AIR CP_102171238_CP_20180215_INVESTIGATION

Texas Commission on Environmental Quality
Investigation Report

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Customer: TXI Operations, LP
Customer Number: CN600125157

Regulated Entity Name: MCKINNEY PLANT 3
Regulated Entity Number: RN102171238

Investigation # 1540584

Incident Numbers
301019 301247
301400

Investigator: ARCHER CHATTIN

Site Classification MINOR SOURCE

Conducted: 02/15/2019 -- 02/15/2019

No Industry Code Assigned

Program(s): AIR NEW SOURCE PERMITS

Investigation Type: Compliance Investigation

Location: PORTABLE

Additional ID(s): 39376

Address: 2105 S MCDONALD ST, MCKINNEY, TX , 75069

Local Unit: REGION 04 - DFW METROPLEX

Activity Type(s): AIRCOMPL - AIR CMPL - AIR COMPLAINT INV

Principal(s):

Role	Name
RESPONDENT	TXI OPERATIONS LP

Contact(s):

Role	Title	Name	Phone	
PARTICIPATED IN	BATCH MAN	MR CHRIS MARKCUM	Cell	(214) 551-6860
REGULATED ENTITY CONTACT	ENVIRONMENTAL MANAGER	MR JESSE MARTINDALE	Phone	(972) 647-3742

Other Staff Member(s):

Role	Name
Investigator	MINGYUAN WEI
Supervisor	KIMBERLI FOWLER
Investigator	JESSICA SPRAGUE

Associated Check List

Checklist Name	Unit Name
AIR COMPLAINT INVESTIGATION	CMPL
AIR INVESTIGATION - EQUIPMENT MONITORING AND SAMPLING revised 06/2013	EQUIP

Investigation Comments:

INTRODUCTION

On February 15, 2019, Ms. Archer Chattin, Environmental Investigator ('Investigator') of the Texas Commission on Environmental Quality (TCEQ), Dallas/Fort Worth (DFW) Region office, conducted an Air Quality Complaint (AIR-CMPL) investigation at TXI Operations McKinney Plant 3 (TXI Operations) located at 2005 S State Highway 5, McKinney, Collin County, Texas. The investigation was conducted in response to three citizen complaints. Incident No. 301400, received on January 24, 2019, alleging that dust was impacting their property and requested sampling. Incident No. 301019, received January 17, 2019, alleged that their property was being impacted by dust. Incident No. 301247, received January 18, 2019, alleged that their property was being impacted by dust. They also had concern that a nearby school was being impacted by operations at the facilities. On January 24, 2019, the investigator contacted all the complainants and discussed the investigation.

The area of interest in this investigation contains multiple facilities that conduct operations with the potential to produce dust, including three facilities that are currently the subject of ongoing Air Quality Complaint investigations: TXI Operations McKinney Plant (RN102171238) being addressed in this investigation, Cowtown Redi Mix (RN108711193) being addressed in Investigation no. 1554375, and Lhoist North America McKinney Terminal (RN100804632) being addressed in investigation no. 1554380.

The purpose of the investigation was to determine if TXI Operations is operating in compliance with applicable state and federal authorizations, evaluate potential nuisance conditions, and to evaluate the effectiveness of corrective actions taken by the facility. Mr. Michael Wei and Ms. Jessica Sprague, Environmental Investigators for TCEQ, and Mr. Chris Markcum, Batch Man for TXI Operations, participated in the investigation. Mr. Jesse Martindale, Environmental Manager for TXI Operations, was the regulated entity contact for this investigation.

DAILY NARRATIVE

On February 15, 2019, the investigators arrived in the vicinity of the complaint at 10:00 am and took weather readings using an anemometer. The temperature was 54 degrees Fahrenheit with 50% humidity and wind from the southwest at an average of 2 miles per hour. Ms. Chattin met with the complainant associated with Incident No 301019 and took Tape Lift Samples of dust on the complainant's property.

Ms. Chattin met with the complainant associated with incident no. 301400 and discussed the investigation. The complainant expressed emotional distress and concern for their health and the health of their community due to the impact of breathing cement dust. The investigators observed dust on surfaces at the property. The investigators took Tape Lift Samples of dust present on the complainant's property from uncovered surfaces on the property. The investigators left the property.

The investigators then proceeded to the property of the complainant associated with Incident No. 301019. Ms. Chattin met with the complainant and discussed the investigation. The complainant stated that they were unhappy that they could not enjoy their outdoor spaces on the property because the dust coated their furniture and ruined their clothes. The complainant stated that they were unable to keep up with the amount of cleaning it took to make outdoor spaces useable. Ms. Chattin observed dust on surfaces at the complainant's property. The investigators took Tape Lift Samples from uncovered surfaces on the property. The investigators left the property.

The complainant associated with Incident No. 301247 was not available during the investigation but requested samples be taken at their property. The investigators took Tape Lift Samples of dust present on uncovered surfaces on the complainant's property. The investigators left the complainant's property and arrived near Malvern Elementary School at approximately 10:45 am and took Tape Lift Samples of dust on uncovered surfaces in the area around the school.

The investigators observed the facility from off property for approximately two hours and did not observe dust emissions leaving the property during that time. The investigators used the Optical Gas Imaging Camera (OGIC) to observe the facilities and detected no emissions.

The investigators arrived at the TXI Operations entrance at 1:10 pm. No visible emissions were observed being generated on the property. Ms. Chattin did not observe any sprinklers, sweepers, or other dust mitigation strategies in use. Ms. Chattin made contact with Mr. Markcum, presented credentials and discussed the purpose of the investigation. Ms. Chattin asked if there had been any operational changes or incidents that had the potential to emit dust since the previous investigation. Mr. Markcum stated that he was not aware of any. Ms. Chattin asked if the facility was continuing to water the stockpiles and roadways. Mr. Markcum said that they

watered every day and swept the traffic areas on an as needed basis. The investigators took two Tape lift sample onsite to serve as reference samples, one near the batch drop point, and one on the in-plant road used to enter and exit the facility. While collecting the samples Ms. Chattin observed that the in-plant roads did have some sand and dirt on them but that it did not appear to become airborne when trucks drove on it.

