

AIR CP_106741770_CP_20160108_Investigation_1305396_
Texas Commission on Environmental Quality
Investigation Report

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Customer: MAVERICK DRILLING & EXPLORATION USA INC.
Customer Number: CN604320804

Regulated Entity Name: GORDON CENTRAL PRODUCTION FACILITY
Regulated Entity Number: RN106741770

Investigation # 1305396

Incident Numbers

225497

Investigator: HASANAIN ALAMEEN

Site Classification PERMIT BY RULE

Conducted: 01/08/2016 -- 01/08/2016

SIC Code: 1311

NAIC Code: 211111

Program(s): AIR NEW SOURCE PERMITS

Investigation Type: Compliance Investigation

Location: FRON INTX OF S POST OAK AND SAM HOUSTON TOLLWAY; S ON S POST OAK FOR 1.5 MI; W ON MCHARD; TRAVEL 0.8 MI; N ON UNNAMED LEASE ROAD; TRAVEL 0.4 MI TO SITE.

Additional ID(s): 4815701947

Address: ,

, ,

Local Unit: REGION 12 - HOUSTON

Activity Type(s): AIR MNSR - MINOR SOURCE NEW SOURCE REVIEW
AIRCOMPL - AIR CMPL - AIR COMPLAINT INV

Principal(s):

Role

Name

RESPONDENT

MAVERICK DRILLING & EXPLORATION USA INC

Contact(s):

Role

Title

Name

Phone

REGULATED
ENTITY MAIL
CONTACT

DRILLING MANAGER

MR TEXAS RICHARDS

Cell (903) 916-9684
Work (832) 783-5730

REGULATED
ENTITY
CONTACT

HEALTH SAFETY &
ENVIRONMENTAL
MANAGER

MIKE MCKENNA

Cell (713) 705-1605
Work (832) 783-5752

Other Staff Member(s):

Role

Name

QA Reviewer
Supervisor
Investigator

LETASHA MILLER
LETASHA MILLER
CASSANDRA MOORE

Associated Check List

Checklist Name

AIR INVESTIGATION - EQUIPMENT
MONITORING AND SAMPLING revised 06/2013
AIR COMPLAINT INVESTIGATION

Unit Name

Gordon Production Facilit
Gordon Production Facilit

Investigation Comments:

INTRODUCTION

Introduction

On December 30, 2015 and January 4, 5, and 10, 2016, the TCEQ Houston Region Office (TCEQ) received thirteen complaints, Incident No. 225497. The complaints were received via e-mail at approximately 1:17 p.m. on December 30 2015; 12:00 a.m., 9:32 a.m., 12:33 p.m., 12:40 p.m., 1:21 p.m., and 2:30 p.m. on January 4, 2016; 9:06 a.m., 11:43 a.m., 12:32 p.m., 12:33 p.m. and 2:43 p.m. on January 5, 2016; and 1:01 p.m. on January 10, 2016. Two of the complainants' alleged health related effects. Typical health effects described by the complainants included nausea and headaches. The odors were described by the complainants as a rotten egg smell, sulfur, sour natural gas, a pungent odor, and a foul stench.

Metrological conditions according to Weather Underground during the complaints were:

December 30, 2015: zero precipitation, a mean temperature of 54 degrees Fahrenheit, and a north northeast (NNE) wind direction at 10 miles per hours (mph).

January 4, 2016: zero precipitation, a mean temperature of 49 degrees Fahrenheit, and a north northeast (NNE) wind direction at 3 mph.

January 5, 2016: zero precipitation, a mean temperature of 47 degrees Fahrenheit, and an east northeast (ENE) wind direction at 9 mph.

January 10, 2016: zero precipitation, a mean temperature of 46 degrees Fahrenheit, and a north northwest (NNW) wind direction at 10 mph.

[Source of Meteorological Conditions: www.wunderground.com, Friendswood (KLVJ).

