



Louisville Metro Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137



Title V Operating Permit

Permit No.: O-0001-19-V

Plant ID: 0001

Effective Date: 09/30/2019

Expiration Date: 09/30/2024

Permission is hereby given by the Louisville Metro Air Pollution Control District to operate the process(es) and equipment described herein which are located at:

Source: **Carbide Industries, LLC**
4400 Bells Lane
Louisville, KY 40211

Owner: **Carbide Industries, LLC**
4400 Bells Lane
Louisville, KY 40211

The applicable procedures of District Regulation 2.16 regarding review by the U.S. EPA and public participation have been followed in the issuance of this permit. Based on review of the application on file with the District, permission is given to operate under the conditions stipulated herein. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than eighteen months and no later than six months prior to the expiration date.

Application No.: See **Application and Related Documents** table.

Administratively Complete Date: 09/12/2018
Public Notice Date: 06/08/2019
Proposed Permit Date: 08/13/2019

Permit writer: Shannon Hosey

Air Pollution Control Officer
9/30/2019

Table of Contents

Permit Revisions and Changes.....	5
Application and Related Documents	5
Abbreviations and Acronyms	6
Preamble	7
General Conditions	8
Plantwide Requirements	16
Facility Description.....	16
Plantwide Applicable Regulations.....	16
Plantwide Specific Conditions.....	17
Comments	18
Emission Unit U1: Lime Handling System	20
U1 Applicable Regulations.....	20
U1 Equipment	20
U1 Control Devices.....	21
U1 Specific Conditions	22
Emission Unit U2: Coke Handling Unit.....	28
U2 Applicable Regulations.....	28
U2 Equipment	28
U2 Control Devices.....	29
U2 Specific Conditions	30
Emission Unit U3: Charge Mix and Furnace.....	36
U3 Applicable Regulations.....	36
U3 Equipment	37
U3 Control Devices.....	37
U3 Specific Conditions	38
Emission Unit U4: Primary Crushing.....	55
U4 Applicable Regulations.....	55
U4 Equipment	55
U4 Control Devices.....	56
U4 Specific Conditions	57

Emission Unit U5: Pack and Screen	63
U5 Applicable Regulations	63
U5 Equipment	63
U5 Control Devices.....	66
U5 Specific Conditions	67
Emission Unit U6: Back End – Final processing and handles waste materials collected	73
U6 Applicable Regulations	73
U6 Equipment	73
U6 Control Devices.....	74
U6 Specific Conditions	75
Emission Unit U7: Desulfurization Operations	79
U7 Applicable Regulations	79
U7 Equipment	79
U7 Control Devices.....	80
U7 Specific Conditions	81
Emission Unit U8: Wet Generator	85
U8 Applicable Regulations	85
U8 Equipment	85
U8 Control Devices.....	86
U8 Specific Conditions	87
Emission Unit U11: Fuel Storage	95
U11 Applicable Regulations	95
U11 Equipment	95
U11 Specific Conditions	96
Emission Unit U12: Gas Fired Boiler	98
U12 Applicable Regulations	98
U12 Equipment	98
U12 Specific Conditions	99
Emission Unit U13: Storm Water Neutralization	101
U13 Applicable Regulations	101
U13 Equipment	101
U13 Specific Conditions	102
Emission Unit U14: Tote Reconditioning.....	103

U14 Applicable Regulations 103
U14 Equipment 103
U14 Control Devices..... 103
U14 Specific Conditions 104

Emission Unit IA1: Cold Solvent Parts Cleaners 108
 EU IA1 Applicable Regulations 108
 EU IA1 Equipment 108
 EU IA1 Specific Conditions 109

Permit Shield..... 112

Off-Permit Documents 112

Alternative Operating Scenario..... 112

Insignificant Activities..... 112

Attachment A – Determination of Benchmark Ambient Concentration (BAC)..... 114

Permit Revisions and Changes

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
140-97-TV	12/24/2000	09/28/2001	Initial	Entire Permit
140-97-TV (R1)	NA	02/09/2003	Admin	Changed name of company, owner, and responsible official
140-97-TV (R2)	12/20/2013	02/05/2014	Renewal	Title V Renewal Incorporating: <ul style="list-style-type: none"> • Construction Permit 101-05-C: Pneumatic transfer system • Construction Permit 102-05-C: Five new bin vent filters • Construction Permit 103-05-C: Coke storage bins, screen, and weigh belt • Construction Permit 104-05-C: Pneumatic transfer system Permit • Construction Permit 105-05-C: Fines storage bin and truck loading station • Construction Permit 101-07-C: Acetylene flare • RO Change 07/20/2007 & 12/03/2008 • Construction Permit 32752-11-C: Electric Arc Furnace Replacement
O-0001-19-V	06/08/2019	09/30/2019	Renewal	Title V Permit Renewal

Application and Related Documents

Document Number	Date	Description
00094007	08/28/2018	Title V Renewal Application

Abbreviations and Acronyms

AP-42	- AP-42, <i>Compilation of Air Pollutant Emission Factors</i> , published by U.S.EPA
APCD	- Louisville Metro Air Pollution Control District
BAC	- Benchmark Ambient Concentration
BACT	- Best Available Control Technology
Btu	- British thermal unit
CEMS	- Continuous Emission Monitoring System
CFR	- Code of Federal Regulations
CO	- Carbon monoxide
District	- Louisville Metro Air Pollution Control District
EA	- Environmental Acceptability
gal	- U.S. fluid gallons
GHG	- Greenhouse Gas
HAP	- Hazardous Air Pollutant
Hg	- Mercury
hr	- Hour
in.	- Inches
lbs	- Pounds
l	- Liter
LMAPCD	- Louisville Metro Air Pollution Control District
mmHg	- Millimeters of mercury column height
MM	- Million
(M)SDS	- (Material) Safety Data Sheet
NAICS	- North American Industry Classification System
NO _x	- Nitrogen oxides
PM	- Particulate Matter
PM ₁₀	- Particulate Matter less than 10 microns
PM _{2.5}	- Particulate Matter less than 2.5 microns
ppm	- parts per million
PSD	- Prevention of Significant Deterioration
psia	- Pounds per square inch absolute
QA	- Quality Assurance
RACT	- Reasonably Available Control Technology
SIC	- Standard Industrial Classification
SIP	- State Implementation Plan
SO ₂	- Sulfur dioxide
STAR	- Strategic Toxic Air Reduction
TAC	- Toxic Air Contaminant
UTM	- Universal Transverse Mercator
VOC	- Volatile Organic Compound
w.c.	- Water column
year	- Any period of twelve consecutive months, unless "calendar year" is specified
yr	- Year, or any 12 consecutive-month period, as determined by context

Preamble

Title V of the Clean Air Act Amendments of 1990 (the Act) required EPA to create an operating permit program for implementation by state or local air permitting authorities. The purposes of this program are: (1) to require an affected company to assume full responsibility for demonstrating compliance with applicable regulations; (2) to capture all of the regulatory information pertaining to an affected company in a single document; and (3) to make permits more consistent with each other.

A company is subject to the Title V program if it meets any of several criteria related to the nature or amount of its emissions. The Title V operating permit specifies what the affected company is, how it may operate, what its applicable regulations are, how it will demonstrate compliance, and what is required if compliance is not achieved. In Jefferson County, Kentucky, the Louisville Metro Air Pollution Control District (LMAPCD or APCD) is responsible for issuing Title V permits to affected companies and enforcing local regulations and delegated federal and state regulations. EPA may enforce federal regulations but not "District Only Enforceable Regulations."

Title V offers the public an opportunity to review and comment on a company's draft permit. It is intended to help the public understand the company's compliance responsibility under the Clean Air Act. Additionally, the Title V process provides a mechanism to incorporate new applicable requirements. Such requirements are available to the public for review and comment before they are adopted.

Title V Permit General Conditions define requirements that are generally applicable to all Title V companies under the jurisdiction of LMAPCD. This avoids repeating these requirements in every section of the company's Title V permit. Company-specific conditions augment the General Conditions as necessary; these appear in the sections of the permit addressing individual emission units or emission points.

The General Conditions include references to regulatory requirements that may not currently apply to the company, but which provide guidance for potential changes at the company or in the regulations during the life of the permit. Such requirements may become applicable if the company makes certain modifications or a new applicable requirement is adopted.

When the applicability of a section or subpart of a regulation is unclear, a clarifying citation will be made in the company's Title V permit at the emission unit/point level. Comments may also be added at the emission unit/point level to give further clarification or explanation.

The owner or operator's Title V permit may include a current table of "insignificant activities."

Insignificant activities are defined in District Regulation 2.16, section 1.23, as of the date the permit was proposed for review by U.S. EPA, Region 4.

Insignificant activities identified in District Regulation 1.02, section 1.38, and Appendix A may be subject to size or production rate disclosure requirements pursuant to Regulation 2.16, section 3.5.4.1.4.

