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J.D.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 8, 2017

Mr. Johnny Dugger
1918 County Road 303
Edna, Texas 77957

Re: Investigation Request at:
Formosa Point Comfort Plant, 201 Formosa Drive, Point Comfort (Calhoun County), Texas
Regulated Entity No.: 100218973, Investigation No.: 1430222, Incident No.: 262833

Dear Mr. Dugger:

The Texas Commission on Environmental Quality (TCEQ) Corpus Christi Region Office has completed a final investigation in response to your concern regarding soot from the above-referenced facility. Enclosed is a copy of the investigation report.

For more information about our complaint process, you may access the publication GI-278: *Do You Want to Make an Environmental Complaint? Do You Have Information or Evidence?* on our website at www.tceq.texas.gov.

We appreciate your concern in bringing this matter to our attention. If we can be of further assistance, please contact Ms. Susan Hoelscher at (361) 825-3100.

Sincerely,

A handwritten signature in cursive script that reads "Kelly Ruble".

Kelly Edward Ruble
Air Section Manager
Corpus Christi Region Office

KER/SMH/mjd

Enclosure: Investigation Report

Associated Check List

<u>Checklist Name</u>	<u>Unit Name</u>
AIR COMPLAINT INVESTIGATION	July 14, 2017
AIR INVESTIGATION - EQUIPMENT MONITORING AND SAMPLING revised 06/2013	1430222
AIR COMPLAINT INVESTIGATION	July 11, 2017

Investigation Comments:

I. INTRODUCTION

Introduction

On July 8, 2017, the Jackson County Sheriff Department contacted the Texas Commission on Environmental Quality (TCEQ) Corpus Christi Region 14 (R14) after-hours emergency response contact to report an unknown black substance in the water of Cox Creek. The alleged source of the black substance was soot particles from a smoking flare at the Formosa Point Comfort Plant (Formosa) located at 201 Formosa Drive in Point Comfort, Calhoun County, Texas.

The flaring event (Emissions Point No. (EPN) 1018) was due to the Olefins I Unit startup. An initial notification of the startup was submitted to the TCEQ R14 Office on July 5, 2017. The startup occurred from July 7, 2017 at 1132 hours until July 8, 2017 at 1655 hours. The final report was submitted to the TCEQ R14 Office on July 18, 2017. Refer to TCEQ Investigation No. 1446831 and TCEQ Incident No. 262328 for more information.

On July 10, 2017, a concerned citizen (Citizen A) contacted the TCEQ R14 Office to discuss the black substance in Cox Creek and file a complaint (TCEQ Incident No. 262833). On July 14, 2017, another concerned citizen (Citizen B) contacted the TCEQ R14 Office to file a complaint regarding the flaring event at Formosa (TCEQ Incident No. 262954). Additional concerned citizens who participated in the investigation were Citizen A's family member (Citizen C), Citizen A's lessee (Citizen D), and Citizen A's relative (Citizen E).

In response to the citizens' concerns, TCEQ R14 Air Section staff members conducted onsite complaint investigations (AIRC MPL) on July 11, 2017 and July 14, 2017. The purpose of the AIRC MPL investigations was to determine if nuisance conditions occurred and to identify the source upon detection. The TCEQ R14 Air Section Staff members that conducted and participated in the investigations included Ms. Susan Hoelscher-Environmental Investigator (EI), Mr. Kelly Ruble-Manager, Ms. Ashley Fuqua-EI, and Mr. Michael "Mike" Riff-EI. Formosa's contacts during the investigation were Mr. Travis Stephens-Environmental Specialist Air Department and Mr. Rick Crabtree-General Manager.

