*Calumet River Terminal Ltd., 10740 S Burley Avenue Chicago, IL 60617*

March 02, 2020

Dr. Allison Arwady, Commissioner
Chicago Department of Public Health
333 South State Street, Room 200
Chicago, Illinois 60604

**Re: Revised Variance Request**
**Bulk Material Storage Rules and Regulations**
**Calumet River Terminal**
**10740 South Burley Avenue, Chicago, Illinois 60617**

Dear Dr. Arwady,

This Revised Variance Request for Calumet River Terminal's (CRT) terminal located at 10740 South Burley Avenue in Chicago, Illinois, is submitted to reflect recent changes in operations, including no longer receiving bulk-affected (manganese containing) material, and the continued gradual removal of existing bulk-affected material from the facility. This is an application for variances from certain portions of the Chicago Department of Public Health (CDPH) rules. CRT's original variance request was submitted June 12, 2014, with a response to comments submitted on February 24, 2015. A second variance request was submitted July 5, 2018 in response to your request dated May 24, 2018. An update to this variance request was submitted February 19, 2019, in response to the new requirements presented in the final City of Chicago rules, effective January 25, 2019 - Rules for Control of Emissions from Handling and Storing Bulk Materials (Rules).

CRT receives and stores until shipped, bulk commercial metals, with a complete list of products currently handled listed in Attachment A. Beginning in January 2020, CRT will no longer receive any bulk-affected material (manganese containing bulk solid materials), and all bulk-affected material currently stored on-site will continue to be gradually shipped off-site as the customers' needs dictate. Operations have declined significantly since the submission of the original variance request. In 2019, CRT received approximately 395,760 pounds of affected material, which is a significant decrease from the quantity received in each of the prior three years. Annually in 2018, 2017, and 2016, CRT received approximately 1.275 million pounds, 3.9 million pounds, and 49 million pounds of affected material, respectively. Likewise, in 2019, CRT received approximately 7.1 million pounds of non-affected material, which is a decrease from the quantity received in each of the prior three years. Annually in 2018, 2017, and 2016, CRT received approximately 12.4 million pounds, 922,000 pounds, and 2.8 million pounds of non-affected material, respectively.

CRT handles mostly manganese ore, silicon manganese, various grades of ferromanganese, ferrochrome, ferrosilicon, and scrap ferro alloys. Smaller quantities of ferromolybdenum,

ferrotitanium, ferrosilicon zirconium, fluorspar, are typically on hand. Minor amounts of other affected (manganese containing) and non-affected materials may also be handled as required by customers. The affected materials that are handled include ferromanganese alloys, silicomanganese alloys, and manganese ore. CRT handles and stores the bulk solid material (BSM) for its customers, but does not take ownership of the material. The description of the processes employed are provided in the January 2020 Fugitive Dust Plan (FDP), enclosed as Attachment B. As of January 2020, CRT is no longer accepting receipt of bulk-affected material, and existing bulk-affected material currently stored on-site will continue to gradually be removed from the site as the customers' needs dictate.

The FDP describes the location and area potentially affected by the BSM at the CRT facility. The pertinent data regarding the area potentially affected is shown by a demographic profile of the surrounding area based on the 2010 Census, and is from the United States Environmental Protection Agency (USEPA) Enforcement and Compliance History Online database (Attachment C). Demographic data presented is for a radius of three miles from the coordinates of the address location.

CRT is requesting variances be permanently granted from several of the CDPH regulations set forth in Part B of the Rules, in accordance with the provisions set forth in Part F(10) of the Rules. The regulations, from which CRT requests variances, are discussed below. Descriptions are provided of the activities for which variances are requested.

## 1.0 Part B (3.0)(3)(e), (f), (g), and (h), Part B (3.0)(4), and Part D (5.0)(1)v., vi, and part of Section vii.-Fugitive Dust Monitoring

The applicant requests a variance to be exempt from the requirement for installation and maintenance of permanent fugitive dust monitors. This would also include exemption from the requirements for the fugitive dust plan for the facility to include a statement certifying that control measures, devices, and technologies have been properly calibrated and maintained; a statement that all facility staff have been trained on the proper application and operation of such technologies; include a dust monitoring plan; include a contingency plan for monitored exceedances; include a contingency plan for monitoring equipment failure; and include a recordkeeping system with a schedule for routine inspection and maintenance of the monitoring devices and technologies

Materials handled at the CRT facility that meet the BSM definition include alloys of various types of metals. These materials are all very dense, with particles that settle quickly and within the immediate vicinity of a transfer operation inside of the building, and do not readily become airborne or scattered by the wind. The densities of these materials range from 114 pounds per cubic foot, to as much as 220 pounds per cubic foot. For comparison, the density of bulk petroleum coke is about 48 pounds per cubic foot. Petcoke is friable, and generates fugitive dust, which easily becomes airborne or scattered by the wind. Furthermore, all BSM stockpiles loading and unloading activities are now conducted indoors, significantly reducing the potential for generation of fugitive dust.

The facility is within an industrial region. The nearest residential properties are located approximately 600 feet east of the facility. There have never been any community complaints regarding visible emissions from this facility's operations, even when the facility stored material outdoors. Facility operations do not result in off-site fugitive dust emissions. Based on historic quantities handled, and on published emission factors, particulate emissions ($PM_{10}$) from CRT's BSM handling operations were negligible when storage was outdoors, and remain insufficient to generate opacity greater than 10 percent, or fugitive dust visible beyond the property line of the facility [3.0(2)], now that storage and loading are conducted indoors.

Fugitive dust monitoring is intended to detect pollutant concentrations elevated over background levels that can be credited to source emissions. At this location, establishing a reliable background level will be impractical because of a neighboring major source of fugitive dust. Immediately to the south and east of the facility, is an active storage operation for petroleum coke, which operates a large storage facility for material that is one-quarter to one-half the density of the materials handled by CRT.

Area background levels, have in the past, been demonstrated by Illinois Environmental Protection Agency testing to be elevated by this neighboring source to levels well above normal background. While the operations at the neighboring facility have been revised to reduce fugitive dust, it will still be difficult for fugitive dust monitors at CRT to detect small incremental fugitive dust emissions with a larger background source of fugitive dust immediately next door.

The neighbor has operated five fence-line air-monitoring stations, with daily results published by USEPA at the link below. The northwest and north monitors are located immediately at the property line with CRT, and are close to the building in which BSM activities are undertaken by CRT. The northeast monitor is located near the access road to CRT.

http://www2.epa.gov/petroleum-coke-chicago/kcbx-fenceline-air-monitoring-data

For the most recent available data (January 31, 2016 through January 31, 2018), daily $PM_{10}$ values remained near background levels and did not evidence any detectable contribution from CRT operations. Weekday values were not materially different from weekend values. CRT BSM handling, limited to weekdays, had no detectable effect on dust emissions. Analyses of air monitoring filters were also done for metals, and these results are consistently below levels of concern and do not evidence any detectable contribution from CRT operations. This ambient air monitoring demonstrates that CRT activities, operations, and storage of bulk materials emit no particulates that could create a public nuisance or adverse impacts to the surrounding area, environment, or property uses, even before BSM storage was relocated indoors.

An engineer's estimate for installation of the dust-monitoring network is attached (Attachment D). This network would include one met station and four Federal Equivalent Method dust stations with Bluetooth telemetry. Costs for installation are $136,750.00 and annual operating, maintenance,

and reporting costs are $19,680.00 per year. Assuming a five-year equipment life, the annualized costs are about $47,030 per year.

CRT is a small business with two full-time employees. CRT considers its loss of business and revenue due to the elimination outdoor storage areas, barge loading/unloading, and crushing operations to be a hardship already endured in order to accommodate the dust regulations. Recovering the monitoring costs will require CRT to increase prices and will cause customers to seek other outlets, likely outside the City of Chicago. CRT considers this potential loss of business and revenue an unreasonable hardship.

As described in the revised FDP, facility operations will achieve ordinance goals by implementing best management practices to ensure that under no condition does opacity exceed 10 percent, nor will fugitive dust be visible beyond the property line of the facility [3.0(2)]. Application of best management practices is a more reasonable approach where no BSMs are stored outside, and there are no adjacent receptors.

The revised FDP is effective in mitigating dust from BSM activities. Significant changes have been made to the facility's operations to minimize the potential for generation of fugitive dust, including discontinuing of barge loading/unloading activities, discontinuing of the ore-crushing process, and movement of all BSM storage piles to the interior of the storage building. Daily logs have been previously submitted to CDPH as required. Enclosed are the 2019 opacity readings (Attachment E), which demonstrate the plan is being implemented and that activities do not create a public nuisance or adversely impact the surrounding area, environment, or property uses.

## 2.0 Part B (3.0)(6) - Wind Monitoring

The applicant requests a variance to be exempt from the requirement for the facility to operate a permanent device to monitor wind speed and direction.

Information from such a device is useful in the event the facility maintained large outdoor piles of BSM and had installed $PM_{10}$ monitors. However, the facility unloads and loads BSM indoors and stages them in piles inside of concrete block-lined bins, indoors. The regulation indicates the monitor should be centrally positioned in relation to the storage piles, which would be inappropriate for indoor storage piles. Building doors are closed during loading or unloading activities and at all times, except during ingress and egress of trucks. The facility has on-line access to real-time wind speed and direction information from Midway Airport, which is considered representative of the area of the CRT facility.

## 3.0 Part D (5.0)(2)(d) Enclosure Requirements

The applicant requests a variance from the requirement to have overlapping flaps or sliding doors, which shall remain closed except to allow material or vehicles to enter or leave, or to allow people to enter and exit. The CRT building meets all other enclosure requirements as listed in Part

D(5.0)(2)(a)-(c). All material handled on-site, including all non-packaged manganese-bearing bulk material, is stored within the enclosure as required by the Rules.

The CRT building has overhead doors that CRT has committed in its fugitive dust plan to keep closed at all times, except during ingress and egress of trucks, including during any loading/unloading event, and for one minute after loading/unloading to allow the dust to settle prior to opening the doors. Doors are also closed during high wind events. CRT considers the use of overlapping flaps on such a large ingress/egress to be a safety hazard, as well as a risk of damage to the vehicles, which are not owned by CRT. Damage to vehicles can easily occur if a flap is caught up in a moving vehicle or its moving parts.

For these reasons, the variance from this requirement is requested due to the potential for equipment damage and safety hazards of the overlapping flaps.

## 4.0 Part B (3.0(9)(d) - Transport

The applicant previously requested a variance to be exempt from transport requirement [3.0(8)(d)] for wheel wash and rumble strips; however, based on clarification in the CDPH response to the original request, this variance request was withdrawn because the criteria were met.

All truck traffic on-site travels on paved surfaces that are regularly maintained to prevent dust accumulations. Trucks are also inspected prior to leaving the site for accumulations of dust on their tires. If accumulation of on-site materials is found on tires, they are then cleaned with a hose that is accessible at the building egress point. Any dust carried onto the public roadways, located one-quarter mile from the site, would be picked up from off-site roadways. The ownership of the off-site roadway is documented in the Cook County Tax Portal for the legal parcel of the owned roadway, included in Attachment F. CRT is not responsible for the pavement and improvement of a third party's property, but does utilize a water truck as needed (discussed in the revised FDP) on that portion of the roadway traveled only by its trucks.

## 5.0 Part D (6.0) Filter-Based Metals Monitoring At Manganese-Bearing Bulk Material Facilities

The applicant requests a variance to be exempt from the requirement for installation and maintenance of Federal Reference Method $PM_{10}$ filter-based monitors to analyze the concentrations of manganese in the air. As stated above, the facility is no longer receiving bulk-affected (manganese containing) material and will continue to reduce the existing affected material from the facility.

As described under Variance Item (1), the affected materials handled at the CRT facility include ferromanganese alloys, silicomanganese alloys, and manganese ore. These materials are all very dense, with particles that settle quickly and within the immediate vicinity of a transfer operation inside of the building, and do not readily become airborne or scattered by the wind. Based on

historic quantities handled, and on published emission factors, $PM_{10}$ from CRT's BSM handling operations were negligible when storage was outdoors, and remain insufficient to generate opacity greater than 10 percent, or fugitive dust visible beyond the property line of the facility, now that storage and loading are conducted indoors. This lack of visible emissions is being monitored by a detailed inspection and housekeeping program, quarterly opacity readings, and real-time monitoring of wind conditions. Loss of product in the form of dust is a loss of customer-owned material. CRT is very sensitive to loss of customers' material, and takes great care to minimize or eliminate any loss.

An engineer's estimate for installation of the dust-monitoring network is included in Attachment D. The expense of a Federal Reference Method monitoring program has been found to represent a cost to CRT of approximately $6,700.00 for capital equipment costs, $5,000.00 for installation costs, plus $42,640.00 per year in operating costs. Assuming a five-year equipment life, the annualized costs are about $45,580.00 per year.

Based on the minimal amount of airborne manganese that could be present from CRT's operations, the temporary nature of the operations, the costs of business reduction already incurred, and the prohibitive cost to such a small, two-employee operation, CRT requests a variance from all sections of Part D (6.0).

## 6.0 Part E (8.0) Implementation Schedule

This section sets forth a three-phase implementation schedule for implementation of each part of the Rules, with the final phase becoming effective ninety days after finalization of the Rules. CRT requests a variance from the requirement to comply with this schedule until such time that CDPH has issued a ruling on this variance request. As stated above, CRT has submitted several variance requests to CDPH, including one in February 2019, shortly after the current Rules were finalized.

## 7.0 Part F (10.0)(2) Additional Requirements Of The Variance Application

This section addresses additional requirements of the variance application under Part F, Section 10, Item (2), b) through h).

**b)** This section requests: "a description of the process or activity for which the variance is requested," and "pertinent data on location, size, and the population and geographic area affected by, or potentially affected by, the process or activity". The description of the process is provided in the FDP as Attachment B and is supplemented with additional information provided herein and attached. The FDP has been updated since our previous variance request to reflect changes in operations.

The pertinent demographic data is shown by a demographic profile of the surrounding area based on the 2010 Census, and is from the USEPA Enforcement and Compliance History Online

database (Attachment C). Demographic data presented is for a radius of three miles from the coordinates of the address location.

**c)** The quantity and types of materials subject to variance are described in the FDP and in Attachment B.

**d)** This variance request demonstrates that CRT's BSM activities create negligible fugitive dust emissions that are insufficient to generate opacity greater than 10 percent or fugitive dust visible beyond the property line of the facility [3.0(2)]. Facility operations have been revised since the original request to move all BSM handling and storage indoors. The facility is also remote from receptors in residential areas (approximately 600 feet from building doorway to nearest residence). Issuing the variances cannot create a public nuisance or adversely impact the surrounding area, environment, or property uses.

**e)(i)** The regulation requiring monitoring imposes an unreasonable hardship in excessive cost and resource commitment for a small company with a workforce of only two employees, and a low volume of business. Monitoring is inappropriate where all BSM is maintained indoors, and cannot generate emissions visible at the property line or fugitive dust above background levels. CRT considers its loss of business and revenue due to the elimination outdoor storage areas, barge loading/unloading, and crushing operations to be a hardship already endured in order to accommodate the dust regulations. Recovering the monitoring costs will require CRT to increase prices and will cause customers to seek other outlets, likely outside the City of Chicago. CRT considers this potential loss of business and revenue an unreasonable hardship. Application of best management practices is a prudent approach where no bulk solid materials are stored outside, and there are no nearby receptors. At this location, the presence of a neighboring source of fugitive petcoke dust also makes a requirement for particulate monitoring unreasonable.

**e)(ii)** This variance application does not claim timeframe constraints such as permitting delays or force majeure.

**e)(iii)** Proposed alternative measures are preferable because they accomplish the objectives of the ordinance, including assurance that there are no impacts to human health or the environment. They eliminate unreasonable measures causing a competitive disadvantage to a vital contributor of jobs and investment to the south side of Chicago, an area targeted by the city for economic renewal and reinvestment.

**f)** The FDP describes compliance and best management practices. The facility is conforming to this plan and is in compliance with the ordinance, with the exception of those variances requested.

**g)** Alternate methods of compliance and factors influencing the choice of applying for a variance are described herein, and in the FDP.

**h)** The applicant is Calumet River Terminal, and their authorized representative since 2016 has been Ms. Cheryl Sikorski, manager.

**Compliance Program**

The FDP sets forth the compliance program, best management practices, and demonstration that facility management of BSM will not adversely impact the surrounding area, environment, or property uses. CRT's variance application is limited to regulations under Part B. The facility has never managed coal or coke materials regulated under Part C. All loading and storage operations are contained within an enclosed building, making the facility not subject to regulation under Part E. CRT proposes reasonable conditions as set forth in the FDP. CRT understands a variance issued by the commissioner may be revoked if "operation of the Facility is creating a public nuisance or otherwise adversely impacting the surrounding area, surrounding environment, or surrounding property uses".

**Change in Operations**

CRT commits to providing a thirty-day advance notification for any expansion or change in operations subject to a variance issued by the commissioner.

We are now operating under the procedures described in the FDP. We manage only heavy, metallic BSM at the facility. Materials are managed within an enclosure and under procedures to minimize fugitive dust, as set forth in the FDP.

Thank you for your attention to this matter. Please contact me if you have any questions or wish to have a CDPH representative visit the facility.