Some of the complainants have elected to be anonymous however, prior to the investigation, one complainant was contacted by phone on January 7, 2016, at approximately 12:17 p.m. The complainant did not provide additional information.

Investigation Narrative

A strong temperature inversion was forecast for the morning of January 8, 2016 from midnight through 9 a.m. and projected to be at its strongest at 6 a.m. Therefore, on January 8, 2016, TCEQ investigators Mr. Hasanain Alameen and Ms. Cassandra Moore conducted an odor survey in the Shadow Creek Ranch (SCR) subdivision at 4:14 a.m. See Attachment #2 (Odor Survey timing). No odors were detected and no visible emissions were observed. The surrounding terrain was flat and the area was residential. The meteorological conditions, obtained by a Kestrel Personal Weather Monitor, were wind speeds detected at 1.5 mph and 1.9 mph from the southeast (SE) and temperature readings of 54 degrees Fahrenheit.

At 5:14 a.m. an odor survey was conducted from the SCR subdivision to FM 521, the industrial areas near FM 521 (Akzo Nobel) and the Blue Ridge Landfill near Broadway to the crossing of Trammel-Fresno Road and Palmetto Street. There were no odors detected. The investigators then traveled to the Winfield Lakes subdivision to detect odors from a Maverick facility. There were no odors detected. The investigators left the area at 5:28 a.m. See Attachment #2 (Odor Survey timing).

At 6:10 a.m. an odor survey was conducted from Trammel-Fresno Road and Fort Bend Parkway Toll Road heading north to W Fuqua Street. At the crossing of Fort Bend Parkway Toll Road and W Fuqua Street, a strong odor of rotten eggs was detected, but the odor quickly disappeared. The investigators traveled to Blue Ridge road

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and Fort Bend Parkway Toll Road to the residential area south of W Fuqua Street (north of Maverick) to trace the odor detected. The odor was not detected. The investigators left the area at 6:47 a.m. See Attachment #2 (Odor Survey timing).

The odor survey resumed at Shadow Creek subdivision at 6:53 a.m. The investigators went through the subdivision, but an odor was not detected. The investigators went back to the Akzo Nobel area at 7:05 a.m. with no odors detected. The investigators revisited the crossing of Fort Bend Parkway Toll Road and W Fuqua Street at 7:25 a.m. An odor was not detected in this area. The investigators left the area at 7:43 a.m. See Attachment #2 (Odor Survey timing).

At 8:15 a.m. the investigators arrived at Maverick, an oil & gas site, and utilized an Optical Gas Imaging Camera (OGIC) to determine the operational status of three flares. There were no odors detected and the flares were operating. There were no issues noted. See Attachment #2 (Odor Survey timing).

At 10:17 a.m., the investigators entered the Maverick facility and met with Mr. Texas Richards, Drilling Manager and Mr. Mike McKenna, Health Safety & Environmental Manager. The investigators informed them of the nature of the complaint and was provided with a process description of their operations. Mr. McKenna accompanied the investigators on a tour of Maverick's oil & gas sites where they observed the equipment for compliant operation. There were no issues noted. The investigators left the facility at 2:55 p.m. See Attachment #2 (Odor Survey timing).

This investigation report addresses the compliance status of Maverick's Gordon Central Production Facility (GPF). Please refer to investigation nos. 1315395, 1315402, 1315405, 1315406, 1315408, and 1315413 for the investigation findings at the other sites.

The investigators revisited Shadow Creek subdivision at 3:33 p.m. and conducted an odor survey. There were no odors detected. The investigators departed the area at 3:37 p.m. See Attachment #2 (Odor Survey timing).

Facility Authorization Narrative

Gordon Production Facility (GPF) operates under the authorization of Permit by Rule (PBR) 106.352 (Oil and Gas Handling and Production Facilities) and 106.492 (Flares).