Daily Narrative

On July 11, 2017, Mr. Riff conducted a complaint investigation in response to Citizen A's concerns. At the time of the investigation, meteorological conditions consisted of southeast winds at 10 miles per hour (mph) and an ambient air temperature of approximately 88 degrees Fahrenheit. Mr. Riff met with Citizen A and listened to Citizen A's concerns. Citizen A had observed the black substance in Cox Creek on Saturday, July 8, 2017. Citizen A had contacted the sheriff's department who in turn contacted the Texas General Land Office (TGLO) and the Coast Guard. Both agencies responded to Citizen A's allegations; however, it was determined that the black substance was in the jurisdictional boundaries of the TCEQ due to the chemical components. Citizen A had collected a sample of the black substance on Saturday, July 8, 2017 by dipping a fiberglass rod into the water containing the black substance and wiping the rod off with an absorbent pad. In addition, Citizen A had taken several photographs of the black substance floating in Cox Creek. At the time of the investigation, there was not any noticeable material floating in Cox Creek or located on any other structure or flora at Citizen A's property, nor was there visible smoke from Formosa's flare. Refer to Attachment 1 for the TGLO's redacted report. Note: TGLO's original report is located in the TCEQ R14 Office confidential files.

On July 14, 2017, Ms. Hoelscher, Ms. Fuqua, and Mr. Ruble (Investigative Team) conducted a complaint investigation in response to Citizen A and Citizen B's concerns. At the time of the investigation, meteorological conditions consisted of north/northeast winds at 5 mph and an ambient air temperature of approximately 90 degrees Fahrenheit. The Investigative Team met with Citizen A, Citizen B, Citizen C, and Citizen D to discuss

their concerns. There was not any noticeable material floating in Cox Creek or located on any other structure or flora on Citizen A's property. There was no visible smoke from Formosa's flare at the time of the investigation. It was noted that there were dead freshwater clams floating in Cox Creek. Samples of the dead clams were collected and analyzed by the Texas Parks and Wildlife Department (TPWD); however, the cause of death was indeterminate.

Tape lift samples were also obtained from Citizen A's property, designated as Samples A, B, C, D, E, F, and G on Laboratory Analysis Request No. 1707008 and as Samples H, I, J, and K on Laboratory Analysis Request No. 1707009. The results indicated that soot was found on Samples A and B. Sample A was taken from a fiberglass rod, and Sample B was taken from an absorbent pad. Based on the TGLO report and discussions with Citizen A, Citizen A dipped the fiberglass rod into the water containing the black substance and wiped the rod off with the absorbent pad on Saturday, July 8, 2017. The absorbent pad was then placed in the back seat of Citizen A's vehicle, and the rod was placed in the bed of Citizen A's vehicle from Saturday, July 8, 2017 through Friday, July 14, 2017 (date of sampling). Since the chain of custody of the fiberglass rod and the absorbent pad did not meet TCEQ protocol, this evidence alone does not support a nuisance violation. Soot was not found on Samples C, D, E, F, G, H, I, J, and K; however, the area received precipitation on July 7, 2017 and July 8, 2017 which could have attributed to washing off the accumulation of soot at the sample sites. Refer to Attachment 2 for the Laboratory Analysis Results of the tape lift samples, Request Nos. 1707008 and 1707009 and Attachment 3 for precipitation maps.

Citizen A also provided the Investigative Team photographs (Citizen Collected Evidence (CCE)) taken on July 8, 2017 of the black substance in Cox Creek. Citizen A's photographs were consistent with the photographs taken by the TGLO. It should be noted that Cox Creek is the water supply for the cattle on Citizen A's property. Refer to Attachment 4 for the CCE photographs and to Attachment 1 for the photographs taken by the TGLO. Note: The original CCE and TGLO's photographs are located in the TCEQ R14 Office confidential files.

Upon departure from Citizen A's property, Ms. Fuqua and Ms. Hoelscher, certified thermographers, utilized the TCEQ R14 infrared Optical Gas Imaging Camera (OGIC) to determine if there were hydrocarbon emissions emanating from Formosa's flares, and the MultiRae Lite multigas analyzer was utilized to detect Volatile Organic Compounds (VOCs). No hydrocarbon emissions were observed emanating from the flares, and no odors or VOCs were detected.