The investigators also took two Tape Lift reference samples at Cowtown Redi Mix. For additional information regarding the investigation at this facility see Investigation No. 1554375.

Tape Lift samples were sent to the TCEQ Air Laboratory and the particles collected are characterized using polarized light microscopy and Scanning Electron Microscopy to determine the concentrations of different minerals and organic compounds. On March 22, 2019, the TCEQ laboratory returned the final results from the tape lift samples (see Attachment 1: Laboratory Analysis Results). The analysis used polarized light microscopy to analyze and compare particles taken offsite to particles taken from TXI Operations and Cowtown Redi Mix.

The reference sample no. 1540584-L was taken at the Cowtown Redi Mix batch drop point. The sample contained between 71 and 80% cement dust, between 5 and 20% each common clays, glassy spheres, and rubber dust; and less than 5% carbon and fungal material. EDS analysis of cement dust particles in the sample showed primary peaks of carbon, oxygen, aluminum, silicon, and calcium. EDS analysis of a feldspar crystal in the sample showed primary peaks of aluminum, silicon, and potassium.

The reference sample no. 1540584-M was taken in a high traffic area at Cowtown Redi Mix. The sample contained over 80% common clays and minerals, and less than 5% spiderwebs. EDS analysis of a quartz crystal in the sample showed primary peaks of oxygen, and silicon. EDS analysis of a feldspar crystal in the sample showed primary peaks of oxygen, aluminum, silicon, and potassium.

The reference sample no. 1540584-J was taken at the TXI Operations Batch drop point. The sample contained between 71 and 80% cement dust, between 5 and 20% each carbonaceous material and glassy spheres; and less than 5% common clays and minerals and rubber dust. EDS analysis of cement dust particles in the sample showed primary peaks of carbon, oxygen, aluminum, silicon, and calcium.

The reference sample no. 1540584-K was taken in a high traffic area at TXI Operations. The sample contained over 80% common clays and minerals, and less than 5% cement dust, glassy spheres, and rubber dust. EDS analysis of a quartz crystal in the sample showed primary peaks of oxygen, and silicon. EDS analysis of a feldspar crystal in the sample showed primary peaks of oxygen, aluminum, silicon, and potassium.

Sample 1540584-D was taken near Malvern Elementary. The sample contained between 21 and 30% cement dust, between 31 and 40% common clays and minerals, and less than 5% each of carbonaceous material, fungal material, glassy spheres, plant Trichomes, pollen, and spider webs. EDS analysis of cement particles showed primary peaks of carbon, aluminum, silicon, oxygen, potassium, and calcium. The x-ray spectra of the cement particles analyzed were consistent with the reference samples taken at both the Cowtown and TXI Operations batch drop points.

Sample 1540584-B was taken at the complainant's property associated with Incident No. 301247. The sample contained between 31 and 40% cement dust, between 31 and 40% common clays and minerals, between 5 and 20% rubber dust, and less than 5% each of fungal material, glassy spheres, plant fibers, and pollen. EDS analysis of cement particles showed primary peaks of carbon, aluminum, silicon, oxygen, sodium, and calcium. The x-ray spectra of the cement particles analyzed were consistent with the reference samples taken at both the Cowtown and TXI Operations batch drop points.

Sample 1540584-C was taken at the complainant's property associated with Incident No. 301400. The sample contained between 21 and 30% each cement dust and rubber dust, between 31 and 40% common clays and minerals, between 5 and 20% plant stellate hairs, and less than 5% each of carbonaceous material, fungal material, glassy spheres, plant fibers, pollen, and insect parts. EDS analysis of cement particles showed primary peaks of carbon, aluminum, silicon, oxygen, and calcium. The x-ray spectra of the cement particles analyzed were consistent with the reference samples taken at both the Cowtown and TXI Operations batch drop points.

Sample 1540584-G was also taken at the complainant's property associated with Incident No. 301400. The sample

contained between 5 and 20% each cement dust and rubber dust, between 31 and 40% each of fungal material and common clays and minerals, and less than 5% each of glassy spheres, white paint overspray, pollen, and spider webs, and starch grains. EDS analysis of cement particles showed primary peaks of carbon, aluminum, silicon, oxygen, and calcium. The x-ray spectra of the cement particles analyzed were consistent with the reference samples taken at both the Cowtown and TXI Operations batch drop points.

Sample 1540584-F was taken at the complainant's property associated with Incident No. 301019. The sample contained between 21 and 30% each cement dust and rubber dust, between 31 and 40% common clays and minerals, between 5 and 20% pollen, and less than 5% each of carbonaceous material, glassy spheres, plant trichomes, and plant stellate hairs. EDS analysis of cement particles showed primary peaks of carbon, aluminum, silicon, oxygen, chlorine, potassium, and calcium. The x-ray spectra of the cement particles analyzed were consistent with the reference samples taken at both the Cowtown and TXI Operations batch drop points.

Sample 1540584-A was also taken at the complainant's property associated with Incident No. 301019. The sample contained between 5 and 20% cement dust, between 31 and 40% each common clays and minerals and rubber dust, and less than 5% each of glassy spheres, plant fibers, pollen, plant trichomes, and insect parts. EDS analysis of cement particles showed primary peaks of aluminum, silicon, oxygen, and calcium.
The x-ray spectra of the cement particles analyzed were consistent with the reference samples taken at both the Cowtown and TXI Operations batch drop points.

