

Texas Commission on Environmental Quality Investigation Report

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Customer: CES Environmental Services, Inc.
Customer Number: CN600618946

Regulated Entity Name: CES ENVIRONMENTAL SERVICES

Regulated Entity Number: RN100693282

<p>Investigation # 777041</p> <p>Investigator: AMY MESSICK</p> <p>Conducted: 09/17/2009 -- 09/17/2009</p> <p>Program(s): AIR NEW SOURCE PERMITS</p> <p>Investigation Type: Compliance Investigation</p> <p>Additional ID(s): 86272 84713 83798 HG1270B</p> <p>Address: 4904 GRIGGS RD, HOUSTON, TX , 77021</p>	<p>Incident Numbers 129609</p> <p>Site Classification</p> <p>SIC Code: 1542 NAIC Code: 562219 SIC Code: 4212</p> <p>Location:</p> <p>Local Unit: REGION 12 - HOUSTON</p> <p>Activity Type(s): AIR MNSR - MINOR SOURCE NEW SOURCE REVIEW AIRCOMPL - AIR CMPL - AIR COMPLAINT INV</p>
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Principal(s):

Role	Name
RESPONDENT	CES ENVIRONMENTAL SERVICES INC

Contact(s):

Role	Title	Name	Phone
Regulated Entity Contact	HSE MANAGER	PRABHAKAR THANGUDU	Work (713) 676-1460
Regulated Entity Mail Contact	PRESIDENT AND REGISTERED AGENT	MATT BOWMAN	Work (713) 676-1460

Other Staff Member(s):

Role	Name
Investigator	DANIEL O'BRIEN
Investigator	MELISSA THOMPSON
Supervisor	CLAUDIO GALLI

Associated Check List

<u>Checklist Name</u>	<u>Unit Name</u>
COMPLAINT INVESTIGATION - AIR	CES Environmental

Investigation Comments:

INTRODUCTION

Introduction

Incident number(s): 129609

How was incident(s) received: Phone call to the TCEQ Houston Region complaint line

Date(s) and Time(s) incident(s) received: 1:54 p.m. on September 17, 2009

What did the complainant allege: The complainant alleged that a chemical odor from CES Environmental Services was causing them to experience health effects both outside and inside their residence. The complainant also cited safety concerns including a previous explosion at CES and the death of an employee of CES.

Date, time, frequency, and duration of each incident: The complainant alleged that the chemical odor has been occurring on an ongoing basis for the last seven to eight years.

Description of alleged health effects: The complainant alleged that the odor causes them to have sore eyes, burning nose, nausea, headaches, and diarrhea.

Description of alleged property effects: The complainant alleged that they experience decreased use and enjoyment of their property due to the chemical odors.

Alleged source: CES Environmental Services

Contact Name: Prabhakar R. Thangudu

Contact Title: HSE Manager

Source Address: 4904 Griggs Road

City (County), State, Zip Code: Houston (Harris County), TX 77021

Telephone Number: (713) 676-1460

Time Contacted: 4:00 p.m. on September 17, 2009

Comment: Mr. Thangudu was informed of the complaint made against CES during the on-site investigation on September 17, 2009.

Map of source location is included in Attachment 1.

Daily Summary

Date and time complainant contacted prior to conducting investigation (if not anonymous): The complainant was contacted around 3:30 p.m. on September 17, 2009 while conducting the odor survey.

Additional information supplied by complainant: The complainant stated that the City of Houston had been out earlier in the day and that the city investigator had vomited due to the strong odor. The complainant further stated that the city investigator took a grab sample of the air to conduct analysis on. They further explained that the odors occur at any point during the day and have been so bad that the complainant has been forced to leave their residence, even in the middle of the night.

Date of investigation: September 17, 2009

Name of investigator(s): Amy Messick, Melissa Thompson, Daniel O'Brien

Time of arrival: 3:15 p.m.

Description of the surrounding land use: The surrounding land use is primarily residential with elementary schools located in the area.

Description of the terrain: The terrain is primarily flat with few trees.