On August 10, 2017, CCE (affidavits) was submitted from Citizen A, Citizen B, Citizen C, and Citizen D documenting the event on July 8, 2017 and the impact that Formosa's operations have on the citizens' normal use and enjoyment of their property, animal life, and/or vegetation and/or how Formosa's operations adversely affect the citizens' health or welfare, animal life and or vegetation. Refer to Attachment 5 located in the TCEQ R14 Office confidential files for the CCE and affidavits submitted.

The CCE submitted on August 10, 2017 documented the following impacts.

Citizen A's children and grandchildren are unable to enjoy the family owned property due to harmful chemicals that Formosa releases into the air. In a past incident at Formosa, an explosion blew all the windows out of the barn on Citizen A's property. A huge fire also occurred at Formosa that could have been devastating to the entire area. In addition, there are countless chemical releases into the air.

When flaring events occur at Formosa, Citizen B and Citizen B's spouse experience headaches, burning eyes, and breathing problems. It was also noted by Citizen B that there is less wildlife in the area than there used to be.

Citizen D has experienced increasingly worse asthma when the flaring events occur at Formosa. On July 7, 2017, Citizen D noticed that the wind was very calm and a big black cloud of smoke came out of Formosa and headed north. Since there was not much wind, the black smoke would go up and down in waves across the sky and looked like it would drop pollution close to the ground. On July 8, 2017, Citizen D tried to work a few hours on Citizen A's property; however, Citizen D's asthma got increasingly worse, and Citizen D started to get a headache. There was thick black smoke coming from Formosa, and there was little wind. The black smoke was very heavy looking. In the days following the event (July 10, 2017 and July 11, 2017), Citizen D and Citizen D's children experienced headaches/migraines and breathing/stomach issues while working cows and riding horses through the brush at Citizen A's property. The headaches continued off and on for several days.

All of the CCE indicated that the morning of July 8, 2017, there was a large flame on Formosa's flare with trailing

heavy black smoke.

On October 10, 2017, Citizen E submitted photographs (CCE) of Formosa's flare (EPN 1018) emanating black smoke during the event on July 8, 2017. The photographs were taken prior to Citizen A's discovery of the black substance in Cox Creek. When the photographs were taken, the meteorological conditions consisted of south/southeast calm winds and an ambient air temperature of approximately 85 degrees Fahrenheit. Based on the wind direction and the location of Citizen E when the photos were taken, the black plume of smoke is observed above Cox Creek. Refer to Attachment 6 for the photographs of the smoking flare. Note: The original CCE photographs and affidavit are located in the TCEQ R14 Office confidential files.

Exit Interview

On October 31, 2017, an Exit Interview Form (EIF) outlining one alleged violation was sent to Mr. Stephens via email. Mr. Stephens was contacted via phone to verify receipt of the EIF. Refer to Attachment 7 for the EIF.

II. GENERAL FACILITY AND PROCESS INFORMATION

Process Description

Formosa's primary business is the manufacture of various synthetic organic chemicals and resins which include ethylene, ethylene dichloride (EDC), vinyl chloride monomer (VCM), polyvinyl chloride (PVC), polyethylene, polypropylene and ethylene glycol. In addition, Formosa is also involved in the manufacture of caustic and chlorine. Complete process descriptions of the various units, as well as process flow diagrams and plot plans can be found in Formosa's respective files at the TCEQ R14 Office.