Insignificant activities identified in District Regulation 1.02, section 1.38, and Appendix A shall comply with generally applicable requirements as required by Regulation 2.16, section 4.1.9.4.

General Conditions

G1. **Compliance** - The owner or operator shall comply with all applicable requirements and with all terms and conditions of this permit. Any noncompliance shall constitute a violation of the Act, State, and District regulations and shall cause the source to be subject to enforcement actions including, but not limited to, the termination, revocation and reissuance, or revision of this permit, or denial of a permit application to renew this permit. Notwithstanding any other provision in the Jefferson County portion of the Kentucky SIP approved by EPA, any credible evidence may be used for the purpose of establishing whether the owner or operator is in compliance with, has violated, or is in violation of any such plan.
[Regulation 2.16, sections 4.1.3, 4.1.13.1, and 4.1.13.7]

G2. **Compliance Certification** - The owner or operator shall certify, annually, or more frequently if required in applicable regulations, compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall meet the requirements of Regulation 2.16, sections 3.5.11 and 4.3.5. The owner or operator shall submit the annual compliance certification (Form 9400-O) directly to the EPA and to the District, as set forth in Regulation 2.16, section 4.3.5.4, at the following addresses:

*US EPA - Region IV
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth Street
Atlanta, GA 30303-8960*

*Air Pollution Control District
701 W. Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137*

The owner or operator shall submit the Compliance Certification on or before April 15 of each year, or other such due date as required by another applicable regulation.

G3. **Compliance Schedule** - The owner or operator shall submit a schedule of compliance for each emission unit that is not in compliance with all applicable requirements. A compliance schedule must meet the requirements of Regulation 2.16, section 3.5.9.5. A schedule of compliance shall be supplemental to, and shall not condone noncompliance with, the applicable requirements on which it is based. For each schedule of compliance, the owner or operator shall submit certified progress reports at least semi-annually, or at a more frequent period if specified in an applicable requirement or by the District in accordance with Regulation 2.16, section 4.3.4. The progress reports shall contain:

- a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when activities, milestones, or compliance were achieved.
- b. An explanation of why dates in the schedule of compliance were not or will not be met, and preventive or corrective measures adopted.

G4. **Duty to Supplement or Correct Application** - If the owner or operator fails to submit relevant facts or has submitted incorrect information in the permit application, they shall, upon discovery of the occurrence, promptly submit the supplementary facts or corrected information in accordance with Regulation 2.16, section 3.4.

G5. **Emergency Provision**

- a. An emergency shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emission limitations if the conditions in Regulation 2.16 are met. The affirmative defense of emergency shall be demonstrated

through properly signed, contemporaneous operating logs, or other relevant evidence that:

- i. An emergency occurred and that the owner or operator can identify the cause of the emergency;
 - ii. The permitted facility was at the time being properly operated;
 - iii. During the period of the emergency the owner or operator expeditiously took all reasonable steps, consistent with safe operating practices, to minimize levels of emissions that exceeded the emission standards or other requirements in this permit; and
 - iv. The owner or operator submitted notice meeting the requirements of Regulation 1.07 of the time when emissions limitations were exceeded because of the emergency. This notice must fulfill the requirement of this condition, and must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.
- b. In an enforcement proceeding, the owner or operator seeking to establish the occurrence of an emergency has the burden of proof.
- c. This condition is in addition to any emergency or upset provision contained in an applicable requirement. [Regulation 2.16, sections 4.7.1 through 4.7.4]
- G6. **Emission Fees Payment Requirements** - The owner or operator shall pay annual emission fees in accordance with Regulation 2.08, section 1.3. Failure to pay the emissions fees when due shall constitute a violation of District Regulations. Such failure is subject to penalties and an increase in the fee of an additional 5% per month up to a maximum of 25% of the original amount due. In addition, failure to pay emissions fees within 60 days of the due date shall automatically suspend this permit to operate until the fee is paid or a schedule for payment acceptable to the District has been established. [Regulation 2.08, section 1.2.5]
- G7. **Emission Offset Requirements** - The owner or operator shall comply with the requirements of Regulation 2.04.
- G8. **Enforceability Requirements** - Except for the conditions that are specifically designated as District-Only Enforceable Conditions, all terms and conditions of this permit, including any provisions designed to limit a source's potential to emit, are enforceable by EPA and citizens as specified under the Act. [Regulation 2.16, sections 4.2.1 and 4.2.2]
- G9. **Enforcement Action Defense**
- a. It shall not be a defense for the owner or operator in an enforcement action that it would have been necessary for the owner or operator to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
 - b. The owner or operator's failure to halt or reduce activity may be a mitigating factor in assessing penalties for noncompliance if the health, safety or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operation. [Regulation 2.16, sections 4.1.13.2 and 4.1.13.3]
- G10. **Hazardous Air Pollutants and Sources Categories** - The owner or operator shall comply with the applicable requirements of Regulations 5.02 and 5.14.
- G11. **Information Requests** - The owner or operator shall furnish to the District, within a reasonable time, information requested in writing by the District, to determine whether cause exists for revising, revoking and reissuing, or terminating this permit, or to determine compliance with this

permit. The owner or operator shall also furnish, upon request, copies of records required to be kept by this permit. [Regulation 2.16, section 4.1.13.6]

If information is submitted to the District under a claim of confidentiality, the source shall submit a copy of the confidential information directly to EPA at the address shown in General Condition 35.b. [Regulation 2.07, section 10.2]

G12. **Insignificant Activities** - The owner or operator shall:

- a. Notify the District in a timely manner of any proposed change to an insignificant activity that would require a permit revision. [Regulation 2.16, Section 5]
- b. Submit a current list of insignificant activities by April 15 of each year with the annual compliance certification, including an identification of the additions and removals of insignificant activities that occurred during the preceding year. [Regulation 2.16, section 4.3.5.3.6]

G13. **Inspection and Entry** - Upon presentation of credentials and other documents as required by law, the owner or operator shall allow the District or an authorized representative to perform the following during reasonable hours: [Regulation 2.16, section 4.3.2]

- a. Enter the premises to inspect any emissions-related activity or records required in this permit.
- b. Have access to and copy records required by this permit.
- c. Inspect facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required by this permit.
- d. Sample or monitor substances or parameters to assure compliance with this permit or any applicable requirements.

G14. **Monitoring and Related Record Keeping and Reporting Requirement** - The owner or operator shall comply with the requirements of Regulation 2.16, section 4.1.9. Unless specified elsewhere in this permit, the owner or operator shall complete required monthly record keeping within 30 days following the end of each calendar month. The owner or operator shall submit all required monitoring reports at least once every six months, unless more frequent reporting is required by an applicable requirement. The reporting period shall be 1 January through 30 June and 1 July through 31 December of each calendar year. All reports shall be sent to the District at the address shown in paragraph 2 of these General Conditions and must be submitted by the 60th day following the end of each reporting period, unless specified elsewhere in this permit. If surrogate operating parameters are monitored and recorded in lieu of emission monitoring, then an exceedance of multiple parameters may be deemed a single violation by the District for enforcement purposes. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. All semi-annual compliance reports shall include the statement "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete" and the signature and title of a responsible official of the company.

The semi-annual compliance reports are due on or before the following dates of each calendar year:

<u>Reporting Period</u>	<u>Report Due Date</u>
January 1 - June 30	August 29
July 1 - December 31	March 1 of the following year

If a change in the responsible official (RO) occurs during the term of this permit, or if an RO is added, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days of such change or addition.