Sincerely,

Cheryl Sikorski

Cheryl Sikorski, Manager
Calumet River Terminal

Enclosures: Attachment A - Product Inventory
Attachment B - 2020 Fugitive Dust Plan
Attachment C - Demographic Data
Attachment D - Dust Monitoring Budgetary Costs
Attachment E - 2019 Opacity Readings
Attachment F - Access Road Ownership Documentation

# ATTACHMENT A

# PRODUCT INVENTORY

**TABLE 1**
**CRT MATERIAL ON HAND**
**AS OF FEBRUARY 1, 2020**

| Non-Affected Bulk Solid Material(s) | | | |
|---|---|---|---|
| | **Total (lbs)** | **Packaged (lbs)** | **Bulk (lbs)** |
| 75% Ferro Silicon | 983,283 | 24,443 | 958,840 |
| Calcium Silicon Hazardous | 27 | 27 | 0 |
| Cerium MischMetal | 100 | 100 | 0 |
| Ferro Titanium | 64,500 | 64,500 | 0 |
| Ferro Silicon Zirconium | 2,369 | 2,369 | 0 |
| Fluorspar | 31,500 | 31,500 | 0 |
| High Carbon FerroChrome | 1,984,427 | 329 | 1,984,098 |
| Low Carbon FerroChrome .10 C | 887 | 887 | 0 |
| Scrap Ferro Alloys | 395,875 | 0 | 395,875 |
| Silicon Carbide Briquettes | 324,079 | 324,079 | |
| **Total Non-Affected Bulk Solid Material(s):** | **3,787,047** | **448,234** | 3,338,813 |
| **Affected Bulk Solid Material(s) (lbs)** | | | |
| | **Total (lbs)** | **Packaged (lbs)** | **Bulk (lbs)** |
| Electrolytic Manganese Metal | 57,708 | 57,708 | 0 |
| High Carbon Ferro Manganese | 2,756 | 2,756 | 0 |
| High Carbon Ferro Manganese LP | 273,822 | 273,822 | 0 |
| Low Carbon Ferro Manganese .5C | 209 | 209 | 0 |
| Ultra-Low Carbon Ferro Manganese .05C | 60,985 | 60,985 | 0 |
| Medium Carbon Ferro Manganese | 229,719 | 229,719 | 0 |
| Nitride Medium Carbon Ferro Manganese | 61,746 | 61,746 | 0 |
| Manganese Ore | 3,425,510 | 34,700 | 3,390,810 |
| Low Carbon Silico Manganese | 21,350 | 21,350 | 0 |
| Silico Manganese | 518,456 | 176,616 | 341,840 |
| **Total Affected Bulk Solid Material(s):** | **4,652,261** | **919,611** | 3,732,650 |
| **TOTALS (lbs):** | **8,439,308** | **1,367,845** | **7,071,463** |
| **TOTALS (tons):** | **4,220** | **684** | **3,536** |

# ATTACHMENT B

# 2020 FUGITIVE DUST PLAN

# FUGITIVE DUST PLAN

## CALUMET RIVER TERMINAL
## 10740 SOUTH BURLEY AVENUE
## CHICAGO, COOK, ILLINOIS

**Prepared For:**

**CALUMET RIVER TERMINAL, LTD**

**Prepared By:**

**CIVIL & ENVIRONMENTAL CONSULTANTS, INC.**
**NAPERVILLE, ILLINOIS**

**CEC Project 180-367**

**JANUARY 2020**

Civil & Environmental Consultants, Inc.

1230 East Diehl Road, Suite 200 | Naperville, IL 60563 | p: 630-963-6026 f: 630-963-6027 | www.cecinc.com

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## FACT SHEET

The Calumet River Terminal (CRT) is a warehouse operation located at 10740 South Burley Avenue in Chicago, Illinois, in an industrial area along the Calumet River. The property is surrounded to the south and east by the KCBX petroleum coke storage facility and on the west and north, respectively, by the Calumet River and a Bayou Steel Corporation steel warehouse/depot. The CRT employs best management practices to prevent fugitive dust from being generated by its operations.

Bulk solid materials (BSM) handled at this facility arrive by and are loaded out to trucks or occasionally railcars. CRT handles and stores the BSM for its customers, but does not take ownership of the material. CRT makes every effort to control the release of dust from the BSM, as this constitutes a loss of product to its customers. Fugitive dust management practices include loading/unloading within the building, routine inspections, roadway sweeping, spill cleanup, minimized drop distances, and stockpile and vehicle tarping. Practices are intended to conform to the State of Illinois and City of Chicago Air Pollution Control Rules and Regulations. The terminal has never had a complaint from its neighbors regarding fugitive dust or particulate matter emanating from its operations.

## 1.0 INTRODUCTION

This Fugitive Dust Plan (FDP) has been prepared for the Calumet River Terminal (CRT) to mitigate potential impacts to air quality resulting from fugitive dust associated with the facility's operations. The FDP will be operated in compliance with the City of Chicago Department of Public Health Rules for Control of Emissions from Handling and Storing Bulk Materials, dated January 25, 2019, as well as with Title 35 of the Illinois Administrative Code (35 IAC) Subpart K. The FDP will be reviewed and updated on an annual basis and submitted to the Chicago Department of Public Health (CDPH) for review and approval on or before January 31 every year. Additionally, the facility will submit an amended FDP with any changes, modifications, or additions to the facility's operations to the Illinois Environmental Protection Agency (IEPA) and the CDPH.

This current plan has been updated from the January 2019 plan. The plan differs from the previous plan submitted to the IEPA and CDPH in that it addresses changes in the operation of the facility, including no longer receiving bulk affected (manganese containing) materials beginning in January 2020, and the continued gradual removal of existing bulk manganese containing materials from the facility as customers' needs dictate, as well as a general reduction in overall throughput at the facility.

This FDP characterizes the sources of fugitive dust/particulate matter emissions. For each source, control measures are identified that are currently implemented. We certify the storage capacity calculations contained in this plan are accurate, to the best of our abilities. **CRT is committed to preventing visible emissions through the implementation and regular review and amendment to this plan. This FDP has the full approval of CRT ownership. CRT has committed the necessary resources to implement the measures described in this plan.**

We acknowledge additional requirements include:

- Maintaining a complete copy of the FDP at the facility.
- Making the FDP available for inspection during normal business hours.
- Notifying the CDPH and amending the plan as needed to reflect changes in the facility or its operation.
- Reviewing the plan annually and submitting it to the CDPH.

The terminal manager has the authority to commit the necessary resources to implement this plan.

| Manager's Signature | Name | Date |
|---|---|---|

## 2.0 FACILITY SETTING

The CRT is located in an industrial area on the Calumet River, approximately 15 miles south of downtown Chicago. The property is approximately 5 acres in size, and contains an approximately 80,000-square-foot warehouse. The property is surrounded to the south and east by the KCBX petroleum coke storage facility, and on the west and north by the Calumet River and a Bayou Steel Group steel warehouse/depot.

The river elevation at the site is 575 feet above mean sea level. Site elevations are approximately 590 feet above mean sea level. Elevations are consistent throughout the surrounding areas.

According to meteorological data compiled from several online sources (including www.myforecast.com, www.intellicast.com, www.idcide.com, usclimatedata.com, and www.city-data.com), Chicago, Illinois receives on average 38.01 inches of precipitation annually. Winds are predominantly southwesterly throughout the year, with an average wind speed of 9.25 knots. Air temperatures are temperate with average highs in the summer around 80 degrees Fahrenheit and average lows in the winter ranging from 18 to 30 degrees.

## 3.0 SOURCE DESCRIPTIONS

The following sections describe the specific sources of fugitive emissions. Dust control methods are discussed only in Sections 4.0 and 5.0.

### 3.1 BSM - PART B (3)(B)

CRT receives and stores until shipped, bulk commercial metals, with a complete list of products currently on-hand included in the table below. CRT handles material in both bulk form, and packaged (non-bulk) form. CRT handles mostly manganese ore, silicon manganese, various grades of ferromanganese, ferrochrome, ferrosilicon, and scrap ferro alloys. Smaller quantities of ferromolybdenum, ferrotitanium, ferrosilicon zirconium, fluorspar, electrolytic manganese are typically on hand. Minor amounts of other affected (or manganese-containing) and non-affected materials may also be handled as required by customers. Manganese-containing materials that are handled include ferromanganese alloys, silicomanganese alloys, electrolytic manganese, and manganese ore. As of January 2020, CRT is no longer accepting receipt of bulk affected material, and existing bulk affected material currently in storage will continue to gradually be removed from the site as customers' needs dictate. CRT handles and stores the BSM for its customers, but does not take ownership of the material.

| CRT Material on Hand - January 2020 | |
|---|---|
| **Non-Affected Bulk Solid Material(s)** | **Affected Bulk Solid Material(s)** |
| 75% Ferro Silicon | Electrolytic Manganese |
| Calcium Silicon Hazardous | High Carbon Ferro Manganese LP |
| Cerium Misch Metal | High Carbon Ferro Manganese |
| Ferro Titanium | Low Carbon Ferro Manganese 0.5C |
| Ferro Silicon Zirconium | Ultra-Low Carbon Ferro Manganese 0.05C |
| Fluorspar | Medium Carbon Ferro Manganese |
| High Carbon Ferro Chrome | Manganese Ore |
| Low Carbon Ferro Chrome 0.10 C | Nitride Medium Carbon Ferro Manganese |
| Scrap Ferro Alloys | Low Carbon Silicon Manganese |
| Silicon Carbide Briquettes | Silicon Manganese |

"BSM" refers to any solid substance or material that can be used as a fuel or an ingredient in a manufacturing process and that can become airborne or scattered by the wind. The materials handled at the facility meet the BSM definition. However, all bulk materials handled have a high density due to their metallic composition. Therefore, particulate matter released during handling will quickly settle back to grade, is not likely to become airborne or cross property lines, and will

not reach the nearest residential property, approximately 600 feet away. All material handling is performed indoors with the building doors closed. The only building ventilation is from roof vents located 75 feet above the working surface.

The cargos typically arrive and depart via trucks. The facility no longer receives material by barge, but does have a track siding to receive/ship materials by rail on a rare occasion. While on-site, bulk materials are staged in bins inside the warehouse, as shown in Figure 1. In 2019, CRT received approximately 7.1 million pounds of non-affected material and 395,760 pounds of affected material. This has decreased significantly from 2018, when the facility received approximately 11.9 million pounds of non-affected material and approximately 1.9 million pounds of affected material. Future throughput is anticipated to be at or below the 2019 levels. As of January 2020, CRT will no longer receive any affected material, and bulk affected material remaining on site will gradually be removed from the site as customers' needs dictate.

## 3.2 BSM STOCKPILES, LOADING, AND UNLOADING - PART B (3)(B)

Section 3.07 of the CDPH Regulations (Transfer Points) requires that: All material transfer points need to be maintained such that fugitive dust does not exceed a 10% opacity limit by using one of four options: a) total enclosure, b) water spray system sufficient to control fugitive dust emissions during operations, c) vented to air pollution control equipment, or d) transfer only moist material in a manner that minimizes the exposed drop.

Transfers are performed inside of the building while access doors are closed providing a total enclosure for the operation, meeting the above requirement using option "a)" of total enclosure. This succeeds in preventing the generation of a 10% opacity in the ambient air at the site. Current dust control measures employed on indoor and outdoor roadways, as described below, including sweeping, truck tarping, and a maximum vehicle speed of 8 miles per hour act to prevent the amount of loose material carried out of the facility by trucks. Also, because all operations and storage are done indoors, Part E of the CDPH Rules for Control of Emissions from Handling and Storing Bulk Materials, does not apply to the facility.

CRT handles "Dry Materials", which are bulk materials that are not permitted to get wet per customer specifications. The Dry Materials consist of metal alloys that are used by the steel industry. These alloys cannot get wet because of the high potential for risk of explosion and other catastrophic safety concerns when added to molten metal at a steel plant furnace.

CRT uses indoor stockpile storage of non-ferroalloy and ferroalloy materials. Loading/unloading operations of Dry Materials involving trucks are completed within an enclosure, within a bulk material storage building. Loading will not commence until both doors are closed. The layout of the storage locations in the building are identified on Figure 2.

The incoming materials are received by truck, unloaded inside of the building, and stored in piles inside of the building. No conveyors are utilized and no unloading or loading is done outdoors. Full size trucks from off-site are unloaded to the building floor, in/near the bin to be used for storage in a manner that minimizes drop heights. Based on the nature of the truck unloading process, the material is choke fed to the ground, and the driver usually has to pull forward to ensure that all material is discharged from the truck. A minimum one-minute wait time for trucks after unloading will be used before the doors are opened to allow fugitive dust to settle.

The storage piles are created by CRT's front-end loader pushing the material further into the bin, and therefore, piles are limited to a possible height at the peak of up to 12 feet, and typically are lower. Each pile is in a designated "bin" area to identify its location in the facility's records. Concrete block walls are used to segregate the bins and retain the piles. Storage piles within the bins containing manganese ore, silicomanganese, and ferro scrap alloys are covered by a tarp when loading/unloading operations are not being conducted. Material is stored until shipped out, resulting in very few on-site transfers of material. The bin locations are shown on Figure 2.

The materials ship out in trucks, and on rare occasion, by rail. Loading of trucks is done indoors with the building doors shut. A front-end loader moves material from where it is stored to a truck, dropping it over the side into the truck bed. One truck carries up to 23 tons of material. Loading a truck takes about ten minutes, resulting in a drop rate of approximately 135 tons per hour, and emissions per single loading event of approximately 0.1 pound. The loading is performed indoors, and due to the high density of the material, fine particulates do not mobilize and dusts settle quickly in the vicinity of the drop area. Truck beds of the ferro alloys are covered with a tarp immediately after loading. A minimum one-minute wait time will be used for trucks after loading before the doors are opened to allow fugitive dust to settle.

Shipment by rail is done in boxcars. The boxcar is pulled into the building, the building doors closed, and the front loader places material onto the floor of the boxcar via its 10-foot wide side door. The loader's bucket is placed approximately four feet into the car, and material is dropped from an approximately 3-foot height with the bottom of the bucket three inches from the floor, minimizing dust plumes outside of the boxcar. A bobcat inside of the boxcar will move the dropped material to the ends of the car. One boxcar has a capacity of 70 to 100 tons. The loading/unloading activities cannot, under any conditions generate opacity greater than 10%, or visible fugitive dust outdoors, beyond the property line of the facility.

## 3.3 CALCULATION OF MAXIMUM STORAGE CAPACITY - PART B (3)(D)

Bins 0 through 7 and 11 are located along the north side of the building, and have a maximum total capacity of approximately 8,700 tons, based on the weight of the densest material handled. Bins 12–20, 26, 27, 29, 30, and 31 are located along the south side of the building, and have a maximum

total capacity of approximately 5,800 tons, for a maximum building capacity of up to 14,500 tons. The typical capacity by weight is lower, due to lower density material being stored. Additionally, some materials are stored packaged (and therefore not considered to be BSMs), utilizing more square feet of space per ton of material. Material densities range from 114 to 220 pounds per cubic foot.

### 3.4 BAGGING - PART B (3)(B)

Within the building, some of the ferroalloy materials are occasionally bagged into packaging upon customer request. Bagging equipment is operated to contain particles within the product for transfer. The equipment used has no exterior exhaust. The only exhausts from the building are the doors at each end (open for truck entry and exit, but closed during bagging operations) and vent fans at the peak of the roof, which is 75 feet above the working floor of the building. The bagging equipment is located approximately 150 feet from the nearest door.

The bagger unit is a simple funnel, allowing material loaded by the front-end loader at the top to fall into the bag or container attached to the bottom. The bagger unit allows ferroalloys to be bagged into 2,000- to 4,000-pound supersacks; 25- to 50-pound bags or cans; or 551-pound steel drums. Once placed into containers, the material is no longer considered to be BSM, as it cannot be become airborne or be scattered by the wind.

### 3.5 SCREENING - PART B (3)(B)

If a customer requests that material be screened to separate nugget sizes, the front-end loader will be utilized to place a load of material onto a slanted metal box screen. The smaller sized pieces of material are collected beneath the screen and the larger pieces roll off the top, forming two separate piles. With this process, there is the potential for fugitive dust to be released when material is deposited onto the screens. Again, the screening is performed indoors; this particulate is very dense material and settles out quickly. The screening will only be done with the building doors shut, and the movable screen will be located at least 100 feet from the nearest door when in use.

### 3.6 ROADWAY DRAG-OUT - PART B (3)(C)

The roadways within the facility are under roof or paved. Incoming trucks enter the facility via the one-quarter-mile long, gravel right of way entrance road, an off-site ingress owned by the adjacent property owner. Trucks enter the building at the northeast end, crossing the scale, and after loading/unloading, they subsequently exit the south end of the building. They then turn around on the paved dock area, re-enter the building via the south door, are weighed on the scale and exit at the northeast end again. During rare occasions of high traffic volumes inside the building, typically only a few times per year, trucks may exit the south end of the building, turning

to the east and north on the exterior paved areas, crossing onto a gravel right of way on the adjacent KCBX property to the south of the building, to reach the gravel entrance road. As of January 2020, this gravel right of way to the south of the CRT building will be physically blocked off, and CRT will only use the KCBX property as a truck route on rare occasion, and with permission of KCBX.

The off-site unpaved right-of–way access road extends for approximately one-quarter mile before truck traffic reaches a paved public road. There are no paved roads within one-quarter mile of the facility. Cronimet Corp is the owner of the roadway, and runs a scrap yard to the northeast of the CRT facility. The repetitive use of the gravel road by truck traffic, some from CRT and mostly from the Cronimet facilities, results in a rough road surface and mechanical breakdown of the roadway materials into fine particles. Cronimet has been requested by CRT and by the City of Chicago to pave the roadway, but they have not responded to the requests. Rainfall or excessive dust control watering creates a paste of mud on the roadway surface that adheres to equipment tires within the facility. Under this condition, trucks leaving the area and traveling onto paved city streets have the potential to track out or drag out dirt and particulate material from the right-of-way on their tires and deposit it on public roadways. Due to the on-site paved conditions and the bumpy, unpaved distance to the public road, any material remaining on trucks when they reach a paved surface is unlikely to include the stored product material from inside the CRT building.

## 4.0 DUST CONTROL PLAN - PART B (3)(E)

The fugitive dust control plan provides a description of the current controls and long-term activities to evaluate and improve fugitive emissions controls for each of the identified sources. Responsibilities for implementation of this plan are outlined in Table 1: Fugitive Dust Control Plan Implementation Activities.