Investigation Summary

Meteorological conditions during alleged incident:

Cloud Cover: Mostly cloudy

Wind direction: West

Wind Speed: 10 mph, gusts up to 16 mph

Temperature: 78.8 degrees Fahrenheit

Precipitation: None

Source of Meteorological Conditions: Weather Underground

Meteorological conditions during investigation:

Cloud Cover: Overcast

Wind direction: West

Wind Speed: 10 mph, gusts up to 18 mph

Temperature: 78.8 degrees Fahrenheit

Precipitation: None

Source of meteorological conditions: Weather Underground

Investigation Narrative:

Ms. Messick, Ms. Thompson, and Mr. O'Brien arrived at CES Environmental Services around 3:15 p.m. on September 17, 2009. The investigators conducted an odor survey from 3:18 p.m. to 3:30 p.m. along Grace Lane, which lies to the east of the facility and was downwind of the facility at the time. The investigators identified several odors along Grace Lane. The first of these odors was light to moderate in intensity and offensive. It was detected for five minutes. The odor was similar to a chlorine bleach or laundry detergent odor, and one investigator stated that it smelled like air freshener.

The second odor smelled almost similar to a fertilizer odor, but with a greater chemical component. One investigator stated that the odor smelled similar to amines, which have a very distinctive, offensive odor. This offensive odor was detected for eight minutes from very light to strong intensity. After this point, the investigators were unable to stay in the odor plume due to the fact that the wind direction was shifting slightly.

During the odor survey, Mr. O'Brien utilized the GasFindIR camera to determine if there were any VOCs in the area. No VOCs were noted from the facility. Additionally, the Multi-Rae did not indicate the presence of any VOCs.

The investigators were approached by three different residents. The investigators explained to the residents that they were conducted an odor survey due to a complaint. All of the residents stated that they frequently experienced strong, offensive odors from CES. They expressed health concerns due to the air contaminants that they stated they were breathing on a daily basis.

At approximately 3:52 p.m., the investigators continued the area survey upwind of CES Environmental Services along the driveway leading to the CES delivery entrance. The investigators viewed a scrubber on the west side of the property. The heat signature as detected by the GasFindIR showed that the scrubber was in use. The ductwork from one tank of the scrubber was duct-taped in place. No VOCs were noted with the GasFindIR or the Multi-Rae. The investigators also viewed several tanks near the back of the CES property. No VOCs were noted coming from the tank farm with the GasFindIR camera. The camera indicated that one of the tanks was heated. Two smaller tanks were noted near the main warehouse closer to the scrubber. One of the tanks had an open hatch on top, but no VOCs were detected with the camera.

At approximately 4:00 p.m., the investigators were approached by a CES representative who later identified himself as Mr. Matt Bowman, President of CES. Mr. Bowman led the investigators into the facility. Before entering the office building, the investigators noted a boxcar-sized container emitting mist into the air near the office building. See Attachment 2, Photographs. Mr. Bowman explained that this was an odor masking compound that the facility used to mitigate odors. The investigators noted that the smell was the same as the chlorine-like, detergent smell noted earlier in the odor survey. The investigators explained that an odor complaint had been received and explained the FIDO (Frequency, Intensity, Duration, Odor) Protocol to Mr. Bowman. Mr. Bowman requested a copy of the protocol and the investigators gave him a copy.

The investigators requested information as to what kinds of activities were being performed earlier that day. Mr. Bowman stated that there was no activity going on and further stated that CES was being driven out of business by all of the complaints. The investigators requested to speak with the environmental manager to discuss activities at the site.

At approximately 4:30 p.m., the investigators met with Mr. Prabhakar Thangudu, HSE Manager with CES Environmental Services. Mr. Thangudu also stated that no activity had occurred at the site that day. He contacted an operations manager at this point, who also reaffirmed that no loading or unloading had occurred on

that date, September 17, 2009. When asked about the odor making mist, Mr. Thangudu stated that they usually only have the mister on when there is activity on-site. The investigators then requested a site walk-through.