- G15. **Off-permit Documents** - Any applicable requirements, including emission limitations, control technology requirements, or work practice standards, contained in an off-permit document cannot be changed without undergoing the permit revision procedures in Regulation 2.16, Section 5. [Regulation 2.16, section 4.1.5]
- G16. **Operational Flexibility** - The owner or operator may make changes without permit revision in accordance with Regulation 2.16, section 5.8.
- G17. **Permit Amendments (Administrative)** - This permit can be administratively amended by the District in accordance with Regulation 2.16, section 5.4.
- G18. **Permit Application Submittal** - The owner or operator shall submit a timely and complete application for permit renewal or significant revision. If the owner or operator submits a timely and complete application then the owner or operator's failure to have a permit is not a violation until the District takes formal action on this permit application. This protection shall cease to apply if, subsequent to completeness determination, the owner or operator fails to submit, by the deadline specified in writing by the District, additional information required to process the application as required by Regulation 2.16, sections 3 and 5.2.
- G19. **Permit Duration** - This permit is issued for a fixed term of 5 years, in accordance with Regulation 2.16, section 4.1.8.3.
- G20. **Permit Renewal, Expiration and Application** - Permit renewal, expiration and application procedural requirements shall be in accordance with Regulation 2.16, sections 4.1.8.2 and 5.3. This permit may only be renewed in accordance with section 5.3.
- G21. **Permit Revisions** - No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit. [Regulation 2.16, section 4.1.16]
- G22. **Permit Revision Procedures (Minor)** - Except as provided in 40 CFR Part 72, the Acid Rain Program, this permit may be revised in accordance with Regulation 2.16, section 5.5.
- G23. **Permit Revision Procedures (Significant)** - A source seeking to make a significant permit revision shall meet all the Title V requirements for permit applications, issuance and Permit renewal, in accordance with Regulation 2.16, section 5.7, and all other applicable District Regulations.
- G24. **Permit Termination and Revocation by the District** - The District may terminate this permit only upon written request of the owner or operator. The District may revoke a permit for cause, in accordance with Regulation 2.16, section 5.11.1 through 5.11.6. For purposes of section 5.11.1, substantial or unresolved noncompliance includes, but is not limited to:
- a. Knowingly operating process or air pollution control equipment in a manner not allowed by an applicable requirement or that results in excess emissions of a regulated air pollutant that would endanger the public or the environment;
 - b. Failure or neglect to furnish information, analyses, plans, or specifications required by the District;
 - c. Knowingly making any false statement in any permit application;
 - d. Noncompliance with Regulation 1.07, section 4.2; or
 - e. Noncompliance with KRS Chapter 77.

- G25. **Permit Shield** - The permit shield shall apply in accordance with Regulation 2.16, section 4.6.1.
- G26. **Prevention of Significant Deterioration of Air Quality** - The owner or operator shall comply with the requirements of Regulation 2.05.
- G27. **Property Rights** - This permit shall not convey property rights of any sort or grant exclusive privileges in accordance with Regulation 2.16, section 4.1.13.5.
- G28. **Public Participation** - Except for modifications qualifying for administrative permit amendments or minor permit revision procedures, all permit proceedings shall meet the requirements of Regulations 2.07, Section 1; and 2.16, sections 5.1.1.2 and 5.5.4.
- G29. **Reopening for Cause** - This permit shall be reopened and revised by the District in accordance with Regulation 2.16,section 5.9.
- G30. **Reopening for Cause by EPA** - This permit may be revised, revoked and reissued or terminated for cause by EPA in accordance with Regulation 2.16,section 5.10.
- G31. **Risk Management Plan [112(r)]** - For each process subject to section 112(r) of the Act, the owner or operator shall comply with 40 CFR Part 68 and Regulation 5.15.
- G32. **Severability Clause** - The conditions of this permit are severable. Therefore, if any condition of this permit, or the application of any condition of this permit to any specific circumstance, is determined to be invalid, the application of the condition in question to other circumstances, as well as the remainder of this permit's conditions, shall not be affected.
[Regulation 2.16, section 4.1.12]
- G33. **Stack Height Considerations** - The owner or operator shall comply with the requirements of Regulation 2.10.
- G34. **Startups, Shutdowns, and Upset Conditions Requirements** - The owner or operator shall comply with the requirements of Regulation 1.07.
- G35. **Submittal of Reports, Data, Notifications, and Applications**
- a. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit as set forth in Regulation 2.16,sections 3.1, 3.3, 3.4, 3.5, 4.1.13.6, 5.8.5 and 5.12 shall be submitted to:
*Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137*
- b. Documents that are specifically required to be submitted to EPA, as set forth in Regulation 2.16,sections 3.3 and 5.8.5 shall be mailed to EPA at:
*US EPA - Region IV
APTMD - 12th floor
Atlanta Federal Center
61 Forsyth Street
Atlanta, GA 30303-3104*

- G36. **Other Applicable Regulations** - The owner or operator shall comply with all applicable requirements of the following:

Regulation	Title
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance With Emissions Standards And Maintenance Requirements
1.06	Source Self-Monitoring, Emission Inventory Development and Reporting
1.07	Excess Emissions During Startups, Shutdowns, and Upset Conditions
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions
1.18	Rule Effectiveness
1.19	Administrative Hearings
2.01	General Application (Permit Requirements)
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements
2.04	Construction or Modification of Major Sources in or Impacting Upon Non-Attainment Areas (Emission Offset Requirements)
2.05	Prevention of Significant Deterioration
2.06	Permit Requirements – Other Sources
2.07	Public Notification for Title V, PSD, and Other Offset Permits; SIP Revisions; and Use of Emission Reduction Credits
2.09	Causes for Permit Modification, Revocation, or Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
3.01	Ambient Air Quality Standards
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.04	Particulate and Sulfur Dioxide Reduction Requirements
4.05	Hydrocarbon and Nitrogen Oxides Reduction Requirements
4.06	Carbon Monoxide Reduction Requirements
4.07	Episode Reporting Requirements
6.01	General Provisions (Existing Affected Facilities)
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions (New Affected Facilities)

District Only Enforceable Regulations:

Regulation	Title
1.12	Control of Nuisances
1.13	Control of Objectionable Odors
2.08	Emission Fee, Permit Fees and Permit Renewal Procedures
2.16	Title V Operating Permits
5.00	Definitions
5.01	General Provisions
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
5.14	Hazardous Air Pollutants and Source Categories
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant
5.21	Environmental Acceptability for Toxic Air Contaminants
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant
5.23	Categories of Toxic Air Contaminants
7.02	Adoption and Incorporation by Reference of Federal New Source Performance Standards

G37. **Stratospheric Ozone Protection Requirements** - Any facility having refrigeration equipment, including air conditioning equipment, which uses a Class I or II substance (listed in 40 CFR 82, Subpart A, Appendices A and B), and any facility which maintains, services, or repairs motor vehicles using a Class I or II substance as refrigerant must comply with all requirements of 40 CFR 82, Subparts A, B, and F. Those requirements include the following restrictions:

- a. Any facility having any refrigeration equipment that normally contains fifty pounds of refrigerant or more must keep servicing records documenting the date and type of all service and the quantity of any refrigerant added, according to 40 CFR 82.166;
- b. No person repairing or servicing a motor vehicle may perform any service on a motor vehicle air conditioner (MVAC) involving the refrigerant for such air conditioner unless the person has been properly trained and certified as provided in 40 CFR 82.34 and 40 CFR 82.40, and properly uses equipment approved according to 40 CFR 82.36 and 40 CFR 82.38, and complies with 40 CFR 82.42;
- c. No person may sell or distribute, or offer for sale or distribution, any substance listed as a Class I or II substance in 40 CFR 82, Subpart A, Appendices A and B, except in compliance with 40 CFR 82.34(b), 40 CFR 82.42, and/or 40 CFR 82.166;
- d. No person maintaining, servicing, repairing, or disposing of appliances may knowingly vent or otherwise release into the atmosphere any Class I or II substance used as a refrigerant in such equipment and no other person may open appliances (except MVACs as defined in 40 CFR 82.152) for service, maintenance, or repair unless the person has been properly trained and certified according to 40 CFR 82.161 and unless the person

uses equipment certified for that type of appliance according to 40 CFR 82.158 and unless the person observes the practices set forth in 40 CFR 82.156 and 40 CFR 82.166;

- e. No person may dispose of appliances (except small appliances, as defined in 40 CFR 82.152) without using equipment certified for that type of appliance according to 40 CFR 82.158 and without observing the practices set forth in 40 CFR 82.156 and 40 CFR 82.166;
- f. No person may recover refrigerant from small appliances, MVACs and MVAC-like appliances (as defined in 40 CFR 82.152), except in compliance with the requirements of 40 CFR 82 Subpart F;
- g. If the permittee manufactures, transforms, imports, or exports, a Class I or II substance (listed in 40 CFR 82, Subpart A, Appendices A and B), the permittee is subject to all requirements as specified in 40 CFR 82 Subpart A, Production and Consumption Controls. [Regulation 2.16, section 4.1.5]

Plantwide Requirements

Facility Description

The company manufactures calcium carbide in a semi-closed electric submerged-arc furnace.