### 4.1 BSM STOCKPILES/LOADING AND UNLOADING

Currently, control of fugitive emissions during storage, loading, and unloading of BSM stockpiles is achieved through operational and source control methods. Unloading transfers from trucks to storage are conducted indoors only, by dumping the load, and pushing the material into a pile. The height of the stockpile is restricted to 12 feet by the physical limits of the loader. Control methods other than wetting the material are currently used throughout the facility to control fugitive dust emissions. Operationally, dust emission potential is controlled by:

- Doing all loading/unloading of trucks or railcars and storage indoors;
- Ensuring the overhead roll-up doors at each end of the building are closed during loading/unloading, and when winds are in excess of 25 miles per hour (note that the discontinuance of activity during High Wind Events of 15 miles per hour or greater does not apply to the CRT facility because all activity and storage is located indoors);
- A minimum one-minute wait time after loading or unloading before the doors are opened to allow fugitive dust to settle;
- Limiting the stockpile disturbed area;
- Reducing tumbling of materials being moved;
- Removing material from the stockpile bottom;
- Limiting the vertical drop height of materials;
- Cleaning the floor surface after a stockpile is removed;
- Covering indoor stockpiles of manganese ore and ferro scrap alloys with tarps;
- Sweeping the aisles at least once per shift on days when material is being transferred or otherwise handled;
- Watering exterior doorways, floors, and roadway surfaces as needed and weather-permitting, and at least once per shift on days when material is being transferred or otherwise handled; and
- Covering truck trailers with tarps or using enclosed hopper trailers, and utilizing enclosed boxcars for rail shipments.

The leadman and/or operators continuously assess the material condition, moisture content, and type (non-ferroalloy versus ferroalloy) and remove fine materials from the floor surfaces to control

the potential for fugitive dust generation. The materials handled by CRT are alloys used in the steel industry. These alloys cannot get wet because of the high potential for risk of explosion and other catastrophic safety concerns when added to molten metal at a steel plant furnace. Therefore, it is impractical to wet the material during loading/unloading as it would render the material unusable for its intended purpose.

The manager performs a daily assessment of prior rainfall, wind speed, temperature, and weather forecast and monitors wind conditions throughout the day to evaluate whether the current operating protocols are appropriate and will be sufficient to control fugitive emissions.

## 4.2 BAGGING

As part of the daily inspections of the bagging area recorded on Table 3: Daily Fugitive Dust Inspection Log, the operation and condition of the bagging process will be reported on the inspection forms. Equipment or operational conditions potentially affecting fugitive dust release will be reported for correction. Additionally, the process is operated indoors with the building doors closed, which in effect, prevents fugitive dust from being carried outside the building due to wind.

## 4.3 SCREENING

Screening is performed inside the building and at least 100 feet from the closed overhead doors in order to minimize fugitive emissions. Additionally, the drop height is low to further prevent fugitive emissions from occurring. These conditions prevent potential emissions from being carried outside the building. Operation of screening equipment is recorded on Table 3: Daily Fugitive Dust Inspection Log.

## 4.4 ROADWAY DRAG-OUT

Roadway drag-out results from the interactions of unpaved road surfaces, wet-weather, and the inability to prevent material from accumulating on truck wheels or remove it when exiting the facility. While the facility is completely paved throughout, the right of way that provides access to the site is an unpaved gravel road. This could lead to potential dust emissions on-site if it is tracked onto the facility.

Therefore, street sweeping is conducted on all pavement within the property. The current protocol uses a street sweeper to remove accumulated particulates from the plant's paved areas. If sweeping effectiveness is observed to not be sufficient to clean the pavement due to dry conditions, excess traffic, etc., then the water spray system on the sweeper will be employed. The water spray will be used as needed in paved areas during non-freezing weather, when sweeping alone is deemed

inadequate. The street sweeping frequency will be two times daily, or once per thirty-five trucks when CRT is open for business, unless the roads are free and clear of BSM that could become airborne. However, sweeping and watering are suspended or augmented as appropriate, based on weather conditions (e.g., raining, freezing, sunny and windy days), truck activity, and roadway conditions. Pavement is also cleaned of residuals when each storage pile is removed for quality control, preventing contamination of material subsequently stored in that bin space.

Each day, on Table 2: Record of Sweeping and Watering, CRT documents the weather conditions, the location of the sweeping and/or applied water, and the sweeping and/or water application frequency on a daily basis. CRT also will document on this log when the sustained wind speeds exceed 25 miles per hour, during which the overhead doors at each end of the building are to remain closed (except when trucks are entering or exiting.) CRT documents on Table 3: Daily Fugitive Dust Inspection Log, whether the paved, on-site roads are free and clear of bulk solid material that could become airborne. The record shows the date and time when the street sweeping was performed. CRT believes that the sweeping program has, and will continue to be, an important tool in controlling fugitive dust emissions from the indoor stockpile areas and from the building.

Truck routes within one-quarter mile of the perimeter of CRT used to transport materials are shown on Figure 1. This one-quarter-mile stretch of roadway is owned by Cronimet Corporation. To minimize dust during transport, trucks handling or transporting BSM will adhere to the following measures prior to leaving the facility. These instructions are posted for all drivers at the check-in window:

- Truck drivers will adhere to the posted speed limit within the facility, which is no more than 8 miles per hour.
- Truck drivers will verify that any part of any tractor, trailer, or tire exterior surface is free of loose materials.
- Trucks will be visually observed by CRT employees at the weigh scale station for loose material prior to exiting the facility.

CRT has no control over drag-out from the access road. Although the access road is not part of the facility, if excess dust is observed from facility-related traffic, the facility will use a watering truck to water the portion of the roadway traveled only by its traffic.

## 4.5 SPILLED MATERIAL

Areas within the facility not regularly used for storage of material are kept free of any spilled or misplaced material by removing such material by the end of each work shift and using the street sweeper in affected areas.

## 4.6 FACILITY WIDE (GENERAL HOUSEKEEPING AND TRAINING)

CRT has two full-time employees on-site. All employees have inspection, monitoring, and/or response roles in the FDP and all receive annual training in their roles and responsibilities in the plan. Each employee is made aware of the general importance of identifying and controlling fugitive dust emissions throughout the facility, the means to minimize fugitive dust emissions as described in this plan, and is instructed to report observations to his/her immediate supervisor for appropriate corrective action.

## 4.7 STORMWATER MANAGEMENT

The operational areas of the site are asphalt paved. The pavement is sloped to direct stormwater to the center (away from property lines), then to run off to the southwest end, into a grassy retention area. Stormwater is also retained on site by berms for the adjacent KCBX facility that surround CRT's southeast, south, and southwest property lines. Stormwater is otherwise allowed to evaporate from the site. If sedimentation is observed on the pavement that could cause dust, it is cleaned up with the sweeper. No material is stored on the dock edge, on the southern paved area, or within 50 feet of the waterway.

## 4.8 VISIBLE DUST OBSERVATIONS AND QUARTERLY OPACITY TESTING

Visual observation of blowing fugitive dust from the facility will be observed through the use of Environmental Protection Agency Method 22. Logs for this purpose are included in Table 4: Visible Emissions and Opacity Log, to be used by trained CRT personnel. Visual observations will be purposely made once per shift and will note their observations at the downwind property boundary. If blowing fugitive dust is noticed by personnel, a Method 22 observation will be performed at that area of the facility and recorded.

The Regulation requires quarterly opacity emission evaluations pursuant to 35 IAC 212.109 (Method 9). An individual trained and certified to evaluate visible emissions will perform quarterly opacity evaluations in accordance with the measurement method specified in Method 9. Opacity reads will be performed at each of the two source types at the facility:

- Roadway; and
- Storage building egress points.

The roadway segment with only trucks travelling to/from CRT will be observed. These opacity read locations are designed to detect the greatest amount of dust emissions. In general, the opacity reads will be performed on clear days or partly cloudy days to provide the appropriate background

contrast for Method 9 reads. The regulation requires testing during a range of weather conditions, noted by the CDPH to include variations in temperature and wind conditions.

Quarterly opacity reads will be completed by the end of each quarter (i.e., March 31, June 30, September 30, and December 31). The specific day(s) will be selected by the certified reader, whose decision will be in part based on weather conditions, including temperature and wind, and on previous days that opacity reads were taken, in order to choose reading days on which opacity readings will be conducted to occur during a range of weather conditions. For example, during at least one of the quarterly opacity reads, the certified reader will endeavor to select specific day(s) with hourly average wind speeds over 10 mile per hour.

Opacity reads will be conducted if the weather conditions are suitable for compliance with Method 9 requirements. If it is raining, snowing, and/or foggy on the test date such that it would affect the ability to follow the Method 9 procedure, the testing will either be conducted later in the day, or rescheduled to the next available date.

Also in accordance with 35 IAC 212.109, opacity reads of roadways will be performed for a duration of four trucks passing, when possible. Scheduling of the opacity readings will take into account anticipated truck traffic for the day. However, due to the infrequency of multiple truck events, the opacity will be done for available truck traffic on the day of the opacity readings. Three readings for each truck pass will be taken at five-second intervals. The first reading will be at the point of maximum opacity, and the second and third readings shall be made at the same point, with the observer standing at right angles to the plume at least 15 feet away from the plume and observing 4 feet above the surface of the roadway. After four (or number based on the available traffic) trucks have passed, the readings will be averaged and recorded.

## 5.0 IMPLEMENTATION

The CRT is committed to the continued operation of the facility in accordance with applicable requirements. The plan identifies actions, responsibilities, and schedules aimed at maintaining the commitment relative to fugitive dust emissions. Table 1: Fugitive Dust Control Plan Implementation Activities identifies activities and responsibilities for the performance of this FDP.

### 5.1 RESPONSIBILITIES

The successful implementation of this plan is the responsibility of personnel ranging from equipment operators brought in as needed, to facility management. As shown in Table 1: Fugitive Dust Control Plan Implementation Activities, activities have been assigned to any as-needed-operators, the leadman, and management personnel. Through the distribution of this plan, incorporation of applicable portions into personnel training programs, and ongoing internal dialogue, roles and responsibilities will be defined and reinforced.

### 5.2 TIMING

Facility personnel have been actively engaged in the management of fugitive particulate matter in accordance with applicable regulatory requirements. Table 1: Fugitive Dust Control Plan Implementation Activities itemizes specific schedule commitments that will be achieved and documented through corresponding records.

### 5.3 RECORDKEEPING

Table 1: Fugitive Dust Control Plan Implementation Activities identifies records that are maintained in accordance with this plan. On a daily basis, the facility will record on Table 2: Record of Sweeping and Watering all street sweeping and watering activities, the number of trucks through the facility, and the weather conditions, including wind speed and direction as documented by the local weather service. This record notes instances when such application is not done for reasons of weather, equipment malfunction, inactivity, etc., and when activities are suspended due to high winds. Observations made during daily inspections are also recorded on the Daily Fugitive Dust Inspection Log, contained in Table 3. All logs are maintained on-site for a minimum of three years.

Table 1: Fugitive Dust Control Plan Implementation Activities also shows that, on a quarterly basis, facility environmental personnel prepare a written summary of incidents of visible dusts and actions taken during the prior quarter. The facility maintains its schedule of inspections and maintenance of all dust control equipment. The quarterly report will be submitted to the IEPA

within thirty days of the end of a quarter (for quarters ending March 31, June 30, September 30, and December 31).

Table 4: Visible Emissions and Opacity Log will be used to record observations of visible emissions in accordance with Method 22 (35 IAC 212.107). Also on a quarterly basis, the facility will perform a visual reading of opacity in accordance with Method 9 (35 IAC 212.109). Records of opacity readings will be maintained on site for a minimum of three years.

On an annual basis, this plan is reviewed and updated as necessary, and is submitted to the CDPH on or before January 31 of each year. An annual summary of the application of control measures, as may be needed for compliance with the opacity limitations, will be prepared and submitted to the IEPA.

# FIGURES

NORTH

SCALE IN FEET

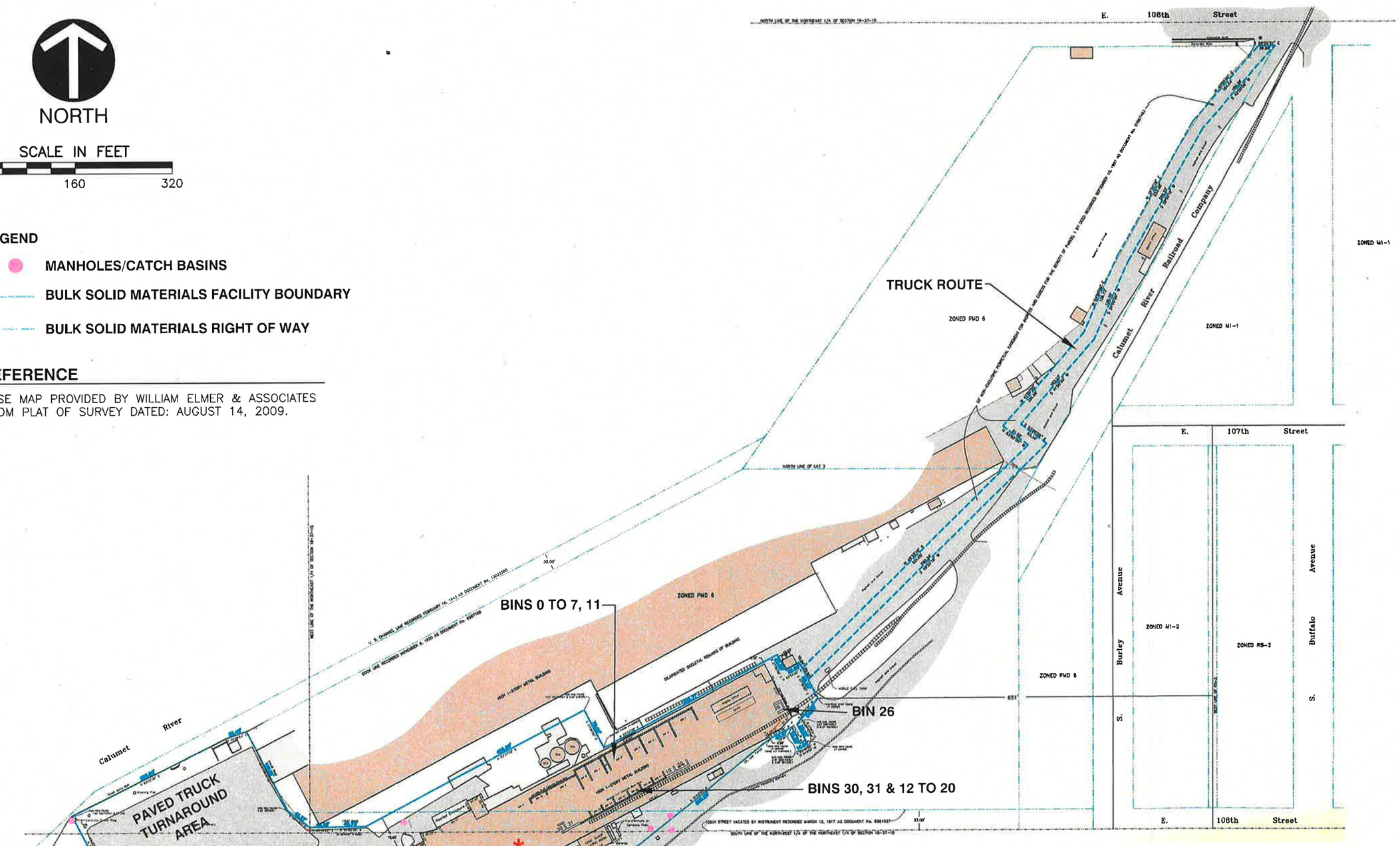
0 160 320

**LEGEND**

- MANHOLES/CATCH BASINS
- BULK SOLID MATERIALS FACILITY BOUNDARY
- BULK SOLID MATERIALS RIGHT OF WAY

## REFERENCE

BASE MAP PROVIDED BY WILLIAM ELMER & ASSOCIATES FROM PLAT OF SURVEY DATED: AUGUST 14, 2009.





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| DRAWN BY: | MSK | CHECKED BY: | ESS | APPROVED BY: | ESS | FIGURE NO.: |
| DATE: | 07/02/2018 | DWG SCALE: | 1"=160' | PROJECT NO: | 180-367.0001 | 1 |

CALUMET RIVER TERMINAL, LTD
FUGITIVE DUST PLAN
10740 SOUTH BURLEY AVENUE
CHICAGO, ILLINOIS 60617

SITE LAYOUT PLAN WITH ACCESS ROAD

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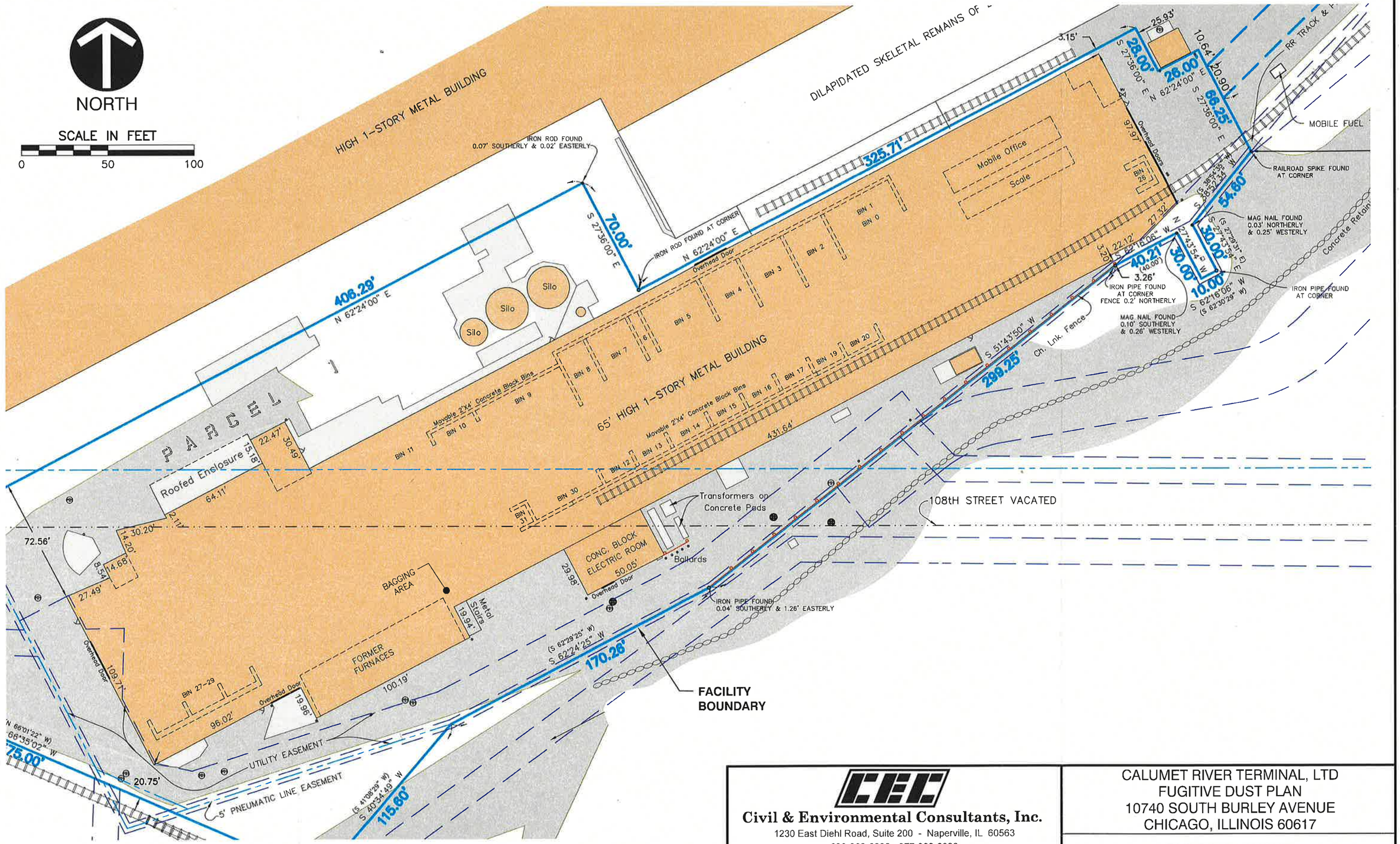


## REFERENCE

BASE MAP PROVIDED BY WILLIAM ELMER & ASSOCIATES
FROM PLAT OF SURVEY DATED: AUGUST 14, 2009.