The site walk-through began in the wastewater unloading area near the front of the site. The investigators noted an open trough where wastewater is unloaded and sent to a series of treatment containers and filter presses. The open trough could potentially allow the emission of VOCs from wastewater and could be a source of nuisance odors. This will be considered an additional issue. See Attachment 2, Photographs. Mr. Thangudu explained that CES adjusts the pH of the wastewater, uses a flocculent to drop out solids, filters the solids, and further treats the water with ferric chloride and sulfuric acid. The solids from the wastewater are filtered out and deposited into a roll-off bin for disposal. Several large yellow overpack drums near this area were labeled "solids" and had open bung holes. A strong acidic smell was noted near these drums. See Attachment 2, Photographs.

Behind the filtration device, the investigators viewed a crusher, which Mr. Thangudu explained was used to crush larger solids to a more manageable size for disposal. The investigators noted staining on the roof above the crusher.

From there, Mr. Thangudu took the investigators to the lab to view the log sheets for all wastewater loading and unloading, as well as laboratory analysis of incoming wastes. The log sheets showed that despite Mr. Thangudu's and Mr. Bowman's statements, a tank truck containing 4,666 gallons of oily water had been unloaded at approximately 3:01 p.m. that day.

Records were also reviewed showing wastewater testing conducted on various tanks for the date range of September 9-17, 2009. Two tanks were tested on September 17, 2009. At approximately 9:10 a.m., tank 6 was tested and had a reported total organic compound concentration of 2,970 ppm and a phenol content of 10 ppm. At approximately 10:35 a.m., T-4 was tested and had a reported total organic compound concentration of 20,250 ppm and a phenol content of 20 ppm.

Additionally, on September 17, 2009, CES Environmental tested the content of five tank truck tanks with incoming wastewater. These five wastewater loads ranged from 1,303 gallons to 5,000 gallons each with total organic concentrations up to 92,460 ppm. The time of the last tank test was not recorded, and the pH and total organic compound concentration of the wastewater received from Port Arthur CES (PACES) at 3:17 p.m. were not recorded. The incomplete records will be considered an additional issue. See Attachment 6, Records provided by facility. CES also accepted two 300-gallon totes of xylene on September 17, 2009.

At this point, the investigators went to the oil processing area, where used oil is recycled and recovered. A collection of totes and tanks lies to the west of this area. Downwind of the tanks, the investigators noted an odor near an enclosed trailer. The specific location of the odor could not be pinpointed due to variable wind speed. The investigators noted that some of the chemical totes in this area of the plant had significant heels of apparent chemical residue. Additionally, many of these totes were unmarked. See Attachment 2, Photographs. The totes that still contained liquid heels were sealed; however, some of the other totes in the area that were empty were left open. The odor near the totes and enclosed trailer were classified as highly offensive and strong, although it did not match any of the odors documented off-site.

The investigators then walked downwind of the oil recovery area tank farm. At this point, the investigators detected a very strong, highly offensive odor that caused several of the investigators to have headaches. One investigator experienced burning eyes at this point as well. Next to the tank farm was "Building H" which appeared to be used for tote washing or tank unloading activities. There was standing liquid inside this area and the investigators detected a strong, offensive to highly offensive odor. See Attachment 2, Photographs. The odor detected at this point was very similar to the amine-like odor noted during the off-site odor survey.

The investigators returned to the office building and then left the site at approximately 5:45 p.m. The investigators conducted another odor survey along Grace Lane, downwind of CES Environmental Services at this time. No significant odors were detected off-site. The investigators left the area at 6:30 p.m.

Was odor detected? Yes

Investigator's Odor Log is included in Attachment 3.

TCEQ - Odor Investigation Checklist is included in Attachment 4.
Odor Survey Route Map is included in Attachment 5.

Description of the odor: Two distinct odors were noted both on and off the site. The first odor had a chlorine bleach-like smell, almost like laundry detergent or an old air freshener. This was later determined to be the odor masking compound. The second odor was almost similar to sewage or fertilizer and might have been an amine compound. This smell was detected downwind of the oil processing area and building H.