General Air Quality Rules 30 TAC Chapter 101

GPF emits over 10 tons per year (TPY) of volatile organic compounds (VOCs) and is required to submit an emissions inventory each calendar year by March 31st, in accordance with 30 TAC 101.10(a)(1). The reviewed emissions data for 2014 were calculated at 23.89 TPY of VOCs. GPF appears to be in compliance with this regulation.

Permits By Rule (PBRs) 30 TAC Chapter 106

30 TAC 106.8

The sitewide emissions for calendar year 2014 were: 23.89 TPY of VOCs, 0.001 TPY of sulfur dioxide (SO₂), 23.72 TPY of carbon monoxide (CO), 2.96 TPY of nitrogen oxide (NO_x), and 0.02 TPY of particulate matter (PM₁₀). There were no issues noted.

30 TAC 106.352

GPF is an oil and gas production facility claiming 30 TAC 106.352(l) to authorize tanks, separators, dehydration units, free water knockouts, gunbarrels, heater treaters, natural gas liquids recovery units (FINs: SEPTTEST, GUNBARREL, OILTANK1, OILTANK2, OILTANK3, OILTANK4, HEATER, FLARE1, FLARE2, and SALTWATER).

30 TAC 106.352(l)(1): Requires flares (FLARE1, FLARE2) to meet the requirements of 30 TAC 106.492. See 30 TAC 106.492 section for more information.

30 TAC 106.352(l)(2): Requires the total emissions, including process fugitives, combustion unit stacks,

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separator, or other process vents, tank vents, and loading emissions to not exceed 25 TPY of SO₂ on VOC; 250 TPY each of NO_x and CO. Refer to 30 TAC 101 and 30 TAC 106.8 sections for more information.

106.352(l)(3), (4), and (5): These rules are not applicable. GPF does not handle sour gas.

30 TAC 106.492

There are two flares (FINs: FLARE1, FLARE2) onsite authorized by 30 TAC 106.492. The flares burn sweet natural gas with a lower heating value greater than 1,000 British Thermal Unit per Cubic Feet (Btu/scf) prior to the addition of air. The functioning of the flares' auto ignitors are monitored manually by GPF's gaugers, and electronically by using flare stack temperature as a proxy for the auto ignitor.

Further, the flares are continuously monitored with a thermocouple, connected to a programmable logic controller (PLC), datalogger and radio that records temperature, battery voltage, radio signal, and AC voltage. Email alarms are sent to the gaugers, field manager and Health Safety and Environmental Community (HSEC) manager when the flare temperature drops below 120 degree Fahrenheit (deg F) which indicates that the flare is not burning. There were no issues noted.

Control of Sulfur Compounds (SO₂ and H₂S)

30 TAC Chapter 112

The natural gas at this site is a sweet gas, which is defined as any natural gas containing less than 1.5 grains of hydrogen sulfide per 100 cubic feet (grains/100 cu ft.), or less than 30 grains of total sulfur per 100 cubic feet. OTA Compression, LLC conducted a storage tank vapor emit test on October 3, 2013. The test did not detect any hydrogen sulfide (H₂S). Also, the investigator reviewed a liquid sample analysis conducted by Southern Petroleum Laboratories, Inc. (SPL) taken on October 23, 2013. The analysis showed that the hydrogen sulfide was less than 5 ppmw (~0.62 grains/100 cu ft.).

Control of Volatile Organic Compounds (VOC)

30 TAC Chapter 115

GPF has four oil tanks and one salt water tank with capacities of 12,600 gallons that are located within the secondary containment area. According to a document (Flare Online: 9/9/2013) provided by Maverick. The tank battery diagram showed that the tanks are vented to the flares. In accordance with 30 TAC 115.112(e)(4), a control device is needed for tanks or an aggregate of tanks that exceed a throughput of 1,500 barrels of condensate per year. Gordon Production Facility is in compliance with this regulation.