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CHICAGO, ILLINOIS 60617

BUILDING LAYOUT

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|---|---|---|---|---|---|---|---|
| DRAWN BY: | MSK | CHECKED BY: | ESS | APPROVED BY: | ESS | FIGURE NO.: | 2 |
| DATE: | 07/02/2018 | DWG SCALE: | 1"=50' | PROJECT NO: | 180-367.0001 | | |

# TABLES

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# TABLE 1
# FUGITIVE DUST CONTROL PLAN
# IMPLEMENTATION ACTIVITIES

| Source Area | Personnel | Activity | Schedule | Records |
|---|---|---|---|---|
| BSM Stockpiles | Operators (temporary, as needed) | Assess condition of facility, transfer accumulated fines to piles, notify Leadman if additional sweeping is needed beyond the routine. | Ongoing daily | Daily Inspection Log |
| | Leadman | Daily inspection, activate additional sweeping if needed. Ensure daily log is completed. | Ongoing daily | Daily Inspection Log |
| | | Ensures the daily recording of sweeping in stockpile area on Table 2 log is completed. | Ongoing daily | Record of Sweeping and Watering |
| | Manager | Conduct visual inspections of piles, record on Table 3 and advise Leadman of additional corrective actions as needed. Ensure daily log is completed. | Ongoing daily | Daily Inspection Log |
| | | Monitor wind speed and precipitation, record on Table 3 and prescribe additional area sweeping or watering, as needed. Ensure daily log is completed. | Ongoing daily | Daily Inspection Log |
| Roadway Drag-Out/In | Manager | Assess condition of the facility, record on Table 3 and notify Leadman if additional sweeping (in plant) or watering (off site) is needed. Ensure daily log is completed. | Quarterly | Quarterly reports |
| Bagging | Leadman | Monitor area and implement general housekeeping procedures, as needed. Ensure daily log is completed. | Ongoing daily | Daily Inspection Log |
| | | Daily recording of sweeping and/or watering in crushing and bagging areas on Table 2. | Ongoing daily | Daily Inspection Log |
| | Manager | Monitor area and coordinate with Leadman for corrective action, as needed. Ensure daily log is completed. | Ongoing daily | Record of Sweeping and Watering |
| Screening | Leadman | Monitor area and implement general housekeeping procedures, as needed | Ongoing weekly | Daily Inspection Log |
| | | Daily recording of sweeping and/or watering in screening area on Table 2. | Ongoing daily | Daily Inspection Log |
| Facility-Wide (General Housekeeping) | Manager | Maintain facility dust control campaign. | Ongoing daily | Record of Sweeping and Watering |
| | | Perform Method 22 visual observation of facility emissions. If visible emissions cross property line, schedule a Method 9 certified opacity inspection. | Quarterly | Daily Inspection Log |
| | | Conduct quarterly (seasonal) evaluation of control plan effectiveness. Submit quarterly reports to IEPA of incidents when dust control measures were not implemented. | Quarterly | Quarterly reports |
| | | Update this Fugitive Dust Plan annually, including storage capacities, personnel changes, operational changes, etc. Submit new plan to CDPH, and if significant changes, submit to IEPA. | Annual | Updated Fugitive Dust Plan |
| | | Enable the performance of a Method 9 opacity test of facility emissions by a certified technician | Annual | Method 9 Report |
| | | Submit annual report to IEPA summarizing the application of control measures. | Annual | Annual report |
| | | Conduct routine training with personnel affected by this plan. | Annual | Updated Fugitive Dust Plan |
| | Leadman | Monitor vehicle speeds for conformance with facility speed limit (8 mph). Ensure daily log is completed. | Annual | Training records. |
| | | Monitor daily truck count, record on Table 3. | Ongoing daily | Daily Inspection Log |

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# TABLE 2
## RECORD OF SWEEPING AND WATERING
## CALUMET RIVER TERMINAL, CHICAGO, ILLINOIS

**SWEEPING:**

| | | | | | WEATHER CONDITIONS | | | | SWEEPING FREQUENCY METHOD | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Start Time | End Time | Initials | Location(s) Swept* | Temp (°F) | Conditions (wet, rainy, snow, dry, etc) | Average Wind Speed (mph) | Doors to Remain Closed Due to High Winds*** (Y/N) | Pavement clear of dust matter?** (Y/N) | Every 4 hours? (Y/N) | Every 35 trucks (Y/N) | # of Trucks | Total Time of Sweeping (mins) | Comments, use of water spray, reasons for not sweeping, corrective measures, etc. |
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*Locations: a = Scale area indoors, b = BSM areas indoors, c = Bagging area, d = Screening area, e = Paved areas outdoors, g = Dock, h = other

**If roads are free and clear of material, no further records required.

***Except when trucks are entering or exiting the building

**WATERING:**

| | | | | | WEATHER CONDITIONS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Start Time | End Time | Initials | Location(s) Watered* | Temp (°F) | Conditions (wet, rainy, snow, dry, etc) | Average Wind Speed (mph) | Activity Suspended Due to High Winds (Y/N) | Visible Emissions over 5 Mins? (Y/N) | Roads already wet (indicate watering or weather) | Qty of Water Applied (gallons) | Quantity of CaCl or salt applied | Number of Passes | Comments, reasons for not watering, corrective measures, etc. |
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*Locations: a = access roads, b = south side access road, c = other

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# TABLE 3
## DAILY FUGITIVE DUST INSPECTION LOG
## CALUMET RIVER TERMINAL, CHICAGO, ILLINOIS

| INSPECTION ITEM/ CORRECTION ITEM | Monday _____ | | | Tuesday _____ | | | Wednesday _____ | | | Thursday _____ | | | Friday _____ | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OK | NOT OK | INITIALS | OK | NOT OK | INITIALS | OK | NOT OK | INITIALS | OK | NOT OK | INITIALS | OK | NOT OK | INITIALS |
| **BSM STOCKPILE AREAS** | | | | | | | | | | | | | | | |
| Inspect for BSM accumulation. | | | | | | | | | | | | | | | |
| *BSM fines collected and recycled by Operator.* | | | | | | | | | | | | | | | |
| Sufficient moisture is present to suppress dust. | | | | | | | | | | | | | | | |
| *Operator notified to water equipment runs.* | | | | | | | | | | | | | | | |
| *Visible emissions from building over 5 minute period, recorded on Table 4* | | | | | | | | | | | | | | | |
| **BAGGING MACHINE** | ACTIVITY? (Y/N)____ | | | ACTIVITY? (Y/N)____ | | | ACTIVITY? (Y/N)____ | | | ACTIVITY? (Y/N)____ | | | ACTIVITY? (Y/N)____ | | |
| Inspect container for proper placement in bagging process | | | | | | | | | | | | | | | |
| *Reset alignment of container.* | | | | | | | | | | | | | | | |
| Inspect for dust escaping from either machine or container. | | | | | | | | | | | | | | | |
| *Control flow into container or report to Leadman for correction.* | | | | | | | | | | | | | | | |
| Inspect ground surface area around bagger for dust accumulation. | | | | | | | | | | | | | | | |
| *Operator to remove dust or report to supervisor for correction.* | | | | | | | | | | | | | | | |
| *Visible emissions from building during bagging operations recorded on Table 4.* | | | | | | | | | | | | | | | |
| **ROADWAYS** | TRUCK COUNT ____ | | | TRUCK COUNT ____ | | | TRUCK COUNT ____ | | | TRUCK COUNT ____ | | | TRUCK COUNT ____ | | |
| Visually inspect paved areas for accumulation of BSM. | | | | | | | | | | | | | | | |
| *Use street sweeper to clean the facility.Record use on Table2.* | | | | | | | | | | | | | | | |
| *If sweeping is deemed insufficient and forecast temperature is above 32°F, use street sweeper with water spray to clean the facility.* | | | | | | | | | | | | | | | |
| *Notify Manager if street sweeper is not effective.* | | | | | | | | | | | | | | | |
| Visually inspect the unpaved roadway entering the facility for dryness/dust. | | | | | | | | | | | | | | | |
| *If forecast temperature is above 32°F, use water truck to spray for dust control. Record use on Table 2.* | | | | | | | | | | | | | | | |
| *Notify Manager if water truck is not effective.* | | | | | | | | | | | | | | | |
| **SCREENING** | ACTIVITY? (Y/N)____ | | | ACTIVITY? (Y/N)____ | | | ACTIVITY? (Y/N)____ | | | ACTIVITY? (Y/N)____ | | | ACTIVITY? (Y/N)____ | | |
| Visible dust generated during screening observed to potentially be carried by wind off site? | | | | | | | | | | | | | | | |
| *Operator to adjust flow of material to minimize dust generated.* | | | | | | | | | | | | | | | |
| Visually inspect around and under the screen for the presence of accumulated BSM fines. | | | | | | | | | | | | | | | |
| *Report to Leadman and Operator to remove fines.* | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Civil & Environmental Consultants, Inc.

# TABLE 4
# VISIBLE EMISSIONS AND OPACITY LOG
# CALUMET RIVER TERMINAL, CHICAGO, ILLINOIS

**Year:** _____

| Month: | Visible Emission Surveys | | | | | *** If Method 9 applicable |
|---|---|---|---|---|---|---|
| | Initials of Observer | Date | Time | Visible Emissions? Yes/No | ** Corrective Action within 8 hours? | % Opacity |
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |
| 17 | | | | | | |
| 18 | | | | | | |
| 19 | | | | | | |
| 20 | | | | | | |
| 21 | | | | | | |
| 22 | | | | | | |
| 23 | | | | | | |
| 24 | | | | | | |
| 25 | | | | | | |
| 26 | | | | | | |
| 27 | | | | | | |
| 28 | | | | | | |
| 29 | | | | | | |
| 30 | | | | | | |
| 31 | | | | | | |
| | | | | | | |

* Please indicate "N/A" for dates when the facility is not in use.

** If visible emissions are observed, perform corrective action within eight hours. If emissions persist, perform a Method 9 within 24 hours of the initial observation.

*** An indivual must be certified to perform a Method 9.

# ATTACHMENT C

# DEMOGRAPHIC DATA

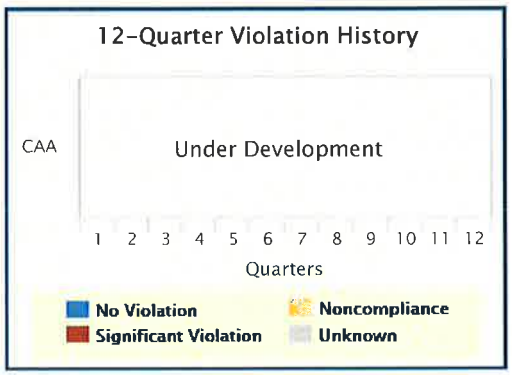
ECHO
Enforcement and Compliance History Online

# Detailed Facility Report

## Facility Summary

**CALUMET RIVER TERMINAL**
**10740 S BURLEY AVE, CHICAGO, IL 60617**

FRS (Facility Registry Service) ID: 110056367701
EPA Region: 05
Latitude: 41.70025
Longitude: -87.54498
Locational Data Source: FRS
Industry: Miscellaneous Manufacturing
Indian Country: N




### Enforcement and Compliance Summary

| Statute | Insp (5 Years) | Date of Last Inspection | Compliance Status | Qtrs in NC (Noncompliance) (of 12) | Qtrs in Significant Violation | Informal Enforcement Actions (5 years) | Formal Enforcement Actions (5 years) | Penalties from Formal Enforcement Actions (5 years) | EPA Cases (5 years) | Penalties from EPA Cases (5 years) |
|---|---|---|---|---|---|---|---|---|---|---|
| CAA | 2 | 04/27/2016 | | 0 | 0 | 1 | -- | -- | -- | -- |

### Regulatory Information

Clean Air Act (CAA): Operating Minor (IL000031600GZM)
Clean Water Act (CWA): No Information
Resource Conservation and Recovery Act (RCRA): No Information
Safe Drinking Water Act (SDWA): No Information

### Other Regulatory Reports

Air Emissions Inventory (EIS): 16798111
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information
Compliance and Emissions Data Reporting Interface (CEDRI): No Information

## Facility/System Characteristics

### Facility/System Characteristics

| System | Statute | Identifier | Universe | Status | Areas | Permit Expiration Date | Indian Country | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| FRS | | 110056367701 | | | | | N | 41.70025 | -87.54498 |
| EIS | CAA | 16798111 | | OPERATING | | | N | | |
| AIR | CAA | IL000031600GZM | Minor Emissions | Operating | CAASIP | | N | | |

### Facility Address

| System | Statute | Identifier | Facility Name | Facility Address |
|---|---|---|---|---|
| FRS | | 110056367701 | CALUMET RIVER TERMINAL | 10740 S BURLEY AVE, CHICAGO, IL 60617 |
| EIS | CAA | 16798111 | CALUMET RIVER TERMINAL | 10740 S BURLEY AVE, CHICAGO, IL 60617 |
| AIR | CAA | IL000031600GZM | CALUMET RIVER TERMINAL | 10740 S BURLEY AVE, CHICAGO, IL 60617 |

### Facility SIC (Standard Industrial Classification) Codes

| System | Identifier | SIC Code | SIC Desc |
|---|---|---|---|
| AIR | IL000031600GZM | 9999 | Nonclassifiable Establishments |

### Facility NAICS (North American Industry Classification System) Codes

| System | Identifier | NAICS Code | NAICS Description |
|---|---|---|---|
| EIS | 16793111 | 339999 | All Other Miscellaneous Manufacturing |
| AIR | IL000031600GZM | 339999 | All Other Miscellaneous Manufacturing |

### Facility Tribe Information

| Reservation Name | Tribe Name | EPA Tribal ID | Distance to Tribe (miles) |
|---|---|---|---|
| No data records returned | | | |

## Enforcement and Compliance

### Compliance Monitoring History (5 years)

| Statute | Source ID | System | Inspection Type | Lead Agency | Date | Finding |
|---|---|---|---|---|---|---|
| CAA | IL000031600GZM | AIR | FCE On-Site | State | 04/27/2016 | |
| CAA | IL000031600GZM | AIR | FCE On-Site | State | 11/19/2013 | |

Entries in italics are not considered inspections in official counts.