Plantwide Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
1.05	Compliance with Emission Standards and Maintenance Requirements	4
6.43	Volatile Organic Compound Emission Reduction Requirements	1, 2, 3, 4 and 9

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

Plantwide Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. TAC

- i. The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be *de minimis*.
[Regulations 5.00 and 5.21]
- ii. If the TAC does not have an established BAC or *de minimis* value, the owner or operator shall calculate and report these values. The form, located in Attachment A, may be used for determining BAC and *de minimis* values. [Regulation 5.20, Sections 3 and 4]

b. VOC

The plantwide emissions of VOCs subject to Regulation 6.43 shall not exceed 6,400 pounds per day. [Regulation 6.43, Section 9]

S2. Monitoring and Record Keeping

[Regulation 2.16, sections 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. TAC

The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to, SDS, analysis of emissions, and/or modeling results.

b. VOC

The owner or operator shall monitor the throughput at each emission point subject to Regulation 6.43, from which VOCs may be emitted and calculate these emissions on a daily basis. The emissions from any specific source will be calculated using protocols established in the company's revised Regulation 1.05 VOC Reporting Plan.¹ The owner or operator shall maintain daily records of the VOC emissions from each emission point and the total VOC emissions from the plant. Specific Monitoring and Record Keeping requirements are included with

¹ Plan submitted June 26, 1993, from Glen Logan, Plant/Environmental Engineer for The Carbide/Graphite Group, Inc. (APCD-00000409)

each affected emission unit. [Regulations 1.05, Section 4, and 6.43, Sections 3 and 4]

S3. Reporting

[Regulation 2.16, section 4.1.1]

The owner or operator shall report the following information, as required by General Condition 14:

a. TAC

Any conditions that were inconsistent with those conditions analyzed in the most recent Environmental Acceptability Demonstration.

b. VOC

The owner or operator shall report the daily plantwide total emissions including any bypassed emissions for VOC, subject to Regulation 6.43, for each day in the reporting period.

Comments

- Compliance with the STAR EA Goals was demonstrated in the source's EA Demonstrations received February 23, 2016. Based on SCREEN3 air modeling, the maximum off-site R_C and R_{NC} for all process/process equipment is less than 1.0. The source has demonstrated compliance with the EA Goals for each TAC. The company used uncontrolled potential for their model, therefore they do not have limits in their permit.

Emission Point	TAC	Risk (EAG_C)		HQ (EAG_{NC})	
		Non-Adjusted	Industrial	Non-Adjusted	Industrial
		$EAG_C \leq 1.0$	$EAG_C \leq 10.0$	$EAG_{NC} \leq 1.0$	$EAG_{NC} \leq 3.0$
U4-U8	Arsenic and arsenic compounds	0.2083	0.7997	0.0032	0.0123
U3	Benz[a]anthracene	0.0091	0.0423	-	-
U3	Benzo[a]pyrene	0.00091	0.3920	-	-
U3	Indeno[1,2,3-cd]pyrene	0.0091	0.0423	-	-
U3	Benzo[b]fluoranthene	0.0091	0.0423	-	-
U3	Benzo[j]fluoranthene	0.0091	0.0423	-	-

U3	Benzo[k]fluoranthene	0.0091	0.0423	-	-
Plantwide R_C for all Processes:		0.2547 (≤ 7.5)	1.4032 (≤ 75)	-	-
R_{NC} for all Processes:		-	-	Arsenic and arsenic compounds 0.0032	Arsenic and arsenic compounds 0.0123

Emission Unit U1: Lime Handling System

U1 Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
1.14	Control of Fugitive Particulate Emissions	1, 2, 8
7.08	Standards of Performance for New Process Operations	1, 2, 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

U1 Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E001	Unloading hopper with vibrating feeder	1968	1.14, 6.09	NA	Fug U1
E002	Belt conveyor	1968	6.09	C1	S1
E003	Bucket elevator	1968	1.14, 6.09	NA	Fug U1
E004	Lime Storage Bin #1	1968	6.09, STAR	BV1	BV01
E005	Lime Storage Bin #2	1968	6.09, STAR		

U1 Control Devices

Control ID	Description	Control Efficiency
C1	F1 Baghouse - Charge Mix (R.L. Flowers) 12,000 ft ³ /min, $\Delta P = 4-8$ in. water, [also controls some emissions from U2 and U3]	98%
BV1	Bin Vent (Lime storage bins)	98%

U1 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. Opacity

The owner or operator shall not cause or allow any gases that contain PM equal to or greater than 20% opacity to be discharged into the atmosphere.

[Regulation 6.09, section 3.1]

b. PM/PM₁₀/PM_{2.5}

i. For Emission Points E001 and E003, no person shall cause, allow, or permit any materials to be handled, transported, or stored; or a building and/or its appurtenances to be constructed, altered, used, repaired, or demolished; or a road to be used without taking reasonable precautions to prevent particulate matter from becoming airborne beyond the work site. [Regulation 1.14, section 2.1]

ii. The owner or operator shall not allow the emission of particulate matter from any emission point which is a part of this emission unit to exceed:² [Regulation 6.09, section 3.2]

(1) 2.58 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;

(2) $4.10 \times P^{0.67}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;

(3) $(55.0 \times P^{0.11}) - 40$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.

iii. For Emission Points E002, E004, and E005, the owner or operator shall operate and maintain the associated control devices at all times that the process equipment is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice for minimizing emissions.

c. TAC

See Plantwide TAC Standards.

² A one-time PM compliance demonstration for Emission Points E002, E004, and E005 was performed and the hourly standard cannot be exceeded controlled. Therefore, controls must be operational at all times for Emission Points E002, E004, and E005.

S2. Monitoring and Record Keeping

[Regulation 2.16, section 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. Opacity

- i. The owner or operator shall conduct a weekly one-minute visible emissions survey of each emission point during normal operation and daylight hours. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.
- ii. For emission points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to reduce the visible emission frequency to monthly.
- iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 or Method 22 observation, as appropriate, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07, and take all practicable steps to eliminate the exceedance. In addition, if the visible emission survey frequency had been reduced to monthly, weekly survey frequency must be resumed until the 12-week criterion is again met.
- iv. The owner or operator shall keep records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include:
 - (1) The date of the survey,
 - (2) The name of the person conducting the survey,
 - (3) Whether or not visible emissions were observed, and
 - (4) What, if any, corrective action was performed.
- v. If an emission point is not being operated during a given survey period, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

b. PM/PM₁₀/PM_{2.5}

- i. The owner or operator shall use water sprays or other methods to suppress the dust during handling.

- ii. The owner or operator shall keep records of the monthly throughput of lime at each emission point and the hours of operation.
- iii. The owner or operator shall calculate the rate of PM emission from the affected emission point(s).³
 - (1) Emissions from conveying equipment shall use an uncontrolled emission factor of 2.2 lb/ton;
 - (2) Emissions from and to storage containers shall use an uncontrolled emission factor of 0.61 lb/ton;
 - (3) Other emission factors approved by the Air Pollution Control District;
 - (4) Apply the appropriate control factor for the emission point.
- iv. For Emission Points E002, E004, and E005, the owner or operator shall maintain daily records of any periods when a process was operating and an associated control device was not operating, or a declaration that the control device operated at all times that day when the process was operating. For each period when the control was not operating or was bypassed, the record must include:
 - (1) Date;
 - (2) Start time and stop time;
 - (3) Identification of the control device and process equipment;
 - (4) PM emissions during the event, in lb/hr;
 - (5) Summary of the cause or reason for each event;
 - (6) Corrective action taken to minimize the extent or duration of the event; and
 - (7) Measures implemented to prevent reoccurrence of the situation that resulted in the event.
- v. The owner or operator shall perform the following inspections:
 - (1) Daily, verify that the fans associated with the equipment are operating;
 - (2) Monthly:
 - (a) Verify that dampers are working properly;
 - (b) Verify the bag cleaning mechanisms are working properly;
 - (c) Verify baghouse bags are clean and not filled with dust;

³ The values specified here are from AP-42, Chapter 11.17 – Lime Manufacturing, Table 4.

- (d) Inspect the bags for excessive wear or damage, and replace if necessary;
 - (e) Inspect exhaust stacks for signs of dust accumulation; and
 - (f) Inspect the mechanical integrity of the baghouses for excessive wear or damage.
- vi. For Baghouse C1, the owner or operator shall monitor and record the pressure drop at least once during each operating day to ensure it is maintained between 4 and 8 in. water column.
 - vii. For any period of operating outside the established pressure drop range for Baghouse C1, the owner or operator shall maintain the following records:
 - (1) The date,
 - (2) The observed pressure drop, and
 - (3) Corrective action taken to minimize the extent of the excursion, and measures implemented to prevent reoccurrence.

c. TAC

See Plantwide TAC Monitoring and Record Keeping.

S3. Reporting

[Regulation 2.16, section 4.1.1]

The owner or operator shall report the following information, as required by General Condition 14:

a. Opacity

- i. Emission Unit and Emission Point identification;
- ii. The date, time, and results for each visible emission survey during which visible emissions were detected, or a negative declaration if no visible emission were observed;
- iii. The date, time, and results of each Method 9 or Method 22 observation conducted, or a negative declaration if no or observations were required;
- iv. Description of any corrective action taken.

b. PM/PM₁₀/PM_{2.5}

- i. The owner or operator shall report any abnormal dustiness that causes particulate matter to become airborne beyond the work site.