Downwind:

Odor offensiveness category: Offensive

Duration of the odor: 13 minutes total

Odor intensity for 1 minute: Strong

Odor intensity for any 10 consecutive minutes: Odors were not detected for 10 consecutive minutes

Odor intensity for 1 hour: Odors were not detected for one hour

Frequency of the odor: Single occurrence (see notes below for characterization of frequency information)

Upwind:

Odor offensiveness category: N/A

Duration of the odor: N/A

Odor intensity for 1 minute: N/A

Odor intensity for any 10 consecutive minutes: N/A

Odor intensity for 1 hour: N/A

Characterization of frequency notes:

TCEQ Investigators detected light odors downwind of CES on several prior occasions. During an emission event and focused investigation on July 8, 2009, a faint intermittent odor was noted (CCEDS Investigation numbers 765254 and 710235).

On December 8, 2008, during an emission event and complaint investigation, a slight faint odor was noted by the investigators. Odors were also observed during a complaint investigation conducted on December 16, 2008 (CCEDS Investigation number 722419).

A focused investigation and complaint investigation was conducted on the following dates: November 5-6 and 19, and December 6, 2008 (CCEDS Investigation number 720985). Light to moderate hydrocarbon odors were detected on each of these days. Despite previous documentation of odors, the odor cannot be classified as a quarterly occurrence and therefore is listed as a single occurrence.

Were other citizens contacted? Yes. Two additional residents approached the TCEQ investigators during the odor survey and described similar health concerns as the complainant. The citizens described recurring odors that caused headaches and nausea.

Was an odor log left with the complainant? No

Location of the odor: Several potential locations of odors were detected, including open overpack drums in the wastewater treatment area, the odor masking mist system, the oil processing area tank farm, and standing liquid in a tank wash station (Building H).

Specific cause of the odor: Several potential causes of the odor were noted. These could include unloading wastewater containing high VOCs into an open trough, atmospheric tanks that are not suited to control compounds containing high vapor pressure components, and fugitive emissions relating to spilled liquids that were not cleaned up promptly.

Did the emissions have an impact on the complainant's property? Yes. The investigators detected light to strong offensive odors off-site of CES that would cause the complainant to experience decreased enjoyment and use of their property.

Did the emissions have an impact on the investigator(s)? Yes. While on-site, the investigators experienced burning eyes and headaches.

Was a nuisance condition verified? No. Due to the fact that the odor was not of sufficient intensity or duration, an odor nuisance could not be confirmed.

Is actual source the same as the alleged source? Yes

Was a compliance investigation conducted (i.e. MNSR)? Yes

Records were reviewed relating to three separate permit by rule (PBR) registrations. PBR 84713 authorizes wastewater unloading and processing. Mr. Thangudu stated that this PBR was issued for sulfurized isobutylene (SIB), which is no longer processed at CES.

PBR 86272 authorizes a thermal oxidizer to control odors from the oil processing area. This thermal oxidizer is not currently in operation. Mr. Thangudu stated that six carbon drums are currently being used to control odors but that these odor control measures were voluntary. Therefore, the PBR registration does not require the use of the thermal oxidizer to control emissions and no violation will be cited.

PBR 83798 authorizes the oil improvement area. In the registration, CES represented that audio, visual, and olfactory (AVO) checks for leaks would be conducted. Mr. Thangudu stated that these checks were performed on a weekly basis. Mr. Thangudu provided the weekly checklist from September 18, 2009. The checklist indicated that valves, flanges, and gaskets associated with the above ground storage tanks were free of leaks. In the truck loading/unloading area, the checklist indicated that the connections were capped or blank flanged when not in use. Mr. Thangudu stated that the operators are required to immediately inform their supervisor if any leaks are noted.

The record request response can be found in Attachment 6.

Was any additional permit or 30 TAC investigation conducted? No

Were any non-nuisance violations alleged? No

Complainant contacted with the results of the investigation (if not anonymous):

Date: N/A

Time: N/A

Comment: The phone number provided by the complainant had been disconnected; therefore, they could not be contacted after the investigation.

Exit Interview

On October 12, 2009, the investigator conducted the exit interview to request additional records. An Exit Interview form was completed by the investigator and emailed to Mr. Prabhakar Thangudu at pthangudu@cesenvironmental.com. The Exit Interview form is included in Attachment 7. An updated exit interview form detailing the additional issues noted during the investigation was emailed to Mr. Thangudu on November 9, 2009. This form can also be found in Attachment 7.