### Compliance Summary Data

| Statute | Source ID | Current SNC (Significant Noncompliance)/HPV (High Priority Violation) | Description | Current As Of | Qtrs in NC (Noncompliance) (of 12) |
|---|---|---|---|---|---|
| CAA | IL000031600GZM | No | | 06/16/2018 | 0 |

### Three Year Compliance Status by Quarter

| Statute | Program Pollutant Violation Type<br>CAA (Source ID: IL000031600GZM) | QTR 1<br>07/01-09/30/15 | QTR 2<br>10/01-12/31/15 | QTR 3<br>01/01-03/31/16 | QTR 4<br>04/01-06/30/16 | QTR 5<br>07/01-09/30/16 | QTR 6<br>10/01-12/31/16 | QTR 7<br>01/01-03/31/17 | QTR 8<br>04/01-06/30/17 | QTR 9<br>07/01-09/30/17 | QTR 10<br>10/01-12/31/17 | QTR 11<br>01/01-03/31/18 | QTR 12<br>04/01-06/30/18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Facility-Level Status | No Violation | | | | | | | | | | | |
| | HPV History | | | | | | | | | | | | |
| | Violation Type / Agency / Programs / Pollutants | | | | | | | | | | | | |

### Informal Enforcement Actions (5 Years)

| Statute | System | Source ID | Type of Action | Lead Agency | Date |
|---|---|---|---|---|---|
| CAA | AIR | IL000031600GZM | Notice of Violation | State | 04/22/2014 |

### Formal Enforcement Actions (5 Years)

| Statute | System | Law Section | Source ID | Action Type | Case No | Lead Agency | Case Name | Issued/Filed Date | Settlement Actions | Settlement Action Date | Federal Penalty | State/Local Penalty | SEP Cost | Comp Action Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No data records returned | | | | | | | | | | | | | | |

## Environmental Conditions

### Water Quality

| Permit ID | Combined Sewer System? | Number of CSO (Combined Sewer Overflow) Outfalls | 12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database)) | WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database)) | State Waterbody Name (ICIS (Integrated Compliance Information System)) | Impaired Waters | Impaired Class | Causes of Impairment (s) by Group(s) | Watershed with ESA (Endangered Species Act)-listed Aquatic Species* |
|---|---|---|---|---|---|---|---|---|---|
| No data records returned | | | | | | | | | |

### Waterbody Designated Uses

| Reach Code | Waterbody Name | Exceptional Use | Recreational Use | Aquatic Life Use | Shellfish Use | Beach Closure Within Last Year | Beach Closure Within Last Two Years |
|---|---|---|---|---|---|---|---|
| No data records returned | | | | | | | |

### Air Quality

| Nonattainment Area? | Pollutant(s) | Applicable Nonattainment Standard(s) |
|---|---|---|
| Yes | Ozone | 8-Hour Ozone (2008) |
| No | Lead | |
| Yes | Particulate Matter | PM-2.5 (1997) |
| No | Sulfur Dioxide | |

## Pollutants

### Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site ⓘ

| TRI Facility ID | Year | Total Air Emissions | Surface Water Discharges | Off-Site Transfers to POTWs (Publicly Owned Treatment Works) | Underground Injections | Releases to Land | Total On-site Releases | Total Off-site Releases |
|---|---|---|---|---|---|---|---|---|
| No data records returned | | | | | | | | |

### Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year ⓘ

| Chemical Name |
|---|
| No data records returned |

## Demographic Profile

### Demographic Profile of Surrounding Area (3 Miles)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 US Census and American Community Survey data, and are accurate to the extent that the facility latitude and longitude listed below are correct. The latitude and longitude are obtained from the EPA Locational Reference Table (LRT) when available.

| | | | | | |
|---|---|---|---|---|---|
| Radius of Area: | 3 | Land Area: | 83% | Households in Area: | 27,670 |
| Center Latitude: | 41.70025 | Water Area: | 17% | Housing Units in Area: | 31,331 |
| Center Longitude: | -87.54614 | Population Density: | 3,806/sq mi | Households on Public Assistance: | 864 |
| Total Persons: | 80,248 | Percent Minority: | 85% | Persons Below Poverty Level: | 41,131 |

| Race Breakdown | Persons (%) | Age Breakdown | Persons (%) |
|---|---|---|---|
| White: | 27,793 (35%) | Child 5 years and younger: | 5,726 (7%) |
| African-American: | 34,102 (43%) | Minors 17 years and younger: | 22,143 (28%) |
| Hispanic-Origin: | 33,879 (42%) | Adults 18 years and older: | 58,106 (72%) |
| Asian/Pacific Islander: | 267 (0%) | Seniors 65 years and older: | 11,222 (14%) |
| American Indian: | 564 (1%) | | |
| Other/Multiracial: | 17,522 (22%) | | |

| Education Level (Persons 25 & older) | Persons (%) | Income Breakdown | Households (%) |
|---|---|---|---|
| Less than 9th Grade: | 7,203 (13.5%) | Less than $15,000: | 4,976 (17.98%) |
| 9th through 12th Grade: | 5,989 (11.23%) | $15,000 - $25,000: | 3,845 (13.43%) |
| High School Diploma: | 17,082 (32.02%) | $25,000 - $50,000: | 7,969 (27.83%) |
| Some College 2-yr: | 15,215 (28.52%) | $50,000 - $75,000: | 5,748 (20.08%) |

| Education Level (Persons 25 & older) | Persons (%) | Income Breakdown | Households (%) |
|---|---|---|---|
| BS/BA or More | 7,853 (14.72%) | Greater than $75,000 | 6,093 (24.28%) |

# ATTACHMENT D

# DUST MONITORING BUDGETARY COST

Civil & Environmental Consultants, Inc.

# Attachment D
## Revised Variance Request
## Dust Monitoring Budgetary Cost
## Annual Operation

| Task | Unit Rate | Estimated Days and Units | Estimated Cost |
|---|---|---|---|
| **TASK 1** **Quality Assurance Project Plan** | $ 6,750.00 | Lump Sum | $ 6,750.00 |
| **TASK 2** **Project Mobilization** | | | |
| 10-meter Met Station w/solar | $ 8,000.00 | 1 | $ 8,000.00 |
| FRM PM10 Dust Monitorig System | $ 6,700.00 | 1 | $ 6,700.00 |
| Battery powered FEM dust monitoring station | $ 22,000.00 | 4 | $ 88,000.00 |
| Installation per system | $ 3,000.00 | 6 | $ 18,000.00 |
| Labor | $ 6,000.00 | Lump Sum | $ 6,000.00 |
| Foundation pad with pole and bollards, electric service, and fencing | $ 5,000.00 | 6 | $ 30,000.00 |
| FEM Bluetooth Telemery to Local PC | Included | | |
| | **Total Capitol Cost =** | | $ 163,450.00 |
| **TASK 3** **Perimeter Monitoring Station Operation** | | | |
| FRM Lab Costs | | Annual | $ 16,000.00 |
| Expenses (Monitor parts/supplies) | $ 50.00 | 12 | $ 600.00 |
| **TASK 4** **Data Management** | | | |
| FRM Data collection/analysis reporting | $ 2,220.00 | 12 | $ 26,640.00 |
| FEM Labor (Assumes 8 hrs/month at $105/hr) | $ 840.00 | 12 | $ 10,080.00 |
| **TASK 5** **Annual Summary Report** | | | |
| Labor [1] | $ 8,500.00 | Lump Sum | $ 8,500.00 |
| Expenses | $ 500.00 | Lump Sum | $ 500.00 |
| | **Total Annual Operating Cost =** | | $ 62,320.00 |

**Notes:**

[1] Reporting costs based on one year of operation and data collection

# ATTACHMENT E

# 2019 OPACITY READINGS

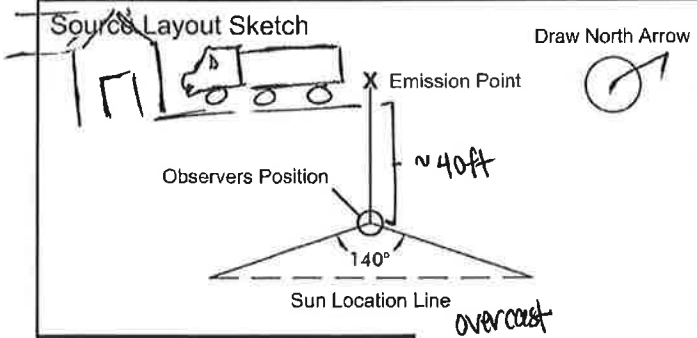
CEC Project #180-367

**Civil & Environmental Consultants, Inc.**

EPA Method 9 pursuant to 35 IAC 212.109 for roadways

| | |
|---|---|
| SOURCE NAME | Calumet River Terminal |
| ADDRESS | 10740 South Burley Ave |
| CITY | Chicago |
| STATE | IL |
| ZIP | 60617 |
| PHONE | 773-221-5300 |
| SOURCE ID NUMBER | N/A |
| PROCESS EQUIPMENT | Haul trucks/roads |
| OPERATING MODE | normal |
| CONTROL EQUIPMENT | watering roads |
| OPERATING MODE | N/A - rain |
| DESCRIBE EMISSION POINT START | Road @ truck wheels |
| HEIGHT ABOVE GROUND LEVEL | 4 ft |
| HEIGHT RELATIVE TO OBSERVER START | 4 ft STOP 4 ft |
| DISTANCE FROM OBSERVER START | ~40 ft STOP |
| DIRECTION FROM OBSERVER START | 315° STOP 315° |
| DESCRIBE EMISSIONS START | none STOP none |
| EMISSION COLOR START | N/A - no stop |
| PLUME TYPE: CONTINUOUS ☐ FUGITIVE ☐ | N/A INTERMITTENT ☐ |
| WATER DROPLETS PRESENT: NO ☒ YES ☐ | IF WATER DROPLET PLUME: ATTACHED ☐ DETACHED ☐ |
| POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START | 4 ft above ground @ tires STOP same |
| DESCRIBE BACKGROUND START | Grey wall STOP same |
| BACKGROUND COLOR START | grey STOP same |
| SKY CONDITIONS START | overcast STOP same |
| WIND SPEED START | 15mph STOP same |
| WIND DIRECTION START | S STOP S |
| AMBIENT TEMP START | 39° F STOP same |
| WET BULB TEMP | |
| RH.percent | |

Source Layout Sketch




Key: Sun | Plume | Wind

| Truck / Sec | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | | | | | | | | | |
| 5 | 0 | | | | | | | | | |
| 10 | 0 | | | | | | | | | |
| 15 | | | | | | | | | | |
| 20 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 30 | | | | | | | | | | |
| 35 | | | | | | | | | | |
| 40 | | | | | | | | | | |
| 45 | | | | | | | | | | |
| 50 | | | | | | | | | | |
| 55 | | | | | | | | | | |
| Total of Opacity Readings | 0 | | | | | | | | | |
| Number of Readings | 3 | | | | | | | | | |
| Average Opacity | 0% | | | | | | | | | |
| Start time: | 11:10AM | Start time: | Start time: | Start time: | | | | | | |
| Comments | | | | | | | | | | |

Observation Date: 3/20/2019

Start Time: 11:10 AM

End Time: 11:10AM

OBSERVER'S NAME (PRINT): Beth Millian

OBSERVER'S SIGNATURE: Beth Millian DATE: 08/20/2019

ORGANIZATION: CEC

CERTIFIED BY: Aeromet DATE: 10/10/2018

VERIFIED BY: DATE:

COMMENTS: Only 1 truck available to read all day

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS

SIGNATURE

TITLE DATE

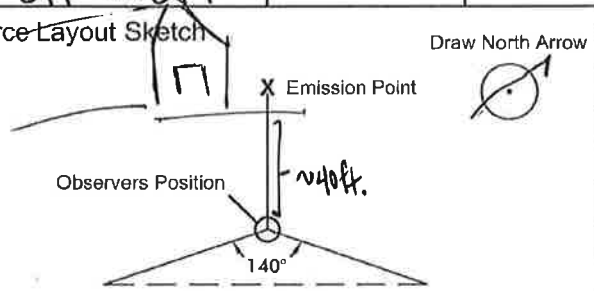
CEC Project #180-367

Visible Emissions Observation Form

# Civil & Environmental Consultants, Inc.

| | |
|---|---|
| SOURCE NAME | Calumet River Terminal |
| ADDRESS | 10740 South Burley Ave |
| CITY | Chicago |
| STATE | IL |
| ZIP | 60617 |
| PHONE | 773-221-5300 |
| SOURCE ID NUMBER | N/A |
| PROCESS EQUIPMENT | Front Door to Storage Bldg. |
| OPERATING MODE | Normal |
| CONTROL EQUIPMENT | N/A |
| OPERATING MODE | N/A |
| DESCRIBE EMISSION POINT START | Entry Door to Storage Bldg. |
| HEIGHT ABOVE GROUND LEVEL | ~4 ft. |
| HEIGHT RELATIVE TO OBSERVER START | 4ft STOP 4ft |
| DISTANCE FROM OBSERVER START | ~40ft STOP same |
| DIRECTION FROM OBSERVER START | 315° STOP 315° |
| DESCRIBE EMISSIONS START | None STOP None |
| EMISSION COLOR START | N/A STOP |
| PLUME TYPE: CONTINUOUS ☐ FUGITIVE ☐ INTERMITTENT ☐ | N/A |
| WATER DROPLETS PRESENT: NO ☒ YES ☐ | |
| IF WATER DROPLET PLUME: ATTACHED ☐ DETACHED ☐ | |
| POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START | ~4 ft above ground STOP same |
| DESCRIBE BACKGROUND START | grey bldg STOP same |
| BACKGROUND COLOR START | grey STOP grey |
| SKY CONDITIONS START | overcast STOP |
| WIND SPEED START | 15mph STOP 15mph |
| WIND DIRECTION START | S STOP S |
| AMBIENT TEMP START | 39°F STOP 39°F |
| WET BULB TEMP | |
| RH,percent | |

Source Layout Sketch




Key: Sun | Plume | Wind

| OBSERVATION DATE | START TIME | STOP TIME |
|---|---|---|
| 3/20/2019 | 11:21 AM | 11:27 AM |

| MIN \ SEC | 0 | 15 | 30 | 45 | MIN \ SEC | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | | | | |
| 2 | 0 | 0 | 0 | 0 | 32 | | | | |
| 3 | 0 | 0 | 0 | 0 | 33 | | | | |
| 4 | 0 | 0 | 0 | 0 | 34 | | | | |
| 5 | 0 | 0 | 0 | 0 | 35 | | | | |
| 6 | 0 | 0 | 0 | 0 | 36 | | | | |
| 7 | 0 | 0 | 0 | 0 | 37 | | | | |
| 8 | | | | | 38 | | | | |
| 9 | | | | | 39 | | | | |
| 10 | | | | | 40 | | | | |
| 11 | | | | | 41 | | | | |
| 12 | | | | | 42 | | | | |
| 13 | | | | | 43 | | | | |
| 14 | | | | | 44 | | | | |
| 15 | | | | | 45 | | | | |
| 16 | | | | | 46 | | | | |
| 17 | | | | | 47 | | | | |
| 18 | | | | | 48 | | | | |
| 19 | | | | | 49 | | | | |
| 20 | | | | | 50 | | | | |
| 21 | | | | | 51 | | | | |
| 22 | | | | | 52 | | | | |
| 23 | | | | | 53 | | | | |
| 24 | | | | | 54 | | | | |
| 25 | | | | | 55 | | | | |
| 26 | | | | | 56 | | | | |
| 27 | | | | | 57 | | | | |
| 28 | | | | | 58 | | | | |
| 29 | | | | | 59 | | | | |
| 30 | | | | | 60 | | | | |

| | |
|---|---|
| AVERAGE OPACITY FOR HIGHEST PERIOD | 0 |
| NUMBER OF READINGS ABOVE | 10 |
| % WERE | 0 |
| RANGE OF OPACITY READINGS MINIMUM | 0 |
| MAXIMUM | 0 |
| OBSERVER'S NAME (PRINT) | Beth Millian |
| OBSERVER'S SIGNATURE | Beth Millian |
| DATE | 3/20/2019 |
| ORGANIZATION | CEC |
| CERTIFIED BY: | Aeromet |
| DATE | 10/10/2018 |
| VERIFIED BY: | |
| DATE | |
| COMMENTS | no emissions observed |
| I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS SIGNATURE | |
| TITLE | |
| DATE | |

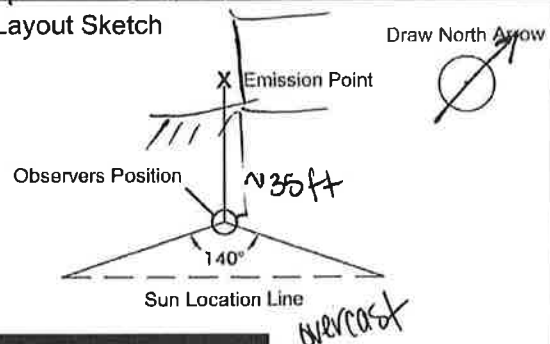
CEC Project # 180-367

Visible Emissions Observation Form

# Civil & Environmental Consultants, Inc.

| | |
|---|---|
| SOURCE NAME | Calumet River Terminal |
| ADDRESS | 10740 South Burley Ave |
| CITY | Chicago |
| STATE | IL |
| ZIP | 60617 |
| PHONE | 773-221-5300 |
| SOURCE ID NUMBER | N/A |
| PROCESS EQUIPMENT | Storage Bldg - Back Door |
| OPERATING MODE | normal |
| CONTROL EQUIPMENT | N/A |
| OPERATING MODE | N/A |
| DESCRIBE EMISSION POINT START | Back door to storage bldg. |
| HEIGHT ABOVE GROUND LEVEL | ~4 ft |
| HEIGHT RELATIVE TO OBSERVER START | 4 ft STOP 4 ft |
| DISTANCE FROM OBSERVER START | 35 ft STOP 35 ft |
| DIRECTION FROM OBSERVER START | 330° STOP 330° |
| DESCRIBE EMISSIONS START | N/A STOP N/A |
| EMISSION COLOR START | N/A STOP |
| PLUME TYPE: CONTINUOUS ☐ | N/A ATIVE ☐ INTERMITTENT ☐ |
| WATER DROPLETS PRESENT: | NO ☒ YES ☐ |
| IF WATER DROPLET PLUME: | ATTACHED ☐ DETACHED ☐ |
| POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START | 4 ft above ground STOP same |
| DESCRIBE BACKGROUND START | grey bldg STOP same |
| BACKGROUND COLOR START | grey STOP grey |
| SKY CONDITIONS START | overcast STOP same |
| WIND SPEED START | 10 mph STOP |
| WIND DIRECTION START | S STOP S |
| AMBIENT TEMP START | 39°F STOP 39°F |
| WET BULB TEMP | |
| RH,percent | |

Source Layout Sketch




Key: Sun | Plume | Wind

| OBSERVATION DATE | START TIME | STOP TIME |
|---|---|---|
| 3/20/2019 | 11:37 AM | 11:43 AM |

| SEC / MIN | 0 | 15 | 30 | 45 | SEC / MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | | | | |
| 2 | 0 | 0 | 0 | 0 | 32 | | | | |
| 3 | 0 | 0 | 0 | 0 | 33 | | | | |
| 4 | 0 | 0 | 0 | 0 | 34 | | | | |
| 5 | 0 | 0 | 0 | 0 | 35 | | | | |
| 6 | 0 | 0 | 0 | 0 | 36 | | | | |
| 7 | 0 | 0 | 0 | 0 | 37 | | | | |
| 8 | | | | | 38 | | | | |
| 9 | | | | | 39 | | | | |
| 10 | | | | | 40 | | | | |
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| 29 | | | | | 59 | | | | |
| 30 | | | | | 60 | | | | |

| | |
|---|---|
| AVERAGE OPACITY FOR HIGHEST PERIOD | 0 |
| NUMBER OF READINGS ABOVE | 10 |
| % WERE | 0 |
| RANGE OF OPACITY READINGS MINIMUM | 0 |
| MAXIMUM | 0 |
| OBSERVER'S NAME (PRINT) | Beth Millian |
| OBSERVER'S SIGNATURE | Beth Millian |
| DATE | 3/20/2019 |
| ORGANIZATION | CEC |
| CERTIFIED BY: | Aeromet |
| DATE | 10/10/2018 |
| VERIFIED BY: | |
| DATE | |
| COMMENTS | No emissions observed |
| I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS SIGNATURE | |
| TITLE | |
| DATE | |