- ii. For Emission Points E002, E004, and E005, the owner or operator shall maintain daily records of any periods when a process was operating and an associated control device was not operating, or a declaration that the control device operated at all times that day when the process was operating. For each period when the control was not operating or was bypassed, the record must include:
 - (1) Date;
 - (2) Start time and stop time;
 - (3) Identification of the control device and process equipment;
 - (4) PM emissions during the event, in lb/hr;
 - (5) Summary of the cause or reason for each event;
 - (6) Corrective action taken to minimize the extent or duration of the event; and
 - (7) Measures implemented to prevent reoccurrence of the situation that resulted in the event.
- iii. Identification of any periods during which required inspections were not completed;
- iv. Description of any corrective action taken to correct abnormal operating conditions, or a negative declaration if no corrective action was taken.

c. TAC

See Plantwide TAC Reporting.

S4. Testing

[Regulation 2.16, section 4.3.1]

a. PM/PM₁₀/PM_{2.5}

- i. Within 180 days of the effective date of this permit, the owner or operator shall perform an EPA Reference Method 5 performance test on the inlet and outlet of Baghouse C1 to determine the emission rate and control efficiency. Failure to perform the test, at maximum capacity, allowable/permitted capacity, or at a level of capacity which results in the greatest emissions may necessitate a re-test or necessitate a revision of the allowable/permitted capacity of the process equipment depending upon the difference between the testing results and the limit.
- ii. The owner or operator shall submit a written compliance test plan that includes the EPA test methods that will be used for PM compliance testing, the process operating parameters (e.g. material throughput, in lbs, material type, etc.) that will be monitored during the compliance test, and

the control device performance indicators (e.g. pressure drop) that will be monitored during the compliance test. (See Appendix A.) The compliance test plan shall be furnished to the District at least 30 days before the actual date of the compliance test.

- iii. The owner or operator shall provide the District at least 10 days prior notice of any compliance test to afford the District the opportunity to have an observer present.
- iv. The owner or operator shall furnish the District with a written report of the results of the compliance test within 60 days following the actual date of completion of the compliance test event.

Emission Unit U2: Coke Handling Unit**U2 Applicable Regulations**

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
1.14	Control of Fugitive Particulate Emissions	1, 2, 8
6.09	Standards of Performance for Existing Process Operations	1, 2, 8
6.10	Standard of Performance for Existing Process Gas Streams	1, 2, 3, 4, 5
7.08	Standards of Performance for New Process Operations	1, 2, 3

U2 Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E008	Coke ground pile	1968	1.14	NA	Fug U2
E009	Coke grade hopper	1968	6.09	NA	Fug U2
E010	Dryer feed belt conveyor	1968	6.09	NA	Fug U2
E012	Coke dryer	1968	6.09, 6.10	C2	S2
E012A	Transfer point conveyor to coke dryer	1968	6.09	NA	Fug U2
E013	Dryer discharge hopper	1968	6.09	C2	S2
E014	Hopper belt conveyor	1968	6.09	NA	Fug U2
E015	Bucket elevator	1968	6.09	NA	Fug U2
E016	Screen	2005	7.08	C2	S2
E017	Pneumatic transfer system	2005	7.08	NA	Fug U2
E018	Fines storage bin	2005	7.08	BV2	BV02
E019	East storage bin	2005	7.08	C2	S2
E020	West storage bin	2005	7.08	C2	S2
E021	Fines truck-loading station	2005	7.08	NA	Fug U2
E022	Fines weigh belt	2005	7.08	C1	S1
E023	East bin weigh belt	1968	6.09	C1	S1
E024	West bin weigh belt	1968	6.09	C1	S1

U2 Control Devices

Control ID	Description	Control Efficiency
C1	F1 Baghouse - (R.L.Flowers) 12,000 ft ³ /min ΔP = 4-8 in. water [also controls emissions from U1 and U3]	98%
C2	F2 Baghouse - (Amerex) 45,000 ft ³ /min ΔP = 4-10 in. water, Rebuilt March 2013	98%
BV2	Bin vent (Coke fines storage)	98%

U2 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. CO

The exhaust from the coke dryer (E012) shall not contain CO unless the gas stream has been burned at a minimum of 1,300 °F for at least 0.5 seconds in a direct flame. [Regulation 6.10, Section 5]

b. NO_x

The exhaust from the coke dryer (E012) shall not contain NO_x at a concentration greater than 300 ppm, when expressed as NO₂, nor shall there be a visible discharge.⁴ [Regulation 6.09, Section 4]

c. Opacity

The owner or operator shall not cause or allow any gases that contain PM equal to or in excess of 20% opacity to be discharged into the atmosphere. [Regulation 6.09, section 3.1 and Regulation 7.08, section 3.1.1]

d. PM/PM₁₀/PM_{2.5}

- i. The owner or operator shall maintain and operate a fugitive-dust suppression watering system or similar method that shall be used during periods of dry windy weather and at other times as the company deems necessary to minimize fugitive dust emissions from the coke storage pile (E008) and the coke haul-road. [Regulation 1.14, Section 2]
- ii. The owner or operator shall not allow the emission of particulate matter to exceed the following limits:⁵
 - (1) Emission Points E009 – E015, E023, E024:
[Regulation 6.09, section 3.2]
 - (a) 2.58 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;
 - (b) $4.10 \times P^{0.67}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;

⁴ In a letter dated April 2, 1998, and submitted to the District for Carbide Industries, Corinne Greenberg, for Woolpert, demonstrated that the maximum NO_x concentration from this operation is 8.5 ppm. (APCD-00000343)

⁵ A one-time PM compliance demonstration for Emission Point E012 was performed and the hourly standard cannot be exceeded controlled. Therefore, controls must be operational at all times for Emission Point E012.

- (c) $(55.0 \times P^{0.11}) - 40$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.
 - (2) Emission Points E016 – E022: [Regulation 7.08, section 3.1.2]
 - (a) 2.34 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;
 - (b) $3.59 \times P^{0.62}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;
 - (c) $17.31 \times P^{0.16}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.
 - iii. For Emission Point E012, the owner or operator shall operate and maintain baghouse C2, at all times that the process equipment is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice for minimizing emissions.
- e. SO₂**

The exhaust from the coke dryer (E012) shall not contain SO₂ at a concentration greater than 2,000 ppm by volume at 0% oxygen. The owner or operator shall not use coke that has a sulfur content more than 3%.^{6,7} [Regulation 6.10, Section 4]

S2. Monitoring and Record Keeping

[Regulation 2.16, section 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. CO

- i. The owner or operator shall keep records of the amount of carbon monoxide in the exhaust from the coke dryer (E012) and the temperature to ensure that the gas stream has been burned at a minimum of 1,300 °F for at least 0.5 seconds in a direct flame if CO is present.

⁶ In a letter dated February 23, 1997 and submitted to the District for Carbide Industries, Robert T. Offutt, for Smith Environmental Management Consultants demonstrated that the limit of 2,000 ppm cannot be exceeded if the sulfur content of the coke is less than 3%.

⁷ To avoid the applicability of Regulation 2.05 (PSD), a maximum sulfur content for the coke used in the process was established along with annual carbide production limits to ensure that SO₂ emissions would not increase above the significant impact level of 40 tpy.

- ii. The owner or operator shall keep records of the amount of carbon monoxide and natural gas burned in the coke dryer and the hours of operation on each fuel.

b. NO_x

There are no monitoring and record keeping requirements for this pollutant.

c. Opacity

- i. The owner or operator shall conduct a weekly one-minute visible emissions survey of Emission Points E009 – E024 during normal operation and daylight hours. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.
- ii. For emission points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to reduce the visible emission frequency to monthly.
- iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 or Method 22 observation, as appropriate, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07, and take all practicable steps to eliminate the exceedance. In addition, if the visible emission survey frequency had been reduced to monthly, weekly survey frequency must be resumed until the 12-week criterion is again met.
- iv. The owner or operator shall keep records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include:
 - (1) The date of the survey,
 - (2) The name of the person conducting the survey,
 - (3) Whether or not visible emissions were observed, and
 - (4) What, if any, corrective action was performed.
- v. If an emission point is not being operated during a given survey period, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

d. PM/PM₁₀/PM_{2.5}

- i. The owner or operator shall maintain records of the monthly throughput of coke at each emission point.
- ii. At the coke storage pile (E008), the coke hopper (E009), and the roads and paths between these two points that are used for the transport of the coke, the owner or operator shall perform daily observations for the presence of dust clouds from any cause, including winds and vehicle traffic and record any findings. If dust is visible, the owner or operator shall take appropriate measures, such as water spray or chemical suppressants, to eliminate the dust to the extent that this is possible without creating safety hazards.
- iii. The owner or operator shall calculate the rate of PM emission from the affected emission point(s), using an emission factor of 0.26 lb_{PM}/ton_{coke}⁸ for emission point E012 and 0.12 lb_{PM}/ton_{coke}⁹ for all other emission points, unless a different emission factor has been approved by APCD.
- iv. The owner or operator shall maintain records of any periods when a process was operating and an associated control device was not operating, or a declaration that the control device operated at all times that day when the process was operating. For each period when the control was not operating or was bypassed the record must include:
 - (1) Date;
 - (2) Start time and stop time;
 - (3) Identification of the control device and process equipment;
 - (4) PM emissions during the event, in pounds per hour;
 - (5) Summary of the cause or reason for each event;
 - (6) Corrective action taken to minimize the extent or duration of the event; and
 - (7) Measures implemented to prevent reoccurrence of the situation that resulted in the event.
- v. The owner or operator shall perform the following inspections:
 - (1) Daily:

Verify that the fans associated with the equipment are operating;
 - (2) Monthly:
 - (a) Verify that dampers are working properly;
 - (b) Verify the bag cleaning mechanisms are working properly;

⁸ The values specified here are from AP-42, Chapter 11.17 – Lime Manufacturing, Table 11.24-2, SCC 3-05-004-02

⁹ The values specified here are from AP-42, Chapter 11.17 – Lime Manufacturing, Table 11.24-2, SCC 3-03-024-04

- (c) Verify baghouse bags are clean and not filled with dust;
 - (d) Inspect the bags for excessive wear or damage, and replace if necessary;
 - (e) Inspect exhaust stacks for signs of dust accumulation; and
 - (f) Inspect the mechanical integrity of the baghouses for excessive wear or damage.
- vi. For Baghouse C2, the owner or operator shall monitor and record the pressure drop at least once during each operating day to ensure it is maintained between 4 and 10 in. water column.
 - vii. For any period of operating outside the established pressure drop range for Baghouse C2, the owner or operator shall maintain the following records:
 - (1) The date,
 - (2) The observed pressure drop, and
 - (3) Corrective action taken to minimize the extent of the excursion, and measures implemented to prevent reoccurrence.
- e. SO₂**

The owner or operator shall keep records of the monthly average sulfur content of each delivery of coke.

S3. Reporting

[Regulation 2.16, section 4.1.1]

The owner or operator shall report the following information, as required by General Condition 14:

a. CO

- i. Emission Unit and Emission Point identification;
- ii. Identification of all periods if the exhaust from the coke dryer (E012) contains CO, unless the gas stream has been burned at a minimum of 1,300 °F for at least 0.5 seconds in a direct flame;
- iii. Description of any corrective action taken to correct abnormal operating conditions, or a negative declaration if no corrective action was taken.

b. NO_x

There are no reporting requirements for this pollutant.

c. Opacity

- i. Emission Unit and Emission Point identification;
- ii. The date, time, and results for each visible emission survey during which visible emissions were detected, or a negative declaration if no visible emission were observed;
- iii. The date, time, and results of each Method 9 or Method 22 observation conducted, or a negative declaration if no or observations were required;
- iv. Description of any corrective action taken.

d. PM/PM₁₀/PM_{2.5}

- i. Emission Unit and Emission Point identification;
- ii. Identification of all periods of exceedance of the hourly PM emissions rate standards established in U2 PM Standards, including calculation of the emission rate and the quantity of excess emissions during such periods, or a negative declaration if there were no such periods;
- iii. Identification of all periods during which a PM control device was bypassed during operation of the associated process equipment, including the date, time, and duration of each such bypass event and the calculated emission rate and quantity of emissions during such periods, or a negative declaration if there were no such periods;
- iv. Identification of any periods during which required inspections were not completed;
- v. Description of any corrective action taken to correct abnormal operating conditions, or a negative declaration if no corrective action was taken.

e. SO₂

- i. Emission Unit and Emission Point Identification;
- ii. Monthly average sulfur content of the coke used for carbide production;
- iii. Description of any periods during which sulfur content exceeded 3%, what was done to correct the exceedance, and the duration of the exceedance, and what actions were taken to assure that the limits of U3 SO₂ Standards were not exceeded.

Emission Unit U3: Charge Mix and Furnace

U3 Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
2.05	Prevention of Significant Deterioration of Air Quality	1, 2
6.09	Standards of Performance for Existing Process Operations	1, 2, 3
7.08	Standards of Performance for New Process Operations	1, 2, 3
7.09	Standards of Performance for New Process Gas Streams	1, 2, 5
40 CFR 60 Subpart Z	Standards of Performance for Ferroalloy Production Facilities	§60.262(a)2, (a)3, (b) §60.263, §60.264(a), (b), §60.265(d)
40 CFR 63 Subpart YYYYYY	National Emission Standards for Hazardous Air Pollutants for Area Sources: Ferroalloys Production Facilities	§63.11526(a), (b), §63.11527(a)(3), §63.11528(c), §63.11527(a)(4), (a)(5), §63.11527(b)(1), (b)(2), §63.11528(b)(2), §63.11529(c)

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

U3 Equipment

Emission Point ¹⁰	Description	Applicable Regulations	Control ID	Release ID
E025	Lower feed belt	6.09	C1	S1
E026	Upper feed belt	6.09	C3	S3
E027	Vibratory conveyor	7.08	C3	S3
E028	9 Charge bins	7.08	C3	S3
E029	9 Charge chutes	7.08	C4	S4
E031	Electric arc furnace, combusting off gas and natural gas	2.05, 7.08, 7.09, 40 CFR 60 Subpart Z, 40 CFR 63 Subpart 6Y, STAR	C9	S9
E032	3 Furnace tap holes	7.08, 40 CFR 60 Subpart Z, 40 CFR 63 Subpart 6Y, STAR	C5	S5

U3 Control Devices

Control ID	Description	Control Efficiency
C1	F1 Baghouse - (R.L. Flowers) 12,000 ft ³ /min, $\Delta P = 4-8$ in. water, Rebuilt March 2013 [also controls emissions from U1 and U2]	98%
C3	F3 Baghouse - (Standard Havens, model Alpha Mark 1, Size 21) 20,000 ft ³ /min, $\Delta P = 1-5$ in. water, Rebuilt March 2013	98%
C4	F4 Baghouse - (Amerex, model RP-14.33-252- D6X4) 85,000 ft ³ /min, $\Delta P = 6-10$ in. water, Rebuilt March 2013	98%
C5	F5 Baghouse - (R.L. Flowers, model 168 #43RW-3) 85,000 ft ³ /min, $\Delta P = 6-10$ in. water, Rebuilt March 2013	98%
C9	Venturi scrubber/CO flare Scrubber: FMC Scrubber, model 07K 5,500 ft ³ /min, $\Delta P = 40-50$ in. water at 200 gal/min, Flare: National Airfoil, model#16 5,500 ft ³ /min	Scrubber 99% ¹¹ Flare 98.5% ¹¹

¹⁰ For Emission Point E030, electrode casing assembly, there are no air emissions from this activity.

¹¹ Per Golden Specialty December 2012 stack test.

U3 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. CO

- i. Net carbon monoxide emissions shall be limited to a consecutive 12-month total of 807 tons, in which net emissions during any single month shall not exceed 80 tons. This standard will be met if the consecutive 12-month total production of calcium carbide does not exceed 126,887 tons and any single month does not exceed 12,578 tons.^{12,13}
- ii. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate CO emissions from the electric arc furnace by combustion in a manner consistent with good air pollution control practice for minimizing emissions by: [Regulation 2.05 and Construction Permit 323752-11-C, effective 07/06/2011]
 - (1) A flare,
 - (2) Combustion chamber of the coke dryer, or
 - (3) Plant's utility boiler.
- iii. No person shall emit carbon monoxide gases from a process or waste gas stream unless they are burned at 1,300°F for 0.5 seconds or greater in a direct flame afterburner or equivalent device equipped with an indicating pyrometer that is positioned in the working area at the operator's eye level.¹⁴ [Regulation 7.09, section 5.1]
- iv. No owner or operator shall cause to be discharged in to the atmosphere from any electric submerged arc furnace any gases which contain, on a dry basis, 20 or greater volume percent of carbon monoxide. Combustion of

¹² This calcium carbide production limit is based on a CO emission factor of 848 lb_{CO}/ton_{carbide} and that all CO is combusted at either the coke dryer, flare, or utility boiler with a destruction efficiency of 98.5%. The maximum carbide production in the ten-year lookback period was 111,376 tons_{carbide}, resulting in production of 47,223 tons_{CO}, and emission of 708 tons_{CO} after controls. Allowing an increase of 99 tons over this level (to stay below the significant increase level), gives an allowable net controlled emission of 807 tons_{CO}, which is equivalent to 126,887 tons_{carbide}.

¹³ To avoid the applicability of Regulation 2.05 (PSD), a maximum sulfur content for the coke used in the process was established along with annual carbide production limits to ensure that SO₂ emissions would not increase above the established significant impact level of 40 tpy.

¹⁴ Flame chemistry ensures that the flame temperature will exceed the specified temperature. A flame detection device that will shut off the flow of gas to the flare if proof-of-flame is lost will be sufficient to meet the requirements of this paragraph.

such gases under conditions acceptable to the District constitutes compliance with this section. Acceptable conditions include, but are not limited to, flaring of gases or use of gases as fuel for other processes.