Ms. Chattin reviewed sample results. The laboratory analysis concludes that the cement dust particles observed on the tape-lift samples taken from the complainant's properties and the facilities appeared to be consistent with each other. Cowtown Redi Mix and TXI Operations appear to be the only potential sources of cement dust in the immediate area of the complainant's properties and have both been observed to have visible emissions leaving their properties in previous investigations, therefore both facilities will be considered sources of the cement dust observed on the complainant's properties. Ms. Chattin checked past meteorological data to determine when the last rain event in the area of the sample locations to approximate a time frame for accumulation of the dust sampled. The investigator found that the most recent rain event had occurred on February 7, 10 and 11, 2019. The second most recent rain event occurred on January 3, 2019.

On April 11, 2019, the complainant associated with Incident No. 301247 submitted a written statement stating how the dust from the regulated entities was impacting them and their property. On April 12, 2019, the complainant associated with Incident No. 301400 submitted a written statement describing how the dust from the regulated entity was impacting them and their property.

The presence of cement dust in the recent dust accumulation found at the complainants' properties, along with complainant written statements of inability to use and enjoy their outdoor spaces due to the presence of the dust appears to constitute a discharge of air contaminants in such concentration and duration as to interfere with the normal use and enjoyment of complainants' properties. This is a violation of 30 TAC 101.4. It is a category B17 violation, in accordance with the Enforcement Initiation Criteria (EIC) revision 16 and is classified as moderate. Cowtown Redi Mix also received a violation of 30 TAC 101.4 based on this determination. For additional information see Investigation No. 1554375. The presence of cement dust at the complainants' properties also appears to suggest that corrective actions implemented by TXI Operation are not sufficiently minimizing dust emissions leaving the property.

Exit Interview
On April 4, 2019, Ms. Chattin discussed the results of the investigation with Mr. Martindale and provided an Exit Interview form via email.

GENERAL FACILITY AND PROCESS INFORMATION
Process Description
McKinney Plant 3 is a permanent concrete batch plant. Washed raw aggregate materials are hauled to site in covered trucks. Aggregates are loaded into aggregate bins using front-end loaders. Cement and fly ash are pumped to pigs from delivery trucks using a closed air hose pumping system. Cement is moved via air hose from pig to cement silo. Fly ash is moved from pig to fly ash silo via air hose. Aggregate bins and silos feed to discharge point. Emissions for aggregates, cement, and fly ash are handled by the central dust collection system and the silo collectors.

BACKGROUND
Compliance History
RE Name: McKinney Plant 3 RN: RN102171238
Classification: Satisfactory Rating: 4.00 Publication Date: November 15, 2018
Customer Name: TXI Operations LP CN: CN600125157
Classification: Satisfactory Rating: 0.37 Publication Date: February 18, 2019

Agreed Orders, Court Orders, and other Compliance Agreements
No agreed orders, court orders, or other compliance agreements exist regarding this facility in the last five years.

Prior Enforcement Issues

On June 14, 2018, a Notice of Violation was sent to the facility noting two violations for failure to achieve maximum control of dust emissions from stockpiles and vehicle traffic areas (violation tracking No. 677421), and failure to maintain intact all surfaces subject to vehicle traffic entering, exiting, or conducting primary functions with a cohesive hard surface (violation tracking No. 677423). Written corrective actions were submitted by the facility and the violations were resolved in investigation no. 1512221.

Complaints
The TCEQ DFW Region office has received ten air quality related complaints regarding this facility in the last five years. Incident No. 278932 was received on February 19, 2018. The complainant alleged that the facility was creating excessive dust and operating a concrete recycling facility that was not authorized. This complaint was addressed in Investigation No. 1473108 and resulted in no violations.

Incident No. 281659 was received on March 27, 2018. The complainant alleged the facility was creating dust and was not in compliance with their authorization. Incident No. 282667 was received on April 17, 2018. The complainant alleged dust from the regulated entity was impacting their property. These two complaints were addressed in Investigation No. 1484771 and resulted in 3 violations. Martin Marietta has submitted corrective action in response to the Notice of Violation dated June 14, 2018 and the submittal is currently under review.

Incident No. 288326 was received July 11, 2018 and alleged dust and chemical smells were impacting their property. This complaint is addressed in investigation no. 1504430. No violations were alleged.

Incident No. 289910 was received August 7, 2018. The complainant alleged that they were concerned about the use of nitrogen injection by the trucks loading. This complaint is addressed in investigation no. 1512221. No violations were alleged.

Incident No. 298902 was received December 12, 2018. The complainant alleged that cement dust was impacting their property. Incident No. 299605 was received December 26, 2018. The complainant alleged that the regulated entity was not operating a required sprinkler system to control dust emissions. These complaints are addressed in investigation no. 1538233. No violations were alleged.

Incident No. 301019 was received January 17, 2019. The complainant alleged that dust emissions from the alleged source was impacting their property. Incident No. 301247 was received January 18, 2019. The complainant alleged they had dust issues. Incident No. 301400 was received January 24, 2019. The complainant alleged that dust from the facility is impacting their property and requested sampling take place. These complaints are addressed in the current investigation.

ADDITIONAL INFORMATION
Conclusions, Recommendations, and Current Enforcement Actions
One violation is alleged for failure to prevent the discharge of an air contaminant, specifically cement dust, in such concentration and duration as to interfere with the normal use and enjoyment of complainant's properties. A Notice of Violation letter will be sent to the facility and a copy of the report will be sent to the complainants. Close incidents nos. 301019, 301247, and 301400.

Additional Issues
None.

NOV Date 04/16/2019 **Method** WRITTEN

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

Track Number: 710322 **Compliance Due Date: 04/30/2019**

Violation Start Date: 2/15/2019

30 TAC Chapter 101.4
5C THSC Chapter 382.085(b)

Alleged Violation:

Investigation: 1540584 Comment Date: 04/15/2019

Failure to prevent the discharge of cement dust in such duration and concentration as to interfere with the normal use and enjoyment of property. During an investigation conducted on February 15, 2019, the investigators observed dust accumulation on complainants' properties and took Tape Lift Samples. The investigators also took reference samples at TXI Operations and Cowtown Redi Mix. The sample analysis determined that the cement dust particles observed on the tape-lift samples taken from the complainant's properties and the facilities appeared to be consistent with each other. TXI Operations and Cowtown Redi Mix are the only potential significant sources of cement dust in the area of the complainants properties and both have been observed to have visible emissions leaving their properties during previous investigations, therefore both facilities will be considered sources of the cement dust observed on complainants' properties. The complainants stated that this dust causes them not to be able to use outdoor spaces or furniture because the dust ruins clothes and causes concern for their health when they breathe it. The presence of cement dust at the complainants' properties also appears to suggest that corrective actions implemented by TXI Operation are not sufficiently minimizing dust emissions leaving the property.