New Source Review (NSR) Permit Requirements

30 TAC Chapter 116

Gordon Production Facility is currently not subject to 30 TAC 116. The self-reported actual VOC emissions at Gordon Production Facility are under 25 tons per year.

Federal Operating Permit Program

30 TAC Chapter 122

Gordon Production Facility is not a major source and is not subject to a federal operating permit.

Exit Interview

On January 8, 2016, the investigator conducted an exit interview with Mr. McKenna. Records listed below were requested by January 25, 2016:

- 1 - 2015 monthly throughputs per lease
- 2 - 2015 emissions per lease
- 3 - Claimed PBRs
- 4 - Flares manufacturer specification

Mr. McKenna provided the requested information within the requested timeframe. See Attachment # 3

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In addition, a complainant was contacted with the results of the investigation on January 8, 2016 at 3:32 p.m. The investigator left a voice message.

GENERAL FACILITY AND PROCESS INFORMATION

Process Description

Maverick, Gordon Production Facility, is an oil and gas facility. Gordon Production Facility has a separator, gun barrel, four crude oil tanks, heater, two flares and one salt water tank. The crude oil goes to the gun barrel, then flows to the subsequent crude oil tanks that are located in series. Flash, breathing and working emissions resulting from the tanks are routed to the flares. Emissions resulting from oil and water loading operations are routed to the atmosphere.

BACKGROUND

Agreed Orders, Court Orders, and Other Compliance Agreements

Based on a review of CCEDS, regional office files, and the enforcement database, the following Agreed Orders (AO) pertaining to violations of air quality regulations were issued by the TCEQ within the past 5 years:

2013-1786-AIR-E

Prior Enforcement Issues

A Notice of Enforcement (NOE) was issued on August 30, 2013 for failure to obtain authorization prior to construction, failure to submit an initial emissions inventory (IEI) for 2009 and subsequent additional emissions inventory updates (AEIUs) for calendar year 2010 and 2011, failure to provide records in order to make a compliance determination, and failure to control emissions of storage tanks. See Air Compliance Investigation No. 1116117 (Typecode AIRFI).

Complaints

Based on a review of CCEDS during the past five years, hundreds of odor complaints have been received relating to this area and other TCEQ nuisance odor investigations are being conducted concurrently by the Region 12 Office.

ADDITIONAL INFORMATION

Current Enforcement Actions

Based on this investigation, no violations are being alleged.

Conclusions, Recommendations, and Current Enforcement Actions

Based on the TCEQ's Odor Complaint Investigation Procedures and application of the FIDO Chart, an "highly offensive" odor with an intensity of "strong" would have to be present on a daily basis continuously for at least 4 hours to constitute a nuisance. Although the investigators confirmed an odor, a nuisance condition and source of odor could not be confirmed at the time. No violations or areas of concern were noted during this investigation.

Investigations were performed at additional Maverick Drilling & Exploration USA Inc. sites in the area. See investigation Nos. 1315395, 1315402, 1315405, 1315406, 1315408, and 1315413.

Additional Issues

No additional issues were noted during this investigation.

REPORT ATTACHMENTS

1. Odor Survey Route Map

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- 2. Odor Survey Timing
- 3. Exit Interview Form

No Violations Associated to this Investigation

Signed

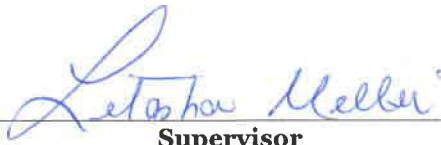


Environmental Investigator

Date

4/29/2016

Signed



Supervisor

Date

4/29/16

Attachments: (in order of final report submittal)

___ Enforcement Action Request (EAR)

☒ Letter to Facility (specify type) : Letter of Compliance

___ Investigation Report

___ Sample Analysis Results

___ Manifests

___ Notice of Registration

___ Maps, Plans, Sketches

___ Photographs

___ Correspondence from the facility

☒ Other (specify) :

- See report attachment

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Maverick Drilling & Exploration USA INC