III. BACKGROUND

Performance Classification and Compliance Rating

CN600130017

Classification: Satisfactory

Rating: 8.58

RN100218973

Classification: Satisfactory

Rating: 9.20

NOTE: Title 30 TAC §60.2 - Compliance History Classification (Point Ranges):
High Performer (above-satisfactory compliance record) = fewer than 0.10 points;
Satisfactory Performer (generally complies with environmental regulations) = 0.10 to 55 points;
Unsatisfactory Performer (performs below minimal acceptable performance standards established by the commission) = more than 55 points

Agreed Orders, Court Orders and Other Compliance Agreements

Formosa has been the subject of air-related agreed orders, court orders, or other compliance agreements in the past five years. Refer to Attachment 8 for the Compliance History Report.

Prior Enforcement Issues

Formosa has been the subject of prior air-related enforcement issues in the past five years. Refer to Attachment 8 for the Compliance History Report.

Complaints

Prior to this investigation, Formosa has been the subject of two air-related complaints in the past two years.

IV. ADDITIONAL INFORMATION

Conclusions, Recommendations, and Current Enforcement Issues

It was determined that soot released from Formosa's smoking flare (EPN 1018) during the Olefin's Unit I startup on July 7, 2017 and July 8, 2017 was found in Cox Creek, the source of drinking water for the cows located on Citizen A's property. In addition, due to the black smoke from the flaring event and the resulting health effects, the citizens were unable to continue working cows as required for their welfare. Based on the evidence obtained and submitted during this investigation, Formosa released one or more air contaminants or combinations thereof, in such concentration and of such duration as are or may tend to be injurious to or to adversely affect human health or welfare, animal life, vegetation, or property, or as to interfere with the normal use and enjoyment of animal life, vegetation, or property; therefore, nuisance conditions were substantiated. Formosa was issued a notice of violation (NOV) for one non-compliance item. See the "OUTSTANDING ALLEGED VIOLATION(S) ASSOCIATED TO A NOTICE OF VIOLATION" sections below for details.

V. ATTACHMENTS

1. TGLO Report
2. Laboratory Analysis Request Nos. 1707008 & 1707009
3. Precipitation Maps
4. Citizen Collected Evidence-Photographs
5. Citizen Collected Evidence-Affidavits
6. Citizen Collected Evidence-Smoking Flare Photographs & Affidavit
7. Exit Interview Form
8. Compliance History Report

NOV Date 12/08/2017 Method WRITTEN

**OUTSTANDING ALLEGED VIOLATION(S)
ASSOCIATED TO A NOTICE OF VIOLATION**

Track Number: 658741

Compliance Due Date: 01/08/2018

Violation Start Date: 7/8/2017

30 TAC Chapter 101.4

5C THSC Chapter 382.085(b)

Alleged Violation:

Investigation: 1430222

Comment Date: 10/31/2017

Failure to prevent a discharge from any source whatsoever one or more air contaminants or combinations thereof, in such concentration and of such duration as are or may tend to be injurious to or to adversely affect human health or welfare, animal life, vegetation, or property, or as to interfere with the normal use and enjoyment of animal life, vegetation, or property. Specifically, based upon a response to citizens' complaints on July 11, 2017 and July 14, 2017, by the Citizen Collected Evidence (CCE) submitted, analyses of samples collected, and the Texas General Land Office (TGLO) report, it was determined that deposits of particulate matter (soot) from the Formosa Point Comfort Plant operations were found in sufficient concentration and of such duration to adversely affect human health or welfare, animal life, or property or as to interfere with normal use and enjoyment of animal life or property.

Recommended Corrective Action: Submit to the TCEQ Corpus Christi Region Office documentation necessary to address the alleged violation to prevent recurrence of a same or similar violation.

Signed Susan Holtzner
Environmental Investigator

Date 12/8/17

Signed Kelly Lubke
Supervisor

Date 12/8/17

Attachments: (in order of final report submittal)

- Enforcement Action Request (EAR)
- Letter to Facility (specify type): Notice of Violation (NOV)
- Investigation Report
- Sample Analysis Results
- Manifests
- Notice of Registration

- Maps, Plans, Sketches
- Photographs
- Correspondence from the facility
- Other (specify):
See Attachment List on Page 5 of 6 *