Recommended Corrective Action: Provide a written description of corrective actions taken to address this violation within 14 days of the Notice of Violation letter.

Signed _____ **Date** 4/15/19
Environmental Investigator

Signed _____ **Date** 4/15/19
Supervisor

Attachments: (in order of final report submittal)

___Enforcement Action Request (EAR)

_X_ Letter to Facility (specify type) : NOV

Investigation Report

_1_ Sample Analysis Results

___Manifests

___Notice of Registration

___Maps, Plans, Sketches

___Photographs

___Correspondence from the facility

_X_ Other (specify) :

2: Exit interview Form

TCEQ

DFW Region

Attachment 1
Laboratory Analysis Results

McKinney Plant 3 – RN102171238
TXI Operations LP – CN600125157

Investigation No.: 1540584
Investigation Date: 2/15/19

Pages: 12

Texas Commission on Environmental Quality

Laboratory and Quality Assurance Section
P.O. Box 13087, MC-165
Austin, Texas 78711-3087
(512) 239-1716

Laboratory Analysis Results

Request Number: 1902004

Request Lead:Frank Martinez Region:T04 Date Received: 2/22/2019

Facility(ies) Sampled	City	County	Facility Type
TXI Operations Concrete Batch Plant	McKinney	Collin	Manufactory

Sample(s) Received

Field ID Number: 1540584-H Laboratory Sample Number: 1902004-001RS Sampled by: Archer Chattin
Sampling Site: Suspected Source Date & Time Sampled: 02/15/19 13:00:00 Valid Sample: Yes
Comments: Tape lift of Lhoist wash out.

Field ID Number: 1540584-I Laboratory Sample Number: 1902004-002RS Sampled by: Archer Chattin
Sampling Site: Suspected Source Date & Time Sampled: 02/15/19 13:00:00 Valid Sample: Yes
Comments: Tape lift of Lhoist bulk dry line.

Field ID Number: 1540584-L Laboratory Sample Number: 1902004-003RS Sampled by: Archer Chattin
Sampling Site: Suspected Source Date & Time Sampled: 02/15/19 13:25:00 Valid Sample: Yes
Comments: Tape lift of Cowtown drop point.

Field ID Number: 1540584-M Laboratory Sample Number: 1902004-004RS Sampled by: Archer Chattin
Sampling Site: Suspected Source Date & Time Sampled: 02/15/19 13:25:00 Valid Sample: Yes
Comments: Tape lift of Cowtown traffic area.

Field ID Number: 1540584-J Laboratory Sample Number: 1902004-005RS Sampled by: Archer Chattin
Sampling Site: Suspected Source Date & Time Sampled: 02/15/19 13:10:00 Valid Sample: Yes
Comments: Tape lift of TXI drop point.

Field ID Number: 1540584-K Laboratory Sample Number: 1902004-006RS Sampled by: Archer Chattin
Sampling Site: Suspected Source Date & Time Sampled: 02/15/19 13:10:00 Valid Sample: Yes
Comments: Tape lift of TXI traffic area.

Field ID Number: 1540584-D Laboratory Sample Number: 1902004-007 Sampled by: Archer Chattin
Sampling Site: Complainant's Property Date & Time Sampled: 02/15/19 10:45:00 Valid Sample: Yes
Comments: Tape lift of a sign.

Field ID Number: 1540584-B Laboratory Sample Number: 1902004-008 Sampled by: Archer Chattin
Sampling Site: Complainant's Property Date & Time Sampled: 02/15/19 10:20:00 Valid Sample: Yes
Comments: Tape lift of an unknown. (301247)

Field ID Number: 1540584-C Laboratory Sample Number: 1902004-009 Sampled by: Archer Chattin
Sampling Site: Complainant's Property Date & Time Sampled: 02/15/19 10:05:00 Valid Sample: Yes
Comments: Tape lift of an unknown. (301400)

Field ID Number: 1540584-G Laboratory Sample Number: 1902004-010 Sampled by: Archer Chattin
Sampling Site: Complainant's Property Date & Time Sampled: 02/15/19 10:05:00 Valid Sample: Yes
Comments: Tape lift of an unknown. (301400)

Texas Commission on Environmental Quality
Laboratory and Quality Assurance Section
P.O. Box 13087, MC-165
Austin, Texas 78711-3087
(512) 239-1716

Laboratory Analysis Results

Request Number: 1902004

Sample(s) Received

Field ID Number: 1540584-F Laboratory Sample Number: 1902004-011 Sampled by: Archer Chattin
Sampling Site: Complainant's Property Date & Time Sampled: 02/15/19 10:35:00 Valid Sample: Yes
Comments: Tape lift of an unknown. (301019)

Field ID Number: 1540584-A Laboratory Sample Number: 1902004-012 Sampled by: Archer Chattin
Sampling Site: Complainant's Property Date & Time Sampled: 02/15/19 10:35:00 Valid Sample: Yes
Comments: Tape lift of an unknown. (301019)

Requested Laboratory Procedure(s):

Analysis: AP007MIC
Environmental Sample Characterization using Polarized Light Microscopy

Analysis: AP008MIC
Sample Characterization using Scanning Electron Microscope with an Energy Dispersive X-Ray Microanalysis Spectrometer

Please note that this analytical technique is not capable of measuring all compounds which might have adverse health effects. For questions on the analytical procedures please contact the laboratory manager at (512) 239-1716.