CN 604320804

Gordon Production Facility

RN 106741770

January 8, 2016

Attachment 1

Odor Survey Route Map

Total Number of Pages: 1

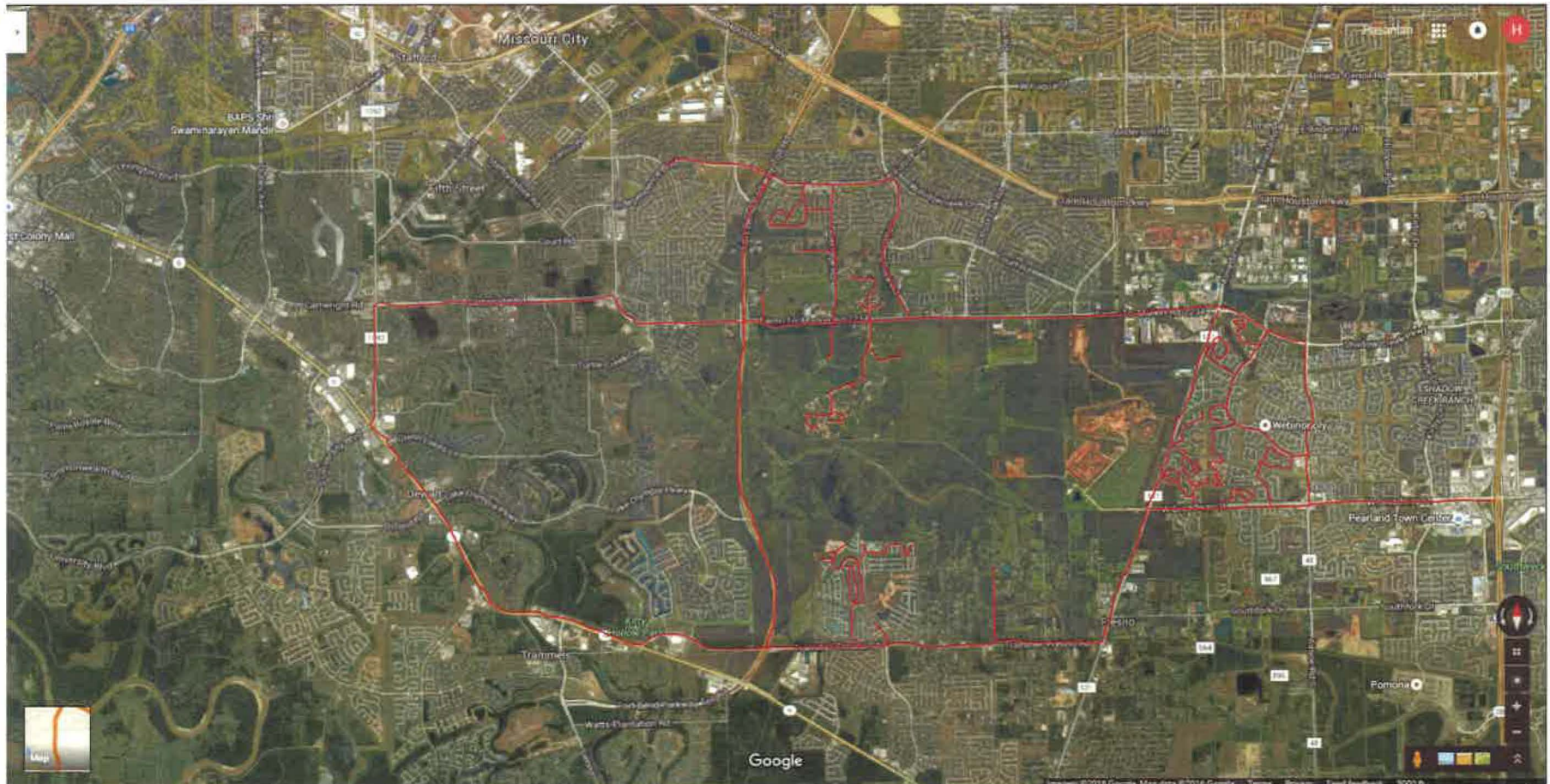
Odor Survey Route Map

Investigation Type: CmPL
 Air Account NO: RN 106741770
 Attachment: 1
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Weather