[40 CFR 60.263(a)]

b. Opacity

- i. The owner or operator shall not allow the opacity of any discharge from either belt conveyor E025 or E026 to equal or exceed 20%. [Regulation 6.09, section 3.1]
- ii. The owner or operator shall not allow the opacity of any discharge from the vibratory conveyor, E027, or the charge delivery system, E028 and E029, to equal or exceed 20%. [Regulation 7.08, section 3.1.1]

c. Opacity (NESHAP)

- i. The owner or operator shall not cause to be discharged into the atmosphere from any electric submerged arc furnace any gases which exit from the venturi scrubber or the CO flare (C9) and exhibit 15 percent opacity or greater. [40 CFR 60.262(a)(3)]
- ii. The owner or operator shall not cause to be discharged into the atmosphere from any dust-handling equipment any gases which exhibit 10 percent opacity or greater. [40 CFR 60.262(b)]
- iii. The owner or operator shall not discharge to the atmosphere visible emissions (VE) from the control device that exceed 5 percent of accumulated occurrences in a 60-minute observation period. [40 CFR 63.11526(a)]
- iv. The owner or operator shall not discharge to the atmosphere fugitive PM emissions from the furnace building containing the electrometallurgical operations that exhibit opacity greater than 20 percent (6-minute average), except for one 6-minute average per hour that does not exceed 60 percent. [40 CFR 63.11526(b)]

d. PM/PM₁₀/PM_{2.5}

- i. The owner or operator shall not exceed the following PSD avoidance limits:¹⁵ [Regulation 2.05 and Construction Permit 323752-11-C, effective 07/06/2011]

¹⁵ To avoid the applicability of Regulation 2.05 (PSD), Carbide has taken limits on significant levels for PM, PM₁₀, and PM_{2.5}. Operating the control devices (C5 and C9) at all times will ensure that these PSD limits are not exceeded.

- (1) 54.0 tons PM per rolling 12-month period and 3.4 tons PM in any one calendar month;
 - (2) 29.8 tons PM₁₀ per rolling 12-month period and 2.2 tons PM₁₀ in any one calendar month;
 - (3) 14.4 PM_{2.5} tons per rolling 12-month period and 0.7 tons PM_{2.5} in any one calendar month.
- ii. The owner or operator shall not allow the emission of particulate matter to exceed the following limits:¹⁶
- (1) Emission Points E025, E026: [Regulation 6.09, section 3.2]
 - (a) 2.58 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;
 - (b) $4.10 \times P^{0.67}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;
 - (c) $(55.0 \times P^{0.11}) - 40$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.
 - (2) Emission Points E027 – E030: [Regulation 7.08, section 3.1.2]
 - (a) 2.34 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;
 - (b) $3.59 \times P^{0.62}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;
 - (c) $17.31 \times P^{0.16}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.
- iii. For Emission Points E025, E026, E027, E028, and E029, the owner or operator shall operate and maintain baghouses C1, C3, and C4, at all times that the process equipment is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice for minimizing emissions.
- iv. The owner or operator shall not allow the emission of PM from the furnace, E031, to exceed 22.4 pounds per hour.
[Regulation 7.08, section 3.1.2]

¹⁶ A one-time PM compliance demonstration for Emission Points E025, E026, E027, E028, and E029 was performed and the hourly standard cannot be exceeded controlled. Therefore, controls must be operational at all times for Emission Points E025, E026, E027, E028, and E029.

- v. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate the Venturi scrubber, C9, in a manner consistent with good air pollution control practice for minimizing emissions. [Regulation 2.05 and 7.08, section 3.1.2]
- vi. The owner or operator shall not allow the emission of PM from the three furnace tap holes, E032, to exceed 22.4 pounds per hour.¹⁷ [Regulation 7.08, section 3.1.2]
- vii. At all time, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate the baghouse C5, in a manner consistent with good air pollution control practice for minimizing emissions. [Regulation 2.05 and 7.08]
- viii. The owner or operator shall not cause to be discharged into the atmosphere from any electric submerged arc furnace any gases which exit from the Venturi scrubber, C9, and contain PM in excess of 0.23 kg/MW-hr (0.51 lb/MW-hr) while calcium carbide is being produced: [40 CFR 60.262(a)(2)]

e. SO₂

- i. The monthly average sulfur content of the coke used in calcium carbide production shall not exceed 3.0%. [Regulation 2.05]
- ii. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate the Venturi scrubber, C9, in a manner consistent with good air pollution control practice for minimizing emissions. [Regulation 2.05]
- iii. The owner or operator shall not cause or allow an affected facility to release a process gas stream containing sulfur dioxide with a concentration greater than 28.63 grains per 100 dry standard cubic feet (dscf) at 0% excess oxygen. [Regulation 7.09, Section 4]

f. TAC

See Plantwide TAC Standards.

S2. Monitoring and Record Keeping

[Regulation 2.16, section 4.1.9.1 and 4.1.9.2]

¹⁷ A stack test was performed December 2012 and the maximum average PM emission rate was 0.475 lb/hr.

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. CO

- i. The owner or operator shall monitor and maintain daily records of the mass of the calcium carbide produced.
- ii. The owner or shall monitor and maintain daily CO emission calculations using an emission factor of 762 lb_{CO}/ton_{carbide}.¹⁸
- iii. The owner or operator shall monitor the flow of CO to the coke dryer, flare, and the plant utility boiler, and time-synchronized flame sensor signals at these units to verify the presence of a flame at any time there is CO gas flow to the unit.¹⁹
- iv. The owner or operator shall maintain daily records of any periods of time when the process was operating, and the control device was not operating or a declaration that the control device operated at all times that day when the process was operating. For each period when the control was not operating or was bypassed the record must include:
 - (1) Date;
 - (2) Start time and stop time;
 - (3) Identification of the control device and process equipment;
 - (4) CO emissions during the bypass. Monthly emissions and 12-month rolling total emissions must then be calculated to show compliance with the PSD limits for CO;
 - (5) Summary of the cause or reason for each bypass event;
 - (6) Corrective action taken to minimize the extent or duration of the bypass event; and
 - (7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

b. Opacity

- i. The owner or operator shall conduct a weekly one-minute visible emissions survey of Emission Points E025-E030, during normal operation and daylight hours. The visible emission surveys can be performed at the

¹⁸ This emission factor of 762 lb_{CO}/ton was approved by the District on September 29, 2015.

¹⁹ During periods of startup and other times when there is insufficient CO production to support self-sustained combustion, the presence of a separately-fueled standing pilot in the exhaust gas stream shall be assumed to be sufficient to meet the proof-of-flame requirement.

building exhaust points if the process is inside an enclosure.
[Regulation 7.08]

- ii. For emission points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to reduce the visible emission frequency to monthly.
- iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed an EPA Method 9 or Method 22 observation, as appropriate, determination of opacity within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07, and take all practicable steps to eliminate the exceedance. In addition, if the visible emission survey frequency had been reduced to monthly, weekly survey frequency must be resumed until the 12-week criterion is again met.
- iv. The owner or operator shall keep records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include:
 - (1) The date of the survey,
 - (2) The name of the person conducting the survey,
 - (3) Whether or not visible emissions were observed, and
 - (4) What, if any, corrective action was performed.

If an emission point is not being operated during a given survey period, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.
- v. A continuous opacity monitoring system must be installed, calibrated, maintained and operated at the discharge of each control device (baghouse C5 and the Venturi scrubber C9) associated with the electric arc furnace.
[40 CFR 60.264(a)]
- vi. When operating a bag leak detection system, if an alarm sounds, conduct visual monitoring of the fabric filter (C5) outlet stack(s) as required in §63.11527(a) within 1 hour. If the visual monitoring reveals the presence of any visible emissions, you must conduct a Method 22 test following the requirements of §63.11528(b)(1) within 24 hours of determining the presence of any visible emissions. [40 CFR 63.11527(a)(4)]
- vii. The owner or operator must prepare a monitoring plan for each bag leak-detection system. You must operate and maintain each bag leak detection

system according to the plan at all times. Each plan must address all of these items: [40 CFR 63.11527(a)(5)]

