_\_\_ Photographs

\_\_\_ Correspondence from the facility

\_\_\_ Other (specify) : \_\_\_\_\_

\_\_\_\_\_  
-  
\_\_\_\_\_