Conditions:	Clear	Partly Cloudy	Cloudy	Overcast	Rain	Fog			
Wind Speed:	1.5 to 1.9 mph		Wind From: NE, NNW	NW	NNW	N	NNE	NE	
Temperature:	54 °F – 60 °F			WNW				ENE	
Humidity:	80.4% RH			W				E	
				WSW				ESE	
				SW	SSW	S	SSE	SE	

► Diagram



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Maverick Drilling & Exploration USA INC

CN 604320804

Gordon Production Facility

RN 106741770

January 8, 2016

Attachment 2

Odor Survey timing

Total Number of Pages: 1

Odor Survey Timing

Investigation Type: CMPL
Air Account NO: RN 106741770
Attachment: 2
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Maverick Drilling & Exploration USA INC

CN 604320804

Gordon Production Facility

RN 106741770

January 8, 2016

Attachment 3

Exit Interview Form

Total Number of Pages: 1

TCEQ EXIT INTERVIEW FORM: Potential Violations and/or Records Requested

Regulated Entity/Site Name	Maverick Drilling & Exploration USA Inc.	TCEQ Add. ID No. RN No. (optional)	FGA-017-0
Investigation Type	<input checked="" type="checkbox"/> Cmpl/NSR <input type="checkbox"/> Contact Made In-House (Y/N) <input checked="" type="checkbox"/> N	Purpose of Investigation	Complaint and Compliance investigation
Regulated Entity Contact	Mike McKenna	Telephone No.	T: 832-783-5151 C: 713-765-1605
Title	Health Safety & Environment manager	Fax No.	
		Date Contacted	onsite: 1/8/2016
		Date Faxed	

NOTICE: The information provided in this form is intended to provide clarity to issues that have arisen during the investigation process between the TCEQ and the regulated entity named above and *does not represent final TCEQ findings related to violations*. Any potential or alleged violations discovered after the date on this form will be communicated by telephone to the regulated entity representative prior to the issuance of a notice of violation or enforcement. Conclusions drawn from this investigation, including additional violations or potential violations discovered (if any) during the course of this investigation, will be documented in a final investigation report.

Issue		For Records Request: identify the necessary records, the company contact and date due to the agency. For Alleged and Potential Violation issues: include the rule in question with the clearly described potential problem. Other type of issues: fully describe.	
No.	Type ¹	Rule Citation (if known)	Description of Issue
1	RR		Throughputs per lease per month per year for 2014 2015
2	RR		Emission by lease for 2015
3	RR		PBRs copies
4	RR		Acadia flares manufacturer specifications.
5			

Investigation Type: Cmpl
 Air Account NO: RN 10674/770
 Attachment: _____
 Page 1 of 1
 Due date for these documents required by January 25, 2016
 Close of Business (COB)

¹Issue Type Can Be One or More of: AV (Alleged Violation), PV (Potential Violation), O (Other), or RR (Records Request)

Did the TCEQ document the regulated entity named above operating without proper authorization?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did the investigator advise the regulated entity representative that continued operation is not authorized?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Document Acknowledgment. Signature on this document establishes only that the regulated entity (company) representative received a copy of this document and associated continuation pages on the date noted. If contact was made by telephone, document will be faxed to regulated entity; therefore, signature not required.

Hasanain Alameen	1/8/2016	Mike McKenna	1-8-16
Investigator Name (Signed & Printed)	Date	Regulated Entity Representative Name (Signed & Printed)	Date

If you have questions about any information on this form, please contact your local TCEQ Regional Office.

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