CEC Project # 180-367

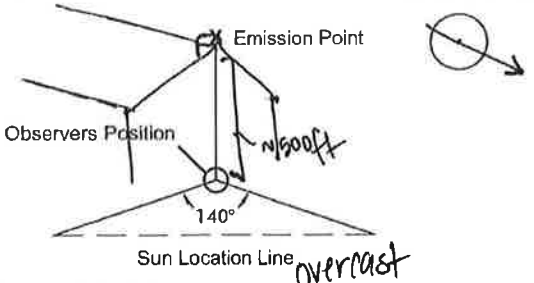
Visible Emissions Observation Form

# Civil & Environmental Consultants, Inc.

| | |
|---|---|
| SOURCE NAME | Calumet River Terminal |
| ADDRESS | 10740 South Burley Ave |
| CITY | Chicago |
| STATE | IL |
| ZIP | 60617 |
| PHONE | 773-221-5300 |
| SOURCE ID NUMBER | N/A |
| PROCESS EQUIPMENT | Roof Vent - 2nd from front |
| OPERATING MODE | Normal |
| CONTROL EQUIPMENT | N/A |
| OPERATING MODE | N/A |
| DESCRIBE EMISSION POINT START | Roof Vent - 2nd from front |
| HEIGHT ABOVE GROUND LEVEL | ~75 feet |
| HEIGHT RELATIVE TO OBSERVER START | 75ft STOP 75ft |
| DISTANCE FROM OBSERVER START | ~500ft STOP ~500ft |
| DIRECTION FROM OBSERVER START | 248° STOP 248° |
| DESCRIBE EMISSIONS START | None STOP None |
| EMISSION COLOR START | N/A STOP |
| PLUME TYPE: CONTINUOUS ☐ FUGITIVE ☐ INTERMITTENT ☐ | N/A |
| WATER DROPLETS PRESENT: NO ☒ YES ☐ | |
| IF WATER DROPLET PLUME: ATTACHED ☐ DETACHED ☐ | |
| POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START | ~10ft above stack STOP same |
| DESCRIBE BACKGROUND START | grey clouds STOP same |
| BACKGROUND COLOR START | grey STOP grey |
| SKY CONDITIONS START | Overcast STOP |
| WIND SPEED START | 15mph STOP 15mph |
| WIND DIRECTION START | S STOP S |
| AMBIENT TEMP START | 39°F STOP 39°F |
| WET BULB TEMP | |
| RH.percent | |

Source Layout Sketch

Draw North Arrow




Key: Sun | Plume | Wind

COMMENTS: No emissions observed

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS
SIGNATURE
TITLE
DATE

OBSERVATION DATE: 3/20/2019
START TIME: 11:59 AM
STOP TIME: 12:06 PM

| SEC / MIN | 0 | 15 | 30 | 45 | SEC / MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | | | | |
| 2 | 0 | 0 | 0 | 0 | 32 | | | | |
| 3 | 0 | 0 | 0 | 0 | 33 | | | | |
| 4 | 0 | 0 | 0 | 0 | 34 | | | | |
| 5 | 0 | 0 | 0 | 0 | 35 | | | | |
| 6 | 0 | 0 | 0 | 0 | 36 | | | | |
| 7 | 0 | 0 | 0 | 0 | 37 | | | | |
| 8 | | | | | 38 | | | | |
| 9 | | | | | 39 | | | | |
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| 30 | | | | | 60 | | | | |

AVERAGE OPACITY FOR HIGHEST PERIOD: 0
NUMBER OF READINGS ABOVE: 10 % WERE
RANGE OF OPACITY READINGS MINIMUM: 0 MAXIMUM: 0
OBSERVER'S NAME (PRINT): Beth Millian
OBSERVER'S SIGNATURE: Beth Millian DATE: 3/20/2019
ORGANIZATION: CEC
CERTIFIED BY: APromet DATE: 10/10/2018
VERIFIED BY: DATE

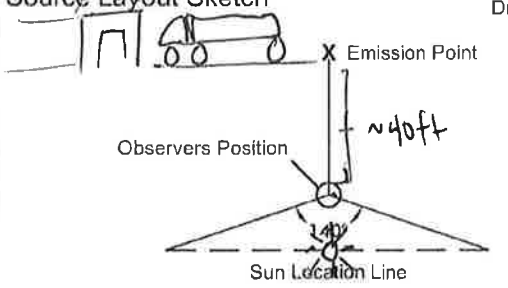
CEC Project #180-367

# Civil & Environmental Consultants, Inc.

EPA Method 9 pursuant to 35 IAC 212.109 for roadways

| | |
|---|---|
| SOURCE NAME | Calumet River Terminal |
| ADDRESS | 10740 South Burley Ave |
| CITY | Chicago |
| STATE | IL |
| ZIP | 60617 |
| PHONE | 773-221-5300 |
| SOURCE ID NUMBER | N/A |
| PROCESS EQUIPMENT | Haul trucks/roads |
| OPERATING MODE | normal |
| CONTROL EQUIPMENT | watering roads |
| OPERATING MODE | normal |
| DESCRIBE EMISSION POINT START | Road @ truck wheels |
| HEIGHT ABOVE GROUND LEVEL | 4 ft |
| HEIGHT RELATIVE TO OBSERVER START | 4ft STOP 4ft |
| DISTANCE FROM OBSERVER START | ~40ft STOP ~40ft |
| DIRECTION FROM OBSERVER START | 316° STOP 316° |
| DESCRIBE EMISSIONS START | N/A STOP N/A |
| EMISSION COLOR START | N/A STOP N/A |
| PLUME TYPE: CONTINUOUS ☐ FUGITIVE ☐ INTERMITTENT ☐ | N/A |
| WATER DROPLETS PRESENT: NO ☒ YES ☐ | |
| IF WATER DROPLET PLUME: ATTACHED ☐ DETACHED ☐ | |
| POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START | 4ft above ground STOP same pt. |
| DESCRIBE BACKGROUND START | grey wall STOP same |
| BACKGROUND COLOR START | grey STOP grey |
| SKY CONDITIONS START | clear STOP clear |
| WIND SPEED START | ~15mph STOP ~15mph |
| WIND DIRECTION START | SW STOP SW |
| AMBIENT TEMP START | 78°F STOP 78°F |
| WET BULB TEMP | |
| RH,percent | |

Source Layout Sketch




Key: Sun | Plume | Wind

| Truck \ Sec | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | | | | | | | | | |
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| 10 | | | | | | | | | | | | |

Observation Date: 6/25/2019

Start Time: 10:01

| | |
|---|---|
| Total of Opacity Readings | 0 |
| Number of Readings | 3 |
| Average Opacity | 0% |
| Start time: | 10:01 AM |
| Start time: | |
| Start time: | |
| Start time: | |

End Time: 10:01

Comments:

| | |
|---|---|
| OBSERVER'S NAME (PRINT) | Beth Millian |
| OBSERVER'S SIGNATURE | Beth Millian |
| DATE | 6/25/2019 |
| ORGANIZATION | CEC |
| CERTIFIED BY: | Arcomet |
| DATE | 4/11/19 |
| VERIFIED BY: | |
| DATE | |

COMMENTS: only 1 truck available to read all day
no emissions observed

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS
SIGNATURE
TITLE
DATE

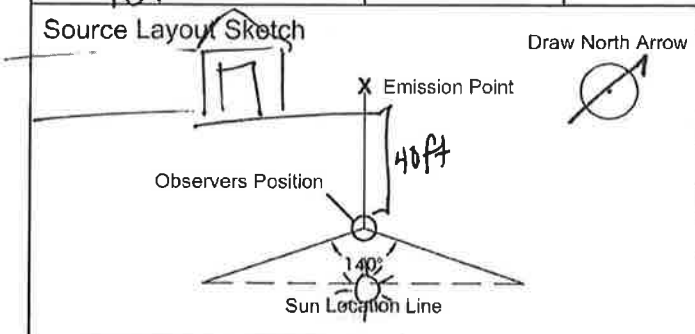
CEC Project # 180-3607

Visible Emissions Observation Form

# Civil & Environmental Consultants, Inc.

| | |
|---|---|
| SOURCE NAME | Calumet River Terminal |
| ADDRESS | 10740 South Burley Ave |
| CITY | Chicago |
| STATE | IL |
| ZIP | 60617 |
| PHONE | 773-221-5300 |
| SOURCE ID NUMBER | N/A |
| PROCESS EQUIPMENT | Front door to storage building |
| OPERATING MODE | Normal |
| CONTROL EQUIPMENT | N/A |
| OPERATING MODE | N/A |
| DESCRIBE EMISSION POINT START | entry door to storage building |
| HEIGHT ABOVE GROUND LEVEL | ~4ft |
| HEIGHT RELATIVE TO OBSERVER START | 4ft STOP 4 ft |
| DISTANCE FROM OBSERVER START | 40ft STOP 40 ft |
| DIRECTION FROM OBSERVER START | 316° STOP 316° |
| DESCRIBE EMISSIONS START | N/A STOP N/A |
| EMISSION COLOR START | N/A STOP |
| PLUME TYPE: CONTINUOUS ☐ FUGITIVE ☐ INTERMITTENT ☐ | N/A |
| WATER DROPLETS PRESENT: NO ☐ YES ☐ | |
| IF WATER DROPLET PLUME: ATTACHED ☐ DETACHED ☐ | |
| POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START | 4 ft above ground STOP same |
| DESCRIBE BACKGROUND START | grey wall STOP same |
| BACKGROUND COLOR START | grey STOP grey |
| SKY CONDITIONS START | clear STOP clear |
| WIND SPEED START | 15mph STOP 15mph |
| WIND DIRECTION START | SW STOP SW |
| AMBIENT TEMP START | 78°F STOP 78°F |
| WET BULB TEMP | |
| RH.percent | |

Source Layout Sketch




Key: Sun ☼ Plume ≤ Wind →

COMMENTS: no emissions observed

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS
SIGNATURE
TITLE
DATE

OBSERVATION DATE: 6/25/2019
START TIME: 10:14 Am
STOP TIME: 10:20 Am

| MIN \ SEC | 0 | 15 | 30 | 45 |
|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 |
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| 30 | | | | |

| MIN \ SEC | 0 | 15 | 30 | 45 |
|---|---|---|---|---|
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| 60 | | | | |

AVERAGE OPACITY FOR HIGHEST PERIOD: 0%
NUMBER OF READINGS ABOVE: 10 % WERE 0
RANGE OF OPACITY READINGS MINIMUM: 0% MAXIMUM 0%
OBSERVER'S NAME (PRINT): Beth Millian
OBSERVER'S SIGNATURE: Beth Millian DATE: 6/25/2019
ORGANIZATION: CEC
CERTIFIED BY: Aeromet DATE: 4/11/2019
VERIFIED BY: DATE

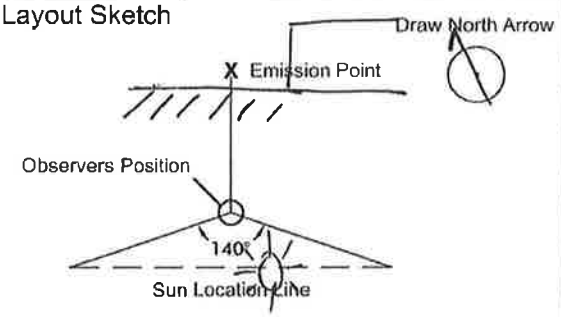
CEC Project 180-367

Visible Emissions Observation Form

# Civil & Environmental Consultants, Inc.

| | |
|---|---|
| SOURCE NAME | Calumet River Terminal |
| ADDRESS | 10740 South Burley Ave |
| CITY | Chicago |
| STATE | IL |
| ZIP | 60617 |
| PHONE | 773- 221- 5300 |
| SOURCE ID NUMBER | N/A |
| PROCESS EQUIPMENT | Back door to storage bldg. |
| OPERATING MODE | normal |
| CONTROL EQUIPMENT | N/A |
| OPERATING MODE | N/A |
| DESCRIBE EMISSION POINT START | Back door to storage building |
| HEIGHT ABOVE GROUND LEVEL | 4 ft |
| HEIGHT RELATIVE TO OBSERVER START | 4ft STOP |
| DISTANCE FROM OBSERVER START | 20ft STOP 20ft |
| DIRECTION FROM OBSERVER START | 30° STOP 30° |
| DESCRIBE EMISSIONS START | N/A STOP N/A |
| EMISSION COLOR START | N/A STOP N/A |
| PLUME TYPE: CONTINUOUS ☐ FUGITIVE ☐ INTERMITTENT ☐ | |
| WATER DROPLETS PRESENT: NO ☒ YES ☐ | |
| IF WATER DROPLET PLUME: ATTACHED ☐ DETACHED ☐ | |
| POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START | 4ft above ground STOP same |
| DESCRIBE BACKGROUND START | grey building door STOP same |
| BACKGROUND COLOR START | grey STOP grey |
| SKY CONDITIONS START | clear STOP clear |
| WIND SPEED START | 15mph STOP 15mph |
| WIND DIRECTION START | SW STOP SW |
| AMBIENT TEMP START | 78°F STOP 78°F |
| WET BULB TEMP | |
| RH.percent | |

Source Layout Sketch




Key: ☼ Sun = Plume → Wind

COMMENTS: no emissions observed

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS
SIGNATURE

TITLE | DATE

OBSERVATION DATE: 6/25/2019 | START TIME: 10:30 | STOP TIME: 10:36

| SEC / MIN | 0 | 15 | 30 | 45 | SEC / MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | | | | |
| 2 | 0 | 0 | 0 | 0 | 32 | | | | |
| 3 | 0 | 0 | 0 | 0 | 33 | | | | |
| 4 | 0 | 0 | 0 | 0 | 34 | | | | |
| 5 | 0 | 0 | 0 | 0 | 35 | | | | |
| 6 | 0 | 0 | 0 | 0 | 36 | | | | |
| 7 | | | | | 37 | | | | |
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| 30 | | | | | 60 | | | | |

AVERAGE OPACITY FOR HIGHEST PERIOD 0%

NUMBER OF READINGS ABOVE 10 % WERE 0

RANGE OF OPACITY READINGS MINIMUM 0% MAXIMUM 0%

OBSERVER'S NAME (PRINT): Beth Millian

OBSERVER'S SIGNATURE: Beth Millian | DATE: 6/25/2019

ORGANIZATION: CEC

CERTIFIED BY: Aeromet | DATE: 4/11/2019

VERIFIED BY: | DATE

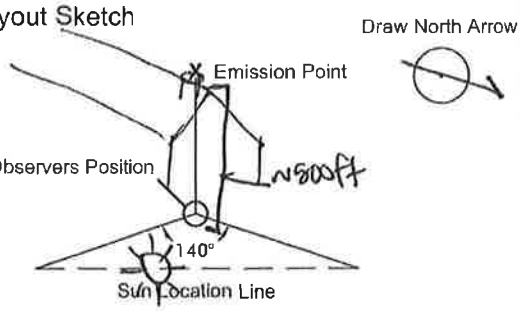
CEC Project # 180-367

Visible Emissions Observation Form

# Civil & Environmental Consultants, Inc.

| | |
|---|---|
| SOURCE NAME | Calumet River Terminal |
| ADDRESS | 10740 South Bourley Ave |
| CITY | Chicago |
| STATE | IL |
| ZIP | 60617 |
| PHONE | 773-221-5300 |
| SOURCE ID NUMBER | N/A |
| PROCESS EQUIPMENT | Building Roof Vent |
| OPERATING MODE | Normal |
| CONTROL EQUIPMENT | N/A |
| OPERATING MODE | N/A |
| DESCRIBE EMISSION POINT START | Roof vent - 2nd from front |
| HEIGHT ABOVE GROUND LEVEL | ~75 feet |
| HEIGHT RELATIVE TO OBSERVER START | 75ft STOP 75ft |
| DISTANCE FROM OBSERVER START | 500ft STOP 500ft |
| DIRECTION FROM OBSERVER START | 260° STOP 260° |
| DESCRIBE EMISSIONS START | N/A STOP N/A |
| EMISSION COLOR START | N/A STOP N/A |
| PLUME TYPE: CONTINUOUS ☐ FUGITIVE ☐ INTERMITTENT ☐ | N/A |
| WATER DROPLETS PRESENT: NO ☒ YES ☐ | |
| IF WATER DROPLET PLUME: ATTACHED ☐ DETACHED ☐ | |
| POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START | 10ft above stack |
| STOP | same |
| DESCRIBE BACKGROUND START | blue sky |
| STOP | same |
| BACKGROUND COLOR START | blue |
| STOP | blue |
| SKY CONDITIONS START | clear |
| STOP | same |
| WIND SPEED START | 15mph |
| STOP | 15mph |
| WIND DIRECTION START | SW |
| STOP | same |
| AMBIENT TEMP START | 79°F |
| STOP | 79°F |
| WET BULB TEMP | |
| RH.percent | |

Source Layout Sketch




Key: Sun | Plume | Wind

COMMENTS: no emissions observed

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS
SIGNATURE

TITLE | DATE

OBSERVATION DATE: 6/25/2019 | START TIME: 10:51 Am | STOP TIME: 10:57 Am

| SEC / MIN | 0 | 15 | 30 | 45 | SEC / MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | | | | |
| 2 | 0 | 0 | 0 | 0 | 32 | | | | |
| 3 | 0 | 0 | 0 | 0 | 33 | | | | |
| 4 | 0 | 0 | 0 | 0 | 34 | | | | |
| 5 | 0 | 0 | 0 | 0 | 35 | | | | |
| 6 | 0 | 0 | 0 | 0 | 36 | | | | |
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| 30 | | | | | 60 | | | | |