Analyst: Amy Harvey Date: 3/21/19

Laboratory Manager: Frank Martinez Date: 3/22/19

Laboratory Analysis Results

Request Number: 1902004

Analysis Code: AP007MIC & AP008MIC

Sample Number: 1902004-001RS — Analysis began: 2/27/2019

Analyst: Amy Harvey — SOP: AP007MIC — Analysis completed: 3/19/2019

Sample 1540584-H was heavily loaded. Lime accounted for over 80% of the particle coverage. Other particles present in quantities less than 5% included spider web.

Sample Number: 1902004-001RS — Analysis began: 3/4/2019

Analyst: Amy Harvey — SOP: AP008MIC — Analysis completed: 3/19/2019

Energy Dispersive Spectroscopy (EDS) of a lime particle showed elements carbon, oxygen, sulfur, and calcium. The primary peaks in the x-ray spectrum were carbon, oxygen, sulfur, and calcium.
EDS analysis of a second lime particle showed elements carbon, oxygen, and calcium. The primary peak in the x-ray spectrum was calcium.
EDS analysis of a third lime particle showed elements carbon, oxygen, magnesium, aluminum, silicon, and calcium. The primary peaks in the x-ray spectrum were carbon, oxygen, and calcium.

Sample Number: 1902004-002RS — Analysis began: 2/27/2019

Analyst: Amy Harvey — SOP: AP007MIC — Analysis completed: 3/19/2019

Sample 1540584-I was heavily loaded. Lime accounted for over 80% of the particle coverage. Other particles present in quantities less than 5% included common clays and minerals.

Sample Number: 1902004-002RS — Analysis began: 3/4/2019

Analyst: Amy Harvey — SOP: AP008MIC — Analysis completed: 3/19/2019

EDS analysis of a lime particle showed elements carbon, oxygen, and calcium. The primary peaks in the x-ray spectrum were oxygen and calcium.
EDS analysis of a second lime particle showed elements carbon, oxygen, and calcium. The primary peaks in the x-ray spectrum were carbon, oxygen, and calcium.
EDS analysis of a third lime particle showed elements carbon, oxygen, magnesium, silicon, sulfur, and calcium. The primary peaks in the x-ray spectrum were carbon, oxygen, and calcium.

Sample Number: 1902004-003RS — Analysis began: 2/27/2019

Analyst: Amy Harvey — SOP: AP007MIC — Analysis completed: 3/19/2019

Sample 1540584-L was heavily loaded. The sample contained between 71 and 80% cement dust, between 5 and 20% common clays and minerals, between 5 and 20% glassy spheres, and between 5 and 20% rubber dust. Other particles present in quantities less than 5% included carbonaceous material and fungal material.

Laboratory Analysis Results

Request Number: 1902004

Analysis Code: AP007MIC & AP008MIC

Sample Number: 1902004-003RS — Analysis began: 3/4/2019

Analyst: Amy Harvey — SOP: AP008MIC — Analysis completed: 3/19/2019

EDS analysis of a glassy sphere particle showed elements carbon, oxygen, magnesium, aluminum, silicon, calcium, titanium, and iron. The primary peaks in the x-ray spectrum were oxygen, aluminum, silicon, and calcium.
EDS analysis of a second glassy sphere particle showed elements carbon, oxygen, sodium, magnesium, aluminum, silicon, potassium, calcium, titanium, and iron. The primary peaks in the x-ray spectrum were oxygen, sodium, aluminum, silicon, and calcium.
EDS analysis of a cement particle showed elements carbon, oxygen, magnesium, aluminum, silicon, calcium, and iron. The primary peaks in the x-ray spectrum were oxygen, aluminum, silicon, and calcium.
EDS analysis of a second cement particle showed elements carbon, oxygen, magnesium, aluminum, silicon, calcium, titanium, and iron. The primary peaks in the x-ray spectrum were oxygen, aluminum, silicon, and calcium.
EDS analysis of a third cement particle showed elements carbon, oxygen, aluminum, silicon, calcium, and iron. The primary peaks in the x-ray spectrum were carbon, oxygen, silicon, and calcium.
EDS analysis of a mineral (feldspar) particle showed elements carbon, oxygen, aluminum, silicon, and potassium. The primary peaks in the x-ray spectrum were aluminum, silicon, and potassium.

Sample Number: 1902004-004RS — Analysis began: 2/28/2019

Analyst: Amy Harvey — SOP: AP007MIC — Analysis completed: 3/19/2019

Sample 1540584-M was heavily loaded. Common clays and minerals accounted for over 80% of the particle coverage. Other particles present in quantities less than 5% included carbonaceous material, and cement dust.

Sample Number: 1902004-004RS — Analysis began: 3/4/2019

Analyst: Amy Harvey — SOP: AP008MIC — Analysis completed: 3/19/2019

EDS analysis of a mineral (quartz) particle showed elements oxygen and silicon. The primary peaks in the x-ray spectrum were oxygen and silicon.
EDS analysis of a mineral (feldspar) particle showed elements carbon, oxygen, magnesium, aluminum, silicon, phosphorus, potassium, calcium, and iron. The primary peaks in the x-ray spectrum were oxygen, aluminum, silicon, and potassium.

Sample Number: 1902004-005RS — Analysis began: 2/28/2019

Analyst: Amy Harvey — SOP: AP007MIC — Analysis completed: 3/19/2019

Sample 1540584-J was heavily loaded. The sample contained between 71 and 80% cement dust, between 5 and 20% glassy spheres, and between 5 and 20% carbonaceous material. Other particles present in quantities less than 5% included common clays and minerals and rubber dust.