GENERAL FACILITY AND PROCESS INFORMATION

Process description

CES Environmental Services operates a transport container cleaning operation and waste handling operation on Griggs Road in Houston, Texas. The facility is authorized through permits by rule (PBRs) to handle materials including the following: methylene chloride, sulfurized isobutylene, light resins (including styrene), methyl-ethyl ketone (MEK), formaldehyde, diazinon, phenol, oily water, gasoline, and petroleum products with less than 10% benzene content. The facility unloads wastewater and other wastes from transport containers and treats it to make it suitable for discharge. Methylene chloride recovery is conducted on a sporadic basis and it controlled by use of a diesel scrubber. Oily water, consisting of used lube oil from refineries and other contaminants, is processed to recover components of the mixture.

BACKGROUND ON THE ALLEGED SOURCE

Current Enforcement Actions:

Based on this investigation, no violations are being alleged.

Agreed Orders, Court Orders, and Other Compliance Agreements

Based on review of CCEDS, regional office files, and enforcement database, there were no Agreed Orders (AO) issued to the regulated entity by the TCEQ. However, one multimedia agreed order was pending as of the time of this investigation (Docket No. 2009-0141-MLM-E).

Complaints

Based on review of CCEDS, there were eight (8) complaints filed against the regulated entity for the past two years with the TCEQ Houston Region Office. Additionally, since October 2005, the City of Houston's Bureau of Air Quality Control has investigated more than 200 complaints against CES Environmental Services.

Prior Enforcement Issues

Based on review of CCEDS and enforcement database, there were no Notices of Violation (NOVs) and three Notices of Enforcement (NOEs) issued by the TCEQ to the regulated entity in the last five years. These three NOEs are grouped together into the pending multimedia agreed order and include violations for an avoidable emissions event, an excessive emissions event, and various permit violations.

ADDITIONAL INFORMATION/RECOMMENDATIONS

Conclusions and Recommendations

No violations were noted during the investigation.

Areas of Concern

There were no specific areas of concern noted during this investigation.

Additional Issues

There were three additional issues noted during this investigation:

1. The unloading of wastewater into an open trough could be a potential source of odorous VOC emissions. CES Environmental should ensure that nuisance-level odors are not emitted from the wastewater unloading area.
2. The records of tank trucks unloaded at the site did not contain all of the required information, including the time the tanks were unloaded or tested and the total organic compound concentration. These records are necessary for the facility to determine compliance with general permit by rule (PBR) requirements and should be properly maintained.
3. CES Environmental Services should implement good housekeeping procedures to limit the amount of standing wastewater or other liquids. Standing wastewater is another potential source of odorous VOC emissions which can be controlled through housekeeping measures.

List of Report Attachments

1. Area Map
2. Photographs
3. Investigator's Odor Log
4. TCEQ - Odor Investigation Checklist
5. Odor Survey Route Map
6. Records Provided by Facility
7. Exit Interview Forms

No Violations Associated to this Investigation

Additional Issues

Description Item 1

Additional Comments

The unloading of wastewater into an open trough could be a potential source of odorous VOC emissions. CES Environmental should ensure that nuisance-level odors are not emitted from the wastewater unloading area.

Description Item 2

Additional Comments

The records of tank trucks unloaded at the site did not contain all of the required information, including the time the tanks were unloaded or tested and the total organic compound concentration. These records are necessary for the facility to determine compliance with general permit by rule (PBR) requirements and should be properly maintained.

Description Item 3

Additional Comments

CES Environmental Services should implement good housekeeping procedures to limit the amount of standing wastewater or other liquids. Standing wastewater is another potential source of odorous VOC emissions which can be controlled through housekeeping measures.

Signed

Date _____

Environmental Investigator

Signed

Date _____

Supervisor

Attachments: (in order of final report submittal)

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

- ___ Maps, Plans, Sketches
- ___ Photographs
- ___ Correspondence from the facility
- ___ Other (specify) :