AVERAGE OPACITY FOR HIGHEST PERIOD: 0%

NUMBER OF READINGS ABOVE: 10 % WERE 0

RANGE OF OPACITY READINGS: MINIMUM 0% MAXIMUM 0%

OBSERVER'S NAME (PRINT): Beth Milliah

OBSERVER'S SIGNATURE: Beth Milliah | DATE: 6/25/2019

ORGANIZATION: CEC

CERTIFIED BY: Aeromet | DATE: 4/11/2019

VERIFIED BY: | DATE

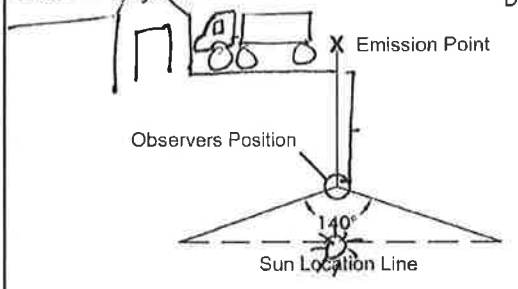
CEC Project # 180-367

**Civil & Environmental Consultants, Inc.**

EPA Method 9 pursuant to 35 IAC 212.109 for roadways

| | |
|---|---|
| SOURCE NAME | Calumet River Terminal |
| ADDRESS | 10740 South Burley Ave |
| CITY | Chicago |
| STATE | IL |
| ZIP | 60617 |
| PHONE | 773-221-5300 |
| SOURCE ID NUMBER | N/A |
| PROCESS EQUIPMENT | haul trucks & roads |
| OPERATING MODE | normal |
| CONTROL EQUIPMENT | road watering |
| OPERATING MODE | normal |
| DESCRIBE EMISSION POINT START | Road @ truck wheels |
| HEIGHT ABOVE GROUND LEVEL | 4 ft |
| HEIGHT RELATIVE TO OBSERVER START | 4ft STOP 4ft |
| DISTANCE FROM OBSERVER START | 40ft STOP 40ft |
| DIRECTION FROM OBSERVER START | 0° STOP 0° |
| DESCRIBE EMISSIONS START | None STOP None |
| EMISSION COLOR START | N/A STOP N/A |
| PLUME TYPE: CONTINUOUS ☐ FUGITIVE ☐ INTERMITTENT ☐ | |
| WATER DROPLETS PRESENT: NO ☒ YES ☐ | |
| IF WATER DROPLET PLUME: ATTACHED ☐ DETACHED ☐ | |
| POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START | 4ft above ground STOP same |
| DESCRIBE BACKGROUND START | grey wall & green plants STOP same |
| BACKGROUND COLOR START | grey/green STOP same |
| SKY CONDITIONS START | 80% clear STOP same |
| WIND SPEED START | ~10mph STOP calm |
| WIND DIRECTION START | SW STOP N/A |
| AMBIENT TEMP START | 71°F STOP 81°F |
| WET BULB TEMP | |
| RH.percent | |

Source Layout Sketch




Key: ☼ Sun = Plume → Wind

| Truck / Sec | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | | | | | | |
| 5 | 0 | 0 | 0 | 0 | | | | | | |
| 10 | 0 | 0 | 0 | 0 | | | | | | |
| 15 | | | | | | | | | | |
| 20 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 30 | | | | | | | | | | |
| 35 | | | | | | | | | | |
| 40 | | | | | | | | | | |
| 45 | | | | | | | | | | |
| 50 | | | | | | | | | | |
| 55 | | | | | | | | | | |
| Total of Opacity Readings | 0 | 0 | 0 | 0 | | | | | | |
| Number of Readings | 3 | 3 | 3 | 3 | | | | | | |
| Average Opacity | 0% | 0% | 0% | 0% | | | | | | |
| Comments | 4 trucks. No emissions observed | | | | | | | | | |
| Start time: | 9:22 AM | 10:02 AM | 11:41 AM | 11:43 AM | | | | | | |

Observation Date: 9/19/2019

Start Time: 9:22 AM

End Time: 11:43 AM

OBSERVER'S NAME (PRINT): Beth Million

OBSERVER'S SIGNATURE: Beth Million DATE: 9/19/19

ORGANIZATION: CEC

CERTIFIED BY: Aeromet DATE: 9/10/2019

VERIFIED BY: DATE:

COMMENTS: no emissions observed.

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS

SIGNATURE

TITLE DATE

CEC Project # 180-367

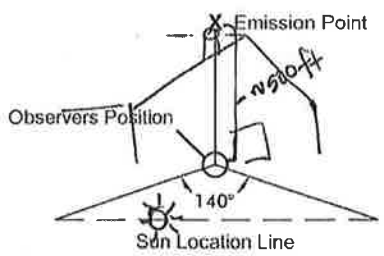
Visible Emissions Observation Form

# Civil & Environmental Consultants, Inc.

| | |
|---|---|
| SOURCE NAME | Calumet River Terminal |
| ADDRESS | 10740 South Burley Ave |
| CITY | Chicago |
| STATE | IL |
| ZIP | 60617 |
| PHONE | 773-221-5300 |
| SOURCE ID NUMBER | N/A |
| PROCESS EQUIPMENT | Building Roof Vent |
| OPERATING MODE | normal |
| CONTROL EQUIPMENT | N/A |
| OPERATING MODE | N/A |
| DESCRIBE EMISSION POINT START | Roof vent - 2nd from front |
| HEIGHT ABOVE GROUND LEVEL | ~75ft |
| HEIGHT RELATIVE TO OBSERVER START | 75ft STOP 75ft |
| DISTANCE FROM OBSERVER START | ~500ft STOP same |
| DIRECTION FROM OBSERVER START | 248° STOP 248° |
| DESCRIBE EMISSIONS START | None STOP None |
| EMISSION COLOR START | N/A STOP N/A |
| PLUME TYPE: CONTINUOUS ☐ FUGITIVE ☐ INTERMITTENT ☐ | |
| WATER DROPLETS PRESENT: NO ☒ YES ☐ | |
| IF WATER DROPLET PLUME: ATTACHED ☐ DETACHED ☐ | |
| POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START | ~10ft above stack STOP same |
| DESCRIBE BACKGROUND START | Blue sky w/ clouds STOP same |
| BACKGROUND COLOR START | Blue STOP Blue |
| SKY CONDITIONS START | partly cloudy 20% STOP same |
| WIND SPEED START | ~5mph STOP 5mph |
| WIND DIRECTION START | SW STOP SW |
| AMBIENT TEMP START | 71°F STOP 71°F |
| WET BULB TEMP | |
| RH.percent | |

Source Layout Sketch

Draw North Arrow




Key: Sun | Plume | Wind

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| OBSERVATION DATE | 9/19/2019 | | | | START TIME | 9:33 AM | | STOP TIME | 9:39 | |
| SEC / MIN | 0 | 15 | 30 | 45 | SEC / MIN | 0 | 15 | 30 | 45 | |
| 1 | 0 | 0 | 0 | 0 | 31 | | | | | |
| 2 | 0 | 0 | 0 | 0 | 32 | | | | | |
| 3 | 0 | 0 | 0 | 0 | 33 | | | | | |
| 4 | 0 | 0 | 0 | 0 | 34 | | | | | |
| 5 | 0 | 0 | 0 | 0 | 35 | | | | | |
| 6 | 0 | 0 | 0 | 0 | 36 | | | | | |
| 7 | | | | | 37 | | | | | |
| 8 | | | | | 38 | | | | | |
| 9 | | | | | 39 | | | | | |
| 10 | | | | | 40 | | | | | |
| 11 | | | | | 41 | | | | | |
| 12 | | | | | 42 | | | | | |
| 13 | | | | | 43 | | | | | |
| 14 | | | | | 44 | | | | | |
| 15 | | | | | 45 | | | | | |
| 16 | | | | | 46 | | | | | |
| 17 | | | | | 47 | | | | | |
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| 23 | | | | | 53 | | | | | |
| 24 | | | | | 54 | | | | | |
| 25 | | | | | 55 | | | | | |
| 26 | | | | | 56 | | | | | |
| 27 | | | | | 57 | | | | | |
| 28 | | | | | 58 | | | | | |
| 29 | | | | | 59 | | | | | |
| 30 | | | | | 60 | | | | | |

| | |
|---|---|
| AVERAGE OPACITY FOR HIGHEST PERIOD | 0 |
| NUMBER OF READINGS ABOVE | 10 % WERE 0 |
| RANGE OF OPACITY READINGS | 0 MINIMUM 0 MAXIMUM |
| OBSERVER'S NAME (PRINT) | Beth Millian |
| OBSERVER'S SIGNATURE | Beth Millian |
| DATE | 9/19/19 |
| ORGANIZATION | CEC |
| CERTIFIED BY: | Aeromet |
| DATE | 4/10/19 |
| VERIFIED BY: | |
| DATE | |

COMMENTS: No emissions observed

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS

SIGNATURE

TITLE

DATE

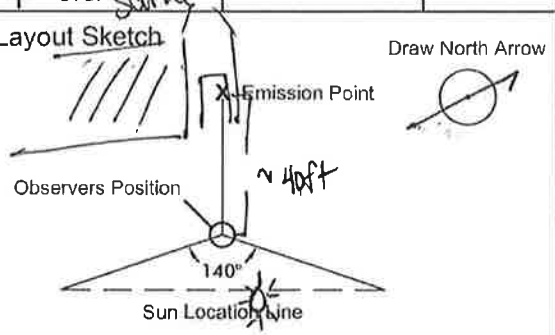
CEC Project # 180-367

Visible Emissions Observation Form

# Civil & Environmental Consultants, Inc.

| | |
|---|---|
| SOURCE NAME | Calumet River Terminal |
| ADDRESS | 10740 South Burley Ave |
| CITY | Chicago |
| STATE | IL |
| ZIP | 60617 |
| PHONE | 773-221-5300 |
| SOURCE ID NUMBER | N/A |
| PROCESS EQUIPMENT | Front door to storage bldg. |
| OPERATING MODE | Normal |
| CONTROL EQUIPMENT | N/A |
| OPERATING MODE | N/A |
| DESCRIBE EMISSION POINT START | Entry door to storage bldg |
| HEIGHT ABOVE GROUND LEVEL | ~4ft |
| HEIGHT RELATIVE TO OBSERVER START | 4ft STOP 4ft |
| DISTANCE FROM OBSERVER START | ~40ft STOP |
| DIRECTION FROM OBSERVER START | 359° STOP 359° |
| DESCRIBE EMISSIONS START | None STOP None |
| EMISSION COLOR START | N/A STOP N/A |
| PLUME TYPE: CONTINUOUS ☐ FUGITIVE ☐ INTERMITTENT ☐ | N/A |
| WATER DROPLETS PRESENT: NO ☒ YES ☐ | |
| IF WATER DROPLET PLUME: ATTACHED ☐ DETACHED ☐ | |
| POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START | ~4ft above ground STOP same |
| DESCRIBE BACKGROUND START | grey bldg. wall STOP same |
| BACKGROUND COLOR START | grey STOP same |
| SKY CONDITIONS START | partly cloudy 30% STOP same |
| WIND SPEED START | ~5mph STOP same |
| WIND DIRECTION START | SW STOP SW |
| AMBIENT TEMP START | 75° F STOP same |
| WET BULB TEMP | |
| RH,percent | |

Source Layout Sketch




Key: Sun ☼ Plume = Wind →

| OBSERVATION DATE | START TIME | STOP TIME |
|---|---|---|
| 9/19/19 | 10:19 AM | 10:26 AM |

| SEC / MIN | 0 | 15 | 30 | 45 | SEC / MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | | | | |
| 2 | 0 | 0 | 0 | 0 | 32 | | | | |
| 3 | 0 | 0 | 0 | 0 | 33 | | | | |
| 4 | 0 | 0 | 0 | 0 | 34 | | | | |
| 5 | 0 | 0 | 0 | 0 | 35 | | | | |
| 6 | 0 | 0 | 0 | 0 | 36 | | | | |
| 7 | | | | | 37 | | | | |
| 8 | | | | | 38 | | | | |
| 9 | | | | | 39 | | | | |
| 10 | | | | | 40 | | | | |
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| 27 | | | | | 57 | | | | |
| 28 | | | | | 58 | | | | |
| 29 | | | | | 59 | | | | |
| 30 | | | | | 60 | | | | |

| | |
|---|---|
| AVERAGE OPACITY FOR HIGHEST PERIOD | 0 |
| NUMBER OF READINGS ABOVE | 10 |
| % WERE | 0 |
| RANGE OF OPACITY READINGS MINIMUM | 0 |
| MAXIMUM | 0 |
| OBSERVER'S NAME (PRINT) | Beth Millian |
| OBSERVER'S SIGNATURE | Beth Millian |
| DATE | 9/19/19 |
| ORGANIZATION | CEC |
| CERTIFIED BY: | Aromet |
| DATE | 9/10/2019 |
| VERIFIED BY: | |
| DATE | |

COMMENTS: No emissions observed

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS
SIGNATURE
TITLE
DATE

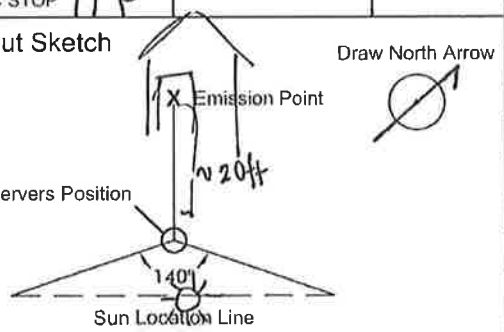
CEC Project # 180-367

Visible Emissions Observation Form

# Civil & Environmental Consultants, Inc.

| | |
|---|---|
| SOURCE NAME | Calumet River Terminal |
| ADDRESS | 10740 South Burley Ave |
| CITY | Chicago |
| STATE | IL |
| ZIP | 60617 |
| PHONE | 773-221-5300 |
| SOURCE ID NUMBER | N/A |
| PROCESS EQUIPMENT | Storage building - back door |
| OPERATING MODE | normal |
| CONTROL EQUIPMENT | N/A |
| OPERATING MODE | N/A |
| DESCRIBE EMISSION POINT START | Back door to storage building |
| HEIGHT ABOVE GROUND LEVEL | ~4ft |
| HEIGHT RELATIVE TO OBSERVER START | 4ft STOP 4ft |
| DISTANCE FROM OBSERVER START | 20ft STOP 20ft |
| DIRECTION FROM OBSERVER START | 330° STOP 330° |
| DESCRIBE EMISSIONS START | None STOP None |
| EMISSION COLOR START | N/A STOP N/A |
| PLUME TYPE: CONTINUOUS ☐ FUGITIVE ☒ INTERMITTENT ☐ | |
| WATER DROPLETS PRESENT: NO ☒ YES ☐ | |
| IF WATER DROPLET PLUME: ATTACHED ☐ DETACHED ☐ | |
| POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START | ~1ft above ground STOP same |
| DESCRIBE BACKGROUND START | Red bldg wall STOP same |
| BACKGROUND COLOR START | Red STOP same |
| SKY CONDITIONS START | 30% STOP partly cloudy same |
| WIND SPEED START | 10mph STOP same |
| WIND DIRECTION START | NE STOP NE |
| AMBIENT TEMP START | 76°F STOP 77°F |
| WET BULB TEMP | |
| RH,percent | |

Source Layout Sketch




Key: Sun ☼ Plume ≤ Wind →

COMMENTS: no emissions observed

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS
SIGNATURE
TITLE
DATE

OBSERVATION DATE: 9/19/2019
START TIME: 10:34 am
STOP TIME: 10:40 AM

| MIN | SEC 0 | 15 | 30 | 45 | MIN | SEC 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | | | | |
| 2 | 0 | 0 | 0 | 0 | 32 | | | | |
| 3 | 0 | 0 | 0 | 0 | 33 | | | | |
| 4 | 0 | 0 | 0 | 0 | 34 | | | | |
| 5 | 0 | 0 | 0 | 0 | 35 | | | | |
| 6 | 0 | 0 | 0 | 0 | 36 | | | | |
| 7 | | | | | 37 | | | | |
| 8 | | | | | 38 | | | | |
| 9 | | | | | 39 | | | | |
| 10 | | | | | 40 | | | | |
| 11 | | | | | 41 | | | | |
| 12 | | | | | 42 | | | | |
| 13 | | | | | 43 | | | | |
| 14 | | | | | 44 | | | | |
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| 16 | | | | | 46 | | | | |
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| 22 | | | | | 52 | | | | |
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| 24 | | | | | 54 | | | | |
| 25 | | | | | 55 | | | | |
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| 27 | | | | | 57 | | | | |
| 28 | | | | | 58 | | | | |
| 29 | | | | | 59 | | | | |
| 30 | | | | | 60 | | | | |

AVERAGE OPACITY FOR HIGHEST PERIOD: 0
NUMBER OF READINGS ABOVE: 10 % WERE 0
RANGE OF OPACITY READINGS: 0 MINIMUM 0 MAXIMUM
OBSERVER'S NAME (PRINT): Bethmillian
OBSERVER'S SIGNATURE: [signature] DATE: 9/19/2019
ORGANIZATION: CEC
CERTIFIED BY: Atromet DATE: 4/10/2019
VERIFIED BY: DATE

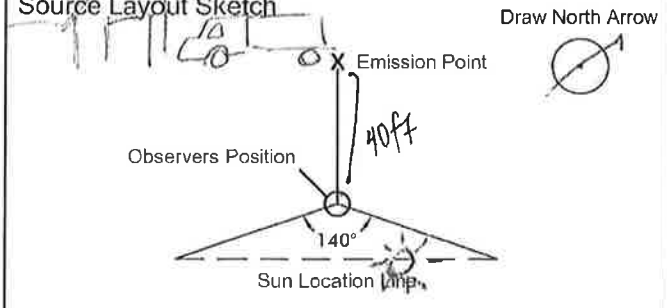
CEC Project # 180-3167

**Civil & Environmental Consultants, Inc.**

EPA Method 9 pursuant to 35 IAC 212.109 for roadways

| | |
|---|---|
| SOURCE NAME | Calumet River Terminal |
| ADDRESS | 10740 South Burley Ave |
| CITY | Chicago |
| STATE | IL |
| ZIP | 60617 |
| PHONE | 773-221-5300 |
| SOURCE ID NUMBER | N/A |
| PROCESS EQUIPMENT | Haul Trucks / Roads |
| OPERATING MODE | normal |
| CONTROL EQUIPMENT | N/A (no road watering in winter) |
| OPERATING MODE | normal |
| DESCRIBE EMISSION POINT START | Road @ truck wheels |
| HEIGHT ABOVE GROUND LEVEL | 4 ft |
| HEIGHT RELATIVE TO OBSERVER START | 4 f STOP 4 ft |
| DISTANCE FROM OBSERVER START | 40 ft STOP 40 ft |
| DIRECTION FROM OBSERVER START | 315° STOP 315° |
| DESCRIBE EMISSIONS START | none STOP none |
| EMISSION COLOR START | N/A STOP N/A |
| PLUME TYPE: CONTINUOUS ☐ FUGITIVE ☐ INTERMITTENT ☐ | N/A |
| WATER DROPLETS PRESENT: NO ☒ YES ☐ | |
| IF WATER DROPLET PLUME: ATTACHED ☐ DETACHED ☐ | |
| POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START | 4 ft above ground STOP same |
| DESCRIBE BACKGROUND START | grey wall STOP grey wall |
| BACKGROUND COLOR START | grey STOP grey |
| SKY CONDITIONS START | clear STOP clear |
| WIND SPEED START | calm STOP calm |
| WIND DIRECTION START | N/A STOP N/A |
| AMBIENT TEMP START | 15°F STOP 15°F |
| WET BULB TEMP | |
| RH,percent | |