Laboratory Analysis Results

Request Number: 1902004

Analysis Code: AP007MIC & AP008MIC

Sample Number: 1902004-005RS — Analysis began: 3/5/2019

Analyst: Amy Harvey — SOP: AP008MIC — Analysis completed: 3/19/2019

EDS analysis of a glassy sphere particle showed elements carbon, oxygen, sodium, magnesium, aluminum, silicon, potassium, calcium, and iron. The primary peaks in the x-ray spectrum were oxygen, aluminum, and silicon.
EDS analysis of a second glassy sphere particle showed elements carbon, oxygen, magnesium, aluminum, silicon, potassium, calcium, titanium, and iron. The primary peaks in the x-ray spectrum were oxygen, aluminum, silicon, and calcium.
EDS analysis of a cement particle showed elements carbon, oxygen, magnesium, aluminum, silicon, and calcium. The primary peaks in the x-ray spectrum were carbon, oxygen, silicon, and calcium.
EDS analysis of a second cement particle showed elements carbon, oxygen, magnesium, aluminum, silicon, calcium, and iron. The primary peaks in the x-ray spectrum were carbon, oxygen, aluminum, and silicon.
EDS analysis of a third cement particle showed elements carbon, oxygen, silicon, and calcium. The primary peaks in the x-ray spectrum were carbon, oxygen, and calcium.

Sample Number: 1902004-006RS — Analysis began: 2/28/2019

Analyst: Amy Harvey — SOP: AP007MIC — Analysis completed: 3/19/2019

Sample 1540584-K was heavily loaded. Common clays and minerals accounted for over 80% of the particle coverage. Other particles present in quantities less than 5% included cement dust, glassy spheres, and rubber dust.

Sample Number: 1902004-006RS — Analysis began: 3/5/2019

Analyst: Amy Harvey — SOP: AP008MIC — Analysis completed: 3/19/2019

EDS analysis of a mineral (quartz) particle showed elements carbon, oxygen, and silicon. The primary peaks in the x-ray spectrum were oxygen and silicon.
EDS analysis of a mineral (feldspar) particle showed elements carbon, oxygen, aluminum, silicon, and potassium. The primary peaks in the x-ray spectrum were oxygen, aluminum, silicon, and potassium.

Sample Number: 1902004-007 — Analysis began: 2/28/2019

Analyst: Amy Harvey — SOP: AP007MIC — Analysis completed: 3/19/2019

Sample 1540584-D was heavily loaded. The sample contained between 21 and 30% cement dust, between 31 and 40% common clays and minerals, and between 31 and 40% rubber dust. Other particles present in quantities less than 5% included carbonaceous material, fungal material, glassy spheres, plant trichomes, pollen, and spider web.

TCEQ laboratory customer support may be reached at Frank. Martinez@tceq.texas.gov

Laboratory Analysis Results

Request Number: 1902004

Analysis Code: AP007MIC & AP008MIC

Sample Number: 1902004-007 Analysis began: 3/7/2019

Analyst: Amy Harvey SOP: AP008MIC Analysis completed: 3/19/2019

EDS analysis of a glassy sphere particle showed elements carbon, oxygen, sodium, magnesium, aluminum, silicon, potassium, calcium, titanium, and iron. The primary peaks in the x-ray spectrum were carbon, oxygen, aluminum, and silicon.
This x-ray spectrum of a glassy sphere particle is consistent with reference samples -003RS and -005RS.
EDS analysis of a cement particle showed elements carbon, oxygen, sodium, aluminum, silicon, chlorine, potassium, calcium, and iron. The primary peaks in the x-ray spectrum were carbon, oxygen, aluminum, silicon, and potassium.
EDS analysis of a second cement particle showed elements carbon, oxygen, magnesium, aluminum, silicon, chlorine, calcium, and iron. The primary peaks in the x-ray spectrum were carbon, oxygen, aluminum, silicon, and calcium.
These x-ray spectra of cement particles are consistent with reference samples -003RS and -005RS.
EDS analysis of a third cement particle showed elements carbon, oxygen, aluminum, silicon, and calcium. The primary peaks in the x-ray spectrum were carbon, oxygen, and calcium.
This x-ray spectrum of a cement particle is consistent with reference samples -001RS and -002RS (lime), and -003RS and -005RS (cement). This particle was categorized as cement due to its presence as a component of the larger cement aggregate.
EDS analysis of a mineral (quartz) particle showed elements carbon, oxygen, aluminum, and silicon. The primary peaks in the x-ray spectrum were oxygen, and silicon.

Sample Number: 1902004-008 Analysis began: 2/28/2019

Analyst: Amy Harvey SOP: AP007MIC Analysis completed: 3/19/2019

Sample 1540584-B was heavily loaded. The sample contained between 31 and 40% cement dust, between 31 and 40% common clays and minerals, and between 5 and 20% rubber dust. Other particles present in quantities less than 5% included fungal material, glassy spheres, plant fibers, and pollen.

Laboratory Analysis Results

Request Number: 1902004

Analysis Code: AP007MIC & AP008MIC

Sample Number: 1902004-008 Analysis began: 3/7/2019

Analyst: Amy Harvey SOP: AP008MIC Analysis completed: 3/19/2019

EDS analysis of a glassy sphere particle showed elements carbon, oxygen, magnesium, aluminum, silicon, potassium, calcium, titanium, and iron. The primary peaks in the x-ray spectrum were oxygen, aluminum, silicon, and calcium.
This x-ray spectrum of a glassy sphere particle is consistent with reference samples -003RS and -005RS.
EDS analysis of a cement particle showed elements carbon, oxygen, sodium, magnesium, aluminum, silicon, potassium, calcium, and iron. The primary peaks in the x-ray spectrum were carbon, oxygen, aluminum, silicon, and calcium.
This x-ray spectrum of a cement particle is consistent with reference samples -003RS and -005RS.
EDS analysis of a second cement particle showed elements carbon, oxygen, sodium, aluminum, silicon, and calcium. The primary peaks in the x-ray spectrum were carbon, oxygen, and calcium.
This x-ray spectrum of a cement particle is consistent with reference samples -001RS and -002RS (lime), and -003RS and -005RS (cement). This particle was categorized as cement due to its presence as a component of the larger cement aggregate.
EDS analysis of a mineral (quartz) particle showed elements carbon, oxygen, and silicon. The primary peaks in the x-ray spectrum were oxygen, and silicon.