Source Layout Sketch




| Truck / Sec | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | | | | | | | | | |
| 5 | 0 | | | | | | | | | |
| 10 | 0 | | | | | | | | | |
| 15 | | | | | | | | | | |
| 20 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 30 | | | | | | | | | | |
| 35 | | | | | | | | | | |
| 40 | | | | | | | | | | |
| 45 | | | | | | | | | | |
| 50 | | | | | | | | | | |
| 55 | | | | | | | | | | |
| Total of Opacity Readings | 0 | | | | | | | | | |
| Number of Readings | 3 | | | | | | | | | |
| Average Opacity | 0% | | | | | | | | | |
| Comments | Start time: 8:05 AM only 1 truck available | Start time: | Start time: | Start time: | | | | | | |

Observation Date: 12/18/2019

Start Time: 8:05 AM

End Time: 8:05 AM

| | |
|---|---|
| OBSERVER'S NAME (PRINT) | Beth Million |
| OBSERVER'S SIGNATURE | Beth Million |
| DATE | 12/18/2019 |
| ORGANIZATION | Civil & Environmental Consultants, Inc. |
| CERTIFIED BY: | Aeromet |
| DATE | 10/10/19 |
| VERIFIED BY: | |
| DATE | |

COMMENTS: only 1 truck available to read all day, no emissions

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SIGNATURE

TITLE

DATE

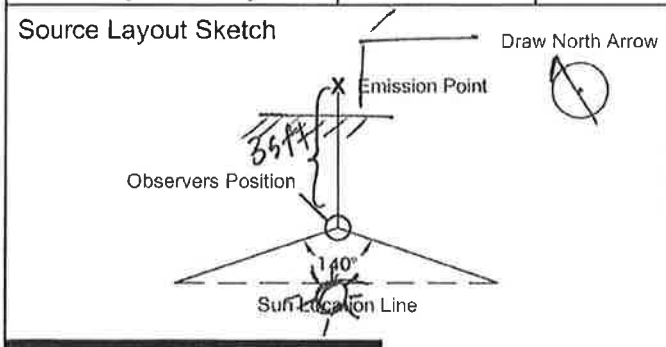
CEC Project # 180-3867

Visible Emissions Observation Form

# Civil & Environmental Consultants, Inc.

| | |
|---|---|
| SOURCE NAME | Calumet River Terminal |
| ADDRESS | 10740 South Burley Ave |
| CITY | Chicago |
| STATE | IL |
| ZIP | 60617 |
| PHONE | 773-221-5300 |
| SOURCE ID NUMBER | N/A |
| PROCESS EQUIPMENT | Storage Bldg. Back Door |
| OPERATING MODE | normal |
| CONTROL EQUIPMENT | N/A |
| OPERATING MODE | |
| DESCRIBE EMISSION POINT START | back door to storage bldg |
| HEIGHT ABOVE GROUND LEVEL | 4ft |
| HEIGHT RELATIVE TO OBSERVER START | 4ft STOP 4ft |
| DISTANCE FROM OBSERVER START | 35ft STOP same |
| DIRECTION FROM OBSERVER START | 315° STOP 315° |
| DESCRIBE EMISSIONS START | None STOP None |
| EMISSION COLOR START | N/A STOP N/A |
| PLUME TYPE: CONTINUOUS ☐ INTERMITTENT ☐ | N/A |
| WATER DROPLETS PRESENT: NO ☒ YES ☐ | |
| IF WATER DROPLET PLUME: ATTACHED ☐ DETACHED ☐ | |
| POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START | 4ft above ground STOP 4ft above ground |
| DESCRIBE BACKGROUND START | grey building STOP grey bldg |
| BACKGROUND COLOR START | grey STOP grey |
| SKY CONDITIONS START | clear STOP clear |
| WIND SPEED START | 10mph STOP 10mph |
| WIND DIRECTION START | NW STOP NW |
| AMBIENT TEMP START | 15°F STOP 15°F |
| WET BULB TEMP | |
| RH,percent | |

Source Layout Sketch




Key: Sun ☼ Plume ≤ Wind →

| OBSERVATION DATE | START TIME | STOP TIME |
|---|---|---|
| 12/19/2019 | 8:20 AM | 8:31 AM |

| SEC / MIN | 0 | 15 | 30 | 45 | SEC / MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | | | | |
| 2 | 0 | 0 | 0 | 0 | 32 | | | | |
| 3 | 0 | 0 | 0 | 0 | 33 | | | | |
| 4 | 0 | 0 | 0 | 0 | 34 | | | | |
| 5 | 0 | 0 | 0 | 0 | 35 | | | | |
| 6 | 0 | 0 | 0 | 0 | 36 | | | | |
| 7 | | | | | 37 | | | | |
| 8 | | | | | 38 | | | | |
| 9 | | | | | 39 | | | | |
| 10 | | | | | 40 | | | | |
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| 26 | | | | | 56 | | | | |
| 27 | | | | | 57 | | | | |
| 28 | | | | | 58 | | | | |
| 29 | | | | | 59 | | | | |
| 30 | | | | | 60 | | | | |

| | |
|---|---|
| AVERAGE OPACITY FOR HIGHEST PERIOD | 0 |
| NUMBER OF READINGS ABOVE | 10 |
| % WERE | 0 |
| RANGE OF OPACITY READINGS MINIMUM | 0 |
| MAXIMUM | 0 |
| OBSERVER'S NAME (PRINT) | Beth Millian |
| OBSERVER'S SIGNATURE | Beth Millian |
| DATE | 12/18/2019 |
| ORGANIZATION | Civil & Environmental Consultants, Inc. |
| CERTIFIED BY: | Aeromet |
| DATE | 10/10/19 |
| VERIFIED BY: | |
| DATE | |
| COMMENTS | NO emissions observed |
| I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS SIGNATURE | |
| TITLE | |
| DATE | |

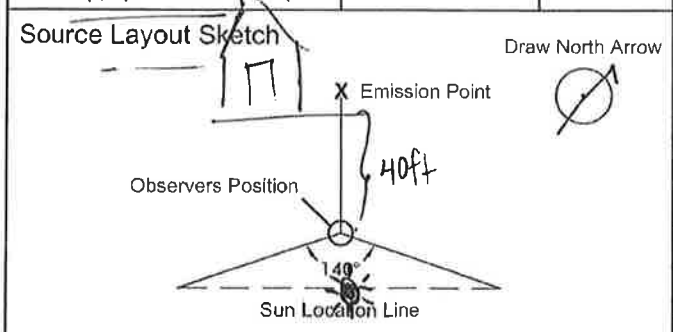
CEC Project # 180-367

Visible Emissions Observation Form

# Civil & Environmental Consultants, Inc.

| | |
|---|---|
| SOURCE NAME | Calumet River Terminal |
| ADDRESS | 10740 South Burley Ave |
| CITY | Chicago |
| STATE | IL |
| ZIP | 60617 |
| PHONE | 773-221-5300 |
| SOURCE ID NUMBER | N/A |
| PROCESS EQUIPMENT | Front door to storage bldg. |
| OPERATING MODE | normal |
| CONTROL EQUIPMENT | N/A |
| OPERATING MODE | |
| DESCRIBE EMISSION POINT START | entry door to storage bldg |
| HEIGHT ABOVE GROUND LEVEL | 4ft |
| HEIGHT RELATIVE TO OBSERVER START | 4f STOP 4ft |
| DISTANCE FROM OBSERVER START | 40ft STOP 40ft |
| DIRECTION FROM OBSERVER START | 315° STOP 315° |
| DESCRIBE EMISSIONS START | none STOP none |
| EMISSION COLOR START | N/A STOP N/A |
| PLUME TYPE: CONTINUOUS ☐ FUGITIVE ☐ INTERMITTENT ☐ | N/A |
| WATER DROPLETS PRESENT: NO ☒ YES ☐ | |
| IF WATER DROPLET PLUME: ATTACHED ☐ DETACHED ☐ | |
| POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START | 4 ft aboveground STOP same |
| DESCRIBE BACKGROUND START | grey building STOP same |
| BACKGROUND COLOR START | grey STOP grey |
| SKY CONDITIONS START | clear STOP clear |
| WIND SPEED START | 15mph STOP 15mph |
| WIND DIRECTION START | NW STOP NW |
| AMBIENT TEMP START | 15°F STOP 15°F |
| WET BULB TEMP | |
| RH,percent | |

Source Layout Sketch




Key: ☼ Sun < Plume → Wind

COMMENTS: no emissions observed

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS
SIGNATURE
TITLE | DATE

OBSERVATION DATE: 12/18/2019 | START TIME: 8:42 AM | STOP TIME: 8:48 AM

| MIN \ SEC | 0 | 15 | 30 | 45 | MIN \ SEC | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | | | | |
| 2 | 0 | 0 | 0 | 0 | 32 | | | | |
| 3 | 0 | 0 | 0 | 0 | 33 | | | | |
| 4 | 0 | 0 | 0 | 0 | 34 | | | | |
| 5 | 0 | 0 | 0 | 0 | 35 | | | | |
| 6 | 0 | 0 | 0 | 0 | 36 | | | | |
| 7 | | | | | 37 | | | | |
| 8 | | | | | 38 | | | | |
| 9 | | | | | 39 | | | | |
| 10 | | | | | 40 | | | | |
| 11 | | | | | 41 | | | | |
| 12 | | | | | 42 | | | | |
| 13 | | | | | 43 | | | | |
| 14 | | | | | 44 | | | | |
| 15 | | | | | 45 | | | | |
| 16 | | | | | 46 | | | | |
| 17 | | | | | 47 | | | | |
| 18 | | | | | 48 | | | | |
| 19 | | | | | 49 | | | | |
| 20 | | | | | 50 | | | | |
| 21 | | | | | 51 | | | | |
| 22 | | | | | 52 | | | | |
| 23 | | | | | 53 | | | | |
| 24 | | | | | 54 | | | | |
| 25 | | | | | 55 | | | | |
| 26 | | | | | 56 | | | | |
| 27 | | | | | 57 | | | | |
| 28 | | | | | 58 | | | | |
| 29 | | | | | 59 | | | | |
| 30 | | | | | 60 | | | | |

AVERAGE OPACITY FOR HIGHEST PERIOD: 0

NUMBER OF READINGS ABOVE: 10 % WERE 0

RANGE OF OPACITY READINGS MINIMUM 0 MAXIMUM 0

OBSERVER'S NAME (PRINT): Beth Millian

OBSERVER'S SIGNATURE: Beth Millian | DATE: 12/18/19

ORGANIZATION: Civil & Environmental Consultants, Inc.

CERTIFIED BY: Aeromet | DATE: 10/10/19

VERIFIED BY: | DATE

CEC Project #180-367

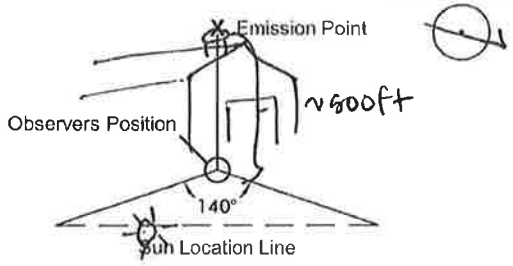
Visible Emissions Observation Form

# Civil & Environmental Consultants, Inc.

| | |
|---|---|
| SOURCE NAME | Calumet River Terminal |
| ADDRESS | 10740 South Burley Ave |
| CITY | Chicago |
| STATE | IL |
| ZIP | 60617 |
| PHONE | 773-221-5300 |
| SOURCE ID NUMBER | N/A |
| PROCESS EQUIPMENT | Roof vent - 2nd from front |
| OPERATING MODE | normal |
| CONTROL EQUIPMENT | N/A |
| OPERATING MODE | |
| DESCRIBE EMISSION POINT START | Roof vent - 2nd from front |
| HEIGHT ABOVE GROUND LEVEL | ~75 feet |
| HEIGHT RELATIVE TO OBSERVER START | 75ft |
| HEIGHT RELATIVE TO OBSERVER STOP | 75ft |
| DISTANCE FROM OBSERVER START | ~500ft |
| DISTANCE FROM OBSERVER STOP | ~500ft |
| DIRECTION FROM OBSERVER START | 230° |
| DIRECTION FROM OBSERVER STOP | 230° |
| DESCRIBE EMISSIONS START | None |
| DESCRIBE EMISSIONS STOP | none |
| EMISSION COLOR START | N/A |
| EMISSION COLOR STOP | N/A |
| PLUME TYPE: CONTINUOUS ☐ FUGITIVE ☐ INTERMITTENT ☐ | |
| WATER DROPLETS PRESENT: NO ☒ YES ☐ | |
| IF WATER DROPLET PLUME: ATTACHED ☐ DETACHED ☐ | |
| POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START | ~10ft above vent |
| POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED STOP | same |
| DESCRIBE BACKGROUND START | sky |
| DESCRIBE BACKGROUND STOP | sky |
| BACKGROUND COLOR START | blue |
| BACKGROUND COLOR STOP | blue |
| SKY CONDITIONS START | clear |
| SKY CONDITIONS STOP | clear |
| WIND SPEED START | 5mph |
| WIND SPEED STOP | 5mph |
| WIND DIRECTION START | NW |
| WIND DIRECTION STOP | NW |
| AMBIENT TEMP START | 15°F |
| AMBIENT TEMP STOP | 15°F |
| WET BULB TEMP | |
| RH.percent | |

Source Layout Sketch

Draw North Arrow




Key: Sun | Plume | Wind

| OBSERVATION DATE | START TIME | STOP TIME |
|---|---|---|
| 12/18/2019 | 8:57 AM | 9:02 AM |

| SEC / MIN | 0 | 15 | 30 | 45 | SEC / MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | | | | |
| 2 | 0 | 0 | 0 | 0 | 32 | | | | |
| 3 | 0 | 0 | 0 | 0 | 33 | | | | |
| 4 | 0 | 0 | 0 | 0 | 34 | | | | |
| 5 | 0 | 0 | 0 | 0 | 35 | | | | |
| 6 | 0 | 0 | 0 | 0 | 36 | | | | |
| 7 | | | | | 37 | | | | |
| 8 | | | | | 38 | | | | |
| 9 | | | | | 39 | | | | |
| 10 | | | | | 40 | | | | |
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| 12 | | | | | 42 | | | | |
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| 27 | | | | | 57 | | | | |
| 28 | | | | | 58 | | | | |
| 29 | | | | | 59 | | | | |
| 30 | | | | | 60 | | | | |

| | |
|---|---|
| AVERAGE OPACITY FOR HIGHEST PERIOD | 0 |
| NUMBER OF READINGS ABOVE | 10 |
| % WERE | 0 |
| RANGE OF OPACITY READINGS MINIMUM | 0 |
| MAXIMUM | 0 |
| OBSERVER'S NAME (PRINT) | Beth Millian |
| OBSERVER'S SIGNATURE | Beth Millian |
| DATE | 12/18/2019 |
| ORGANIZATION | Civil & Environmental Consultants, Inc. |
| CERTIFIED BY: | Aeromet |
| DATE | 10/10/19 |
| VERIFIED BY: | |
| DATE | |

COMMENTS: no emissions observed

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS

SIGNATURE

TITLE

DATE

# ATTACHMENT F

# ACCESS ROAD OWNERSHIP DOCUMENTATION

Property Characteristics for PIN:

# 26-18-200-026-0000

## PROPERTY ADDRESS

10740 S BURLEY AVE
CHICAGO
60617
Township: HYDE PARK

## MAILING ADDRESS

CRONIMET CORPORATION
1 PILARSKY WAY
ALIQUIPPA, PA 15001

## INFO FOR TAX YEAR 2017

| | |
|---|---|
| Estimated Property Value: | |
| Total Assessed Value: | 21,741 |
| Lot Size (SqFt): | 52,098 |
| Building (SqFt): | |
| Property Class: | 5-80 |
| Tax Rate (2016): | 7.162 |
| Tax Code (2017): | 70030 |

## TAX BILLED AMOUNTS & TAX HISTORY

| | | |
|---|---|---|
| 2017: | $2,400.65* | Paid in Full |
| 2016: | $4,364.81 | Paid in Full |
| 2015: | $3,993.82 | Payment History |
| 2014: | $4,043.88 | Payment History |
| 2013: | $3,963.42 | Payment History |

*=(1st Install Only)

## EXEMPTIONS

2017: Not Available
2016: 0 Exemptions Received
2015: 0 Exemptions Received
2014: 0 Exemptions Received
2013: 0 Exemptions Received

## APPEALS

2017: Not Available
2016: Not Accepting Appeals
2015: Not Accepting Appeals
2014: Not Accepting Appeals
2013: Not Accepting Appeals

## REFUNDS AVAILABLE

No Refund Available

## TAX SALE (DELINQUENCIES)

2017: Tax Sale Has Not Occurred
2016: No Tax Sale
2015: No Tax Sale
2014: No Tax Sale
2013: No Tax Sale

## DOCUMENTS, DEEDS & LIENS

1433529101 - RELEASE - 12/01/2014
1433529100 - RELEASE - 12/01/2014
0704741091 - WARRANTY DEED - 02/16/20(
0010698219 - MODIFICATION - 08/02/2001
00210967 - RELEASE - 03/24/2000

*All years referenced herein denote the applicable tax year (i.e., the year for which taxes were assessed). Parcels may from time to time be consolid(
subdivided. If information regarding a particular PIN appears to be missing for one or more tax years, it is possible that the PIN has changed d(
consolidation or subdivision. Users may contact the Cook County Clerk's Office for information regarding PIN lineage. Users should also note t
information displayed on this site does not include special assessments (which are billed and collected by municipalities) or omitted taxes (which are asse
an ad hoc basis by the Cook County Assessor's Office). Please direct inquiries regarding the status of special assessments to your municipality. Qu
regarding omitted taxes should be directed to the Assessor's Office.*

**Note: This printout cannot be used as a tax bill.**