Sample Number: 1902004-009 Analysis began: 2/28/2019

Analyst: Amy Harvey SOP: AP007MIC Analysis completed: 3/19/2019

Sample 1540584-C was lightly loaded. The sample contained between 21 and 30% cement dust, between 31 and 40% common clays and minerals, between 5 and 20% plant stellate hairs, and between 21 and 30% rubber dust. Other particles present in quantities less than 5% included carbonaceous material, fungal material, glassy spheres, insect parts, plant fibers, and pollen.

Laboratory Analysis Results

Request Number: 1902004

Analysis Code: AP007MIC & AP008MIC

Sample Number: 1902004-009 Analysis began: 3/8/2019

Analyst: Amy Harvey SOP: AP008MIC Analysis completed: 3/19/2019

EDS analysis of a glassy sphere particle showed elements carbon, oxygen, magnesium, aluminum, silicon, calcium, titanium, and iron. The primary peaks in the x-ray spectrum were carbon, oxygen, aluminum, silicon, and calcium.
This x-ray spectrum of a glassy sphere particle is consistent with reference samples -003RS and -005RS.
EDS analysis of a cement particle showed elements carbon, oxygen, sodium, magnesium, aluminum, silicon, potassium, calcium, and iron. The primary peaks in the x-ray spectrum were oxygen, aluminum, silicon, and calcium.
EDS analysis of a second cement particle showed elements carbon, oxygen, magnesium, aluminum, silicon, calcium, and iron. The primary peaks in the x-ray spectrum were carbon, oxygen, aluminum, silicon, and calcium.
These x-ray spectra of cement particles are consistent with reference samples -003RS and -005RS.
EDS analysis of a third cement particle showed elements carbon, oxygen, magnesium, silicon, sulfur, chlorine, and calcium. The primary peaks in the x-ray spectrum were carbon, oxygen, and calcium.
This x-ray spectrum of a cement particle is consistent with reference samples -001RS and -002RS (lime), and -003RS and -005RS (cement). This particle was categorized as cement due to its presence as a component of the larger cement aggregate.
EDS analysis of a mineral (felspar) particle showed elements carbon, oxygen, sodium, aluminum, silicon, calcium, and iron. The primary peaks in the x-ray spectrum were oxygen, sodium, aluminum, and silicon.
EDS analysis of a mineral (dolomite) particle showed elements carbon, oxygen, magnesium, and calcium. The primary peaks in the x-ray spectrum were oxygen, magnesium, and calcium.
EDS analysis of a mineral (quartz) particle showed elements carbon, oxygen, aluminum, and silicon. The primary peaks in the x-ray spectrum were oxygen and silicon.

Sample Number: 1902004-010 Analysis began: 2/28/2019

Analyst: Amy Harvey SOP: AP007MIC Analysis completed: 3/19/2019

Sample 1540584-G was heavily loaded. The sample contained between 5 and 20% cement dust, between 31 and 40% common clays and minerals, between 31 and 40% fungal material, and between 5 and 20% rubber dust. Other particles present in quantities less than 5% included glassy spheres, paint overspray (white), pollen, spider web, and starch grains.

TCEQ laboratory customer support may be reached at Frank. Martinez@tceq.texas.gov

Laboratory Analysis Results

Request Number: 1902004

Analysis Code: AP007MIC & AP008MIC

Sample Number: 1902004-010 Analysis began: 3/8/2019

Analyst: Amy Harvey SOP: AP008MIC Analysis completed: 3/19/2019

EDS analysis of a glassy sphere particle showed elements carbon, oxygen, sodium, magnesium, aluminum, silicon, potassium, calcium, titanium, and iron. The primary peaks in the x-ray spectrum were oxygen, aluminum, and silicon.
This x-ray spectrum of a glassy sphere particle is consistent with reference samples -003RS and -005RS.
EDS analysis of a cement particle showed elements carbon, oxygen, aluminum, silicon, potassium, calcium, and iron. The primary peaks in the x-ray spectrum were oxygen, aluminum, silicon, and calcium.
EDS analysis of a second cement particle showed elements carbon, oxygen, sodium, magnesium, aluminum, silicon, chlorine, potassium, calcium, and iron. The primary peaks in the x-ray spectrum were carbon, oxygen, aluminum, silicon, and calcium.
These x-ray spectra of cement particles are consistent with reference samples -003RS and -005RS.
EDS analysis of a third cement particle showed elements carbon, oxygen, aluminum, silicon, and calcium. The primary peaks in the x-ray spectrum were carbon, oxygen, and calcium.
This x-ray spectrum of a cement particle is consistent with reference samples -001RS and -002RS (lime), and -003RS and -005RS (cement). This particle was categorized as cement due to its presence as a component of the larger cement aggregate.
EDS analysis of a mineral (dolomite) particle showed elements carbon, oxygen, magnesium, silicon, and calcium. The primary peaks in the x-ray spectrum were oxygen, magnesium, and calcium.
EDS analysis of a mineral (quartz) particle showed elements oxygen, and silicon. The primary peaks in the x-ray spectrum were oxygen, and silicon.
EDS analysis of a mineral (limestone) particle showed elements carbon, oxygen, aluminum, silicon, and calcium. The primary peaks in the x-ray spectrum were carbon, oxygen, and calcium.
EDS analysis of a mineral (feldspar) particle showed elements carbon, oxygen, aluminum, silicon, and potassium. The primary peaks in the x-ray spectrum were oxygen, aluminum, silicon, and potassium.

Sample Number: 1902004-011 Analysis began: 3/4/2019

Analyst: Amy Harvey SOP: AP007MIC Analysis completed: 3/19/2019

Sample 1540584-F was moderately loaded. The sample contained between 21 and 30% cement dust, between 31 and 40% common clays and minerals, between 21 and 30% rubber dust, and between 5 and 20% pollen. Other particles present in quantities less than 5% included carbonaceous material, glassy spheres, plant stellate hairs, and plant trichomes.

Laboratory Analysis Results

Request Number: 1902004

Analysis Code: AP007MIC & AP008MIC

Sample Number: 1902004-011 Analysis began: 3/8/2019

Analyst: Amy Harvey SOP: AP008MIC Analysis completed: 3/19/2019

EDS analysis of a glassy sphere particle showed elements carbon, oxygen, magnesium, aluminum, silicon, calcium, titanium, and iron. The primary peaks in the x-ray spectrum were oxygen, aluminum, silicon, and calcium.

This x-ray spectrum of a glassy sphere particle is consistent with reference samples -003RS and -005RS.

EDS analysis of a cement particle showed elements carbon, oxygen, magnesium, aluminum, silicon, chlorine, potassium, calcium, and iron. The primary peaks in the x-ray spectrum were carbon, oxygen, aluminum, silicon, and calcium.

EDS analysis of a second cement particle showed elements, carbon, oxygen, sodium, magnesium, aluminum, silicon, chlorine, potassium, calcium, and iron. The primary peaks in the x-ray spectrum were oxygen, aluminum, silicon, chlorine and potassium.

These x-ray spectra of cement particles are consistent with reference samples -003RS and -005RS.

EDS analysis of a mineral (quartz) particle showed elements carbon, oxygen, and silicon. The primary peaks in the x-ray spectrum were oxygen and silicon.

Sample Number: 1902004-012 Analysis began: 3/4/2019

Analyst: Amy Harvey SOP: AP007MIC Analysis completed: 3/19/2019

Sample 1540584-A was moderately loaded. The sample contained between 5 and 20% cement dust, between 31 and 40% common clays and minerals, and between 31 and 40% rubber dust. Other particles present in quantities less than 5% included glassy spheres, insect parts, plant fibers, plant trichomes, and pollen.

TCEQ laboratory customer support may be reached at Frank. Martinez@tceq.texas.gov

Laboratory Analysis Results

Request Number: 1902004

Analysis Code: AP007MIC & AP008MIC

Sample Number: 1902004-012 Analysis began: 3/8/2019

Analyst: Amy Harvey SOP: AP008MIC Analysis completed: 3/19/2019

EDS analysis of a glassy sphere particle showed elements carbon, oxygen, sodium, magnesium, aluminum, silicon, potassium, calcium, titanium, and iron. The primary peaks in the x-ray spectrum were carbon, oxygen, sodium, magnesium, aluminum, silicon, and calcium.
This x-ray spectrum of glassy sphere particle is consistent with reference samples -003RS and -005RS.
EDS analysis of a cement particle showed elements carbon, oxygen, sodium, magnesium, aluminum, silicon, chlorine, potassium, calcium, and iron. The primary peaks in the x-ray spectrum were oxygen, aluminum, and silicon.
EDS analysis of a second cement particle showed elements carbon, oxygen, sodium, magnesium, aluminum, silicon, potassium, calcium, and iron. The primary peaks in the x-ray spectrum were oxygen, aluminum, silicon, and calcium.
These x-ray spectra of cement particles are consistent with reference samples -003RS and -005RS.
EDS analysis of a mineral (quartz) particle showed elements carbon, oxygen, and silicon. The primary peaks in the x-ray spectrum were oxygen and silicon.
EDS analysis of a mineral (feldspar) particle showed elements carbon, oxygen, sodium, aluminum, and silicon. The primary peaks in the x-ray spectrum were oxygen, sodium, aluminum, and silicon.
EDS analysis of a mineral (dolomite) particle showed elements carbon, oxygen, magnesium, silicon, and calcium. The primary peaks in the x-ray spectrum were carbon, oxygen, magnesium, and calcium.

Laboratory Analysis Results

Request Number: 1902004

Analysis Code: AP008MIC

Qualifier Notes:

ND - not detected
NQ - concentration can not be quantified due to possible interferences or coelutions.
SDL - Sample Detection Limit (Limit of Detection adjusted for dilutions).
SQL - Sample Quantitation Limit (Limit of Quantitation adjusted for dilution).
INV - Invalid.
J - Reported concentration is below SDL.
L - Reported concentration is at or above the SDL and is below the lower limit of quantitation.
E - Reported concentration exceeds the upper limit of instrument calibration.
M - Result modified from previous result.
T- Data was not confirmed by a confirmational analysis. Compound and/or results is tentatively identified.
F - Established acceptance criteria was not met due to factors outside the laboratory's control.
H - Not all associated hold time specifications were met. Data may be biased.
C - Sample received with a missing or broken custody seal.
R - Sample received with a missing or incomplete chain of custody.
I - Sample received without a legible unique identifier.
G - Sample received in an improper container.
U - Sample received with insufficient sample volume.
W - Sample recevied with insufficient preservation.

TCEQ laboratory customer support may be reached at Frank.Martinez@tceq.texas.gov

TCEQ

DFW Region

Attachment 2
Exit Interview Form

McKinney Plant 3 – RN102171238
TXI Operations LP – CN600125157

Investigation No.: 1540584
Investigation Date: 2/15/19

Pages: 1

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

Regulated Entity/Site Name	TXI Operations McKinney Plant 3				**TCEQ Add. ID No. RN No (optional)**	102171238	
Investigation Type	CMPL	**Contact Made In-House (Y/N)**	Y	**Purpose of Investigation**			
Regulated Entity Contact	Mr. Jesse Martindale			**Telephone No.**		**Date Contacted**	
				FAX #/Email address		**FAX/Email date**	

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 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	AV	30 TAC 101.4	Failure to prevent the discharge of cement dust in such concentration and duration as to interfere with the normal use and enjoyment of complainant's properties.

Note 1: Issue 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?	☐ **Yes**	☐ **No**
Did the investigator advise the regulated entity representative that continued operation is not authorized?	☐ **Yes**	☐ **No**

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

Archer Chattin			
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.
Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, call 512/239-3282.