- (1) Installation of the bag leak detection system.
[40 CFR 63.11527(a)(5)(i)]
 - (2) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point and alarm delay time will be established. [40 CFR 63.11527(a)(5)(ii)]
 - (3) Operation of the bag leak detection system, including quality assurance procedures. [40 CFR 63.11527(a)(5)(iii)]
 - (4) Maintenance of the bag leak detection system, including a routine maintenance schedule and spare parts inventory list.
[40 CFR 63.11527(a)(5)(iv)]
 - (5) How the bag leak-detection system output will be recorded and stored. [40 CFR 63.11527(a)(5)(v)]
- viii. The owner or operator must conduct visual monitoring of the wet scrubber C9 outlet stack for any visible emissions. [40 CFR 63.11527(b)(1)]
- (1) Perform visual determination of fugitive emissions once per day, on each day the process is in operation, during operation of the process. [40 CFR 63.11527(b)(1)(i)]
 - (2) If no visible fugitive emissions are detected in consecutive daily visual monitoring performed for 90 days of operation of the process, you may decrease the frequency of visual monitoring to once per calendar week of the time the process is in operation, during operation of the process. If visible fugitive emissions are detected during these inspections, you must resume daily visual monitoring of that operation during each day that the process is in operation until you satisfy the criteria of this section to resume conducting weekly visual monitoring. [40 CFR 63.11527(b)(1)(ii)]
 - (3) If the visual monitoring reveals the presence of any visible emissions, you must conduct a Method 22 test within 24 hours of determining the presence of any visible emissions. [40 CFR 63.11527(b)(2)]
- ix. The owner or operator must conduct a semi-annual Method 22 test using the procedures in §63.11528(b)(1) to determine that the visible emissions from each control device do not exceed the HAP emission standard specified in §63.11526(a). For a wet scrubber, conduct the test for at least 60 minutes at the outlet stack(s). [40 CFR 63.11528(b)(2)]
- x. The owner or operator for furnace building opacity must conduct an opacity test for fugitive emissions from the furnace building according to the procedures in §63.6(h) and Method 9. The test must be conducted for at least 60 minutes and shall include tapping the furnace or reaction vessel.

The observation must be focused on the part of the building where electrometallurgical operation fugitive emissions are most likely to be observed. [40 CFR 63.11528(c)(1)]

- xi. The owner or operator shall conduct subsequent Method 9 tests no less frequently than every 6 months and each time you make a process change likely to increase fugitive emissions. [40 CFR 63.11528(c)(2)]
- xii. After the initial Method 9 performance test, as an alternative to the Method 9 performance test, you may monitor visible emissions using Method 22 for subsequent semi-annual compliance demonstrations. The Method 22 test is successful if no visible emissions are observed for 90 percent of the readings over the furnace cycle (tap to tap) or 60 minutes, whichever is longer. If visible emissions are observed greater than 10 percent of the time over the furnace cycle or 60 minutes, whichever is longer, then the facility must conduct another test as soon as possible, but no later than 15 calendar days after the Method 22 test using Method 9 as specified in §63.11528(c)(1). [40 CFR 63.11528(c)(3)]
- xiii. The owner or operator must keep the records specified in §63.11529(d)(1) through (d)(2). [40 CFR 63.11529(d)]
 - (1) As required in §63.10(b)(2)(xiv), you must keep a copy of each notification that you submitted to comply with this subpart and all documentation supporting any Initial Notification, Notification of Compliance Status, and annual compliance certifications that you submitted. [40 CFR 63.11529(d)(1)]
 - (2) You must keep the records of all daily or weekly visual, Method 22 (appendix A-7 of 40 CFR part 60), and Method 9 (appendix A-4 of 40 CFR part 60) monitoring data required by § 63.11527 and the information identified in §63.11529(d)(2)(i) through (d)(2)(v). [40 CFR 63.11529(d)(2)]
 - (a) The date, place, and time of the monitoring event; [40 CFR 63.11529(d)(2)(i)]
 - (b) Person conducting the monitoring; [40 CFR 63.11529(d)(2)(ii)]
 - (c) Technique or method used; [40 CFR 63.11529(d)(2)(iii)]
 - (d) Operating conditions during the activity; and [40 CFR 63.11529(d)(2)(iv)]
 - (e) Results, including the date, time, and duration of the period from the time the monitoring indicated a problem (e.g., VE) to the time that monitoring indicated proper operation. [40 CFR 63.11529(d)(2)(v)]

- xiv. Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1). [40 CFR 63.11529(e)]
- xv. As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each recorded action. [40 CFR 63.11529(f)]
- xvi. You must keep each record onsite for at least 2 years after the date of each recorded action according to §63.10(b)(1). You may keep the records offsite for the remaining 3 years. [40 CFR 63.11529(g)]

c. PM/PM₁₀/PM_{2.5}

- i. The owner or operator shall:
 - (1) Calculate the rate of PM emissions from the affected emission point(s);
 - (2) Record the following information:
 - (a) Date of the excess emissions;
 - (b) Start and stop time of the excess emissions;
 - (c) Affected process equipment;
 - (d) PM emissions during the excess throughput event, in pounds per hour;
 - (e) Cause of the excess emissions.
- ii. The owner or operator shall maintain daily records of any periods when a process was operating and an associated control device was not operating, or a declaration that the control device operated at all times that day when the process was operating. For each period which the control was not operating or was bypassed the record must include:
 - (1) Date;
 - (2) Start time and stop time;
 - (3) Identification of the control device and process equipment;
 - (4) PM, PM₁₀, and PM_{2.5} emissions during the bypass. Monthly emissions and 12-month rolling total emissions must then be calculated to show compliance with the PSD limits for particulates specified in U3 PM Standards.
 - (a) For Emission Points E025-E029, the uncontrolled PM emission factor is 0.22 lb_{PM}/ton_{carbide}.²⁰

²⁰ The value specified here is from AP-42, table 11.4-2; SCC 3-05-004-06.

- (b) For the furnace, E031, the uncontrolled PM emission factor is 26 lb_{PM}/ton_{carbide}.²¹
 - (c) For the tapping operation, E032, the uncontrolled PM emission factor is 0.14 lb_{PM}/ton_{carbide}.²²
 - (d) In all cases, the emission factor for PM₁₀ is 51% of the given PM value. For PM_{2.5}, the emission factor is 15% of the given PM value.²³
 - (e) Alternate emission factors and particle size distributions may be approved by APCD.
- (5) Summary of the cause or reason for each bypass event;
 - (6) Corrective action taken to minimize the extent or duration of the bypass event; and
 - (7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.
- iii. The owner or operator shall install, calibrate, maintain, and operate a device to measure and continuously record the furnace power input. The furnace power input may be measured at the output or input side of the transformer. The device must have ± 5 percent accuracy over its operating range.
[40 CFR 60.265(b)]
- iv. The owner or operator shall determine the volumetric flow rate through each fan of the capture system from the fan power consumption, pressure drop across the fan and the fan performance curve. Only data specific to the operation of the affected electric submerged arc furnace are acceptable for demonstration of compliance with the requirements of this paragraph. The owner or operator shall maintain on file a permanent record of the fan performance curve (prepared for a specific temperature) and shall:²⁴
[40 CFR 60.265(e)]
- (1) Install, calibrate, maintain, and operate a device to continuously measure and record the power consumption of the fan motor (measured in kilowatts), and [40 CFR 60.265(e)(1)]
 - (2) Install, calibrate, maintain, and operate a device to continuously measure and record the pressure drop across the fan. The fan power consumption and pressure drop measurements must be

²¹ The value specified here is from AP-42, table 11.4-2; SCC 3-05-004-01.

²² The value specified here is from AP-42, table 11.4-2; SCC 3-05-004-04.

²³ These particle-size distributions are from AP-42, Appendix B2, category 3, and have been used for emission inventory calculations since 2006, or earlier.

²⁴ Carbide is using 40 CFR 60.265(e) as an alternative to 40 CFR 60.265(c) as the regulation allows.

synchronized to allow real time comparisons of the data. The monitoring devices must have an accuracy of ± 5 percent over their normal operating ranges. [40 CFR 60.265(e)(2)]

- v. The owner or operator must install, operate, and maintain a bag leak detection system on fabric filter (C5). [40 CFR 63.11527(a)(3)]
 - (1) The system must be certified by the manufacturer to be capable of detecting emissions of PM at concentrations of 10 milligrams per actual cubic meter (0.00044 grains per actual cubic foot) or less. [40 CFR 63.11527(a)(3)(i)]
 - (2) The bag leak detection-system sensor must provide output of relative PM loadings and the owner or operator shall continuously record the output from the bag leak detection system using a strip chart recorder, data logger, or other means. [40 CFR 63.11527(a)(3)(ii)]
 - (3) The system must be equipped with an alarm that will sound when an increase in relative PM loadings is detected over the alarm set point established in the operation and maintenance plan, and the alarm must be located such that it can be heard, seen, or otherwise detected by the appropriate plant personnel. [40 CFR 63.11527(a)(3)(iii)]
 - (4) The initial adjustment of the system must, at minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points, at a minimum. If the system is equipped with an alarm delay time feature, you also must establish a maximum reasonable alarm delay time. [40 CFR 63.11527(a)(3)(iv)]
 - (5) Following the initial adjustment, do not adjust the sensitivity or range, averaging period, alarm set point, or alarm delay time, except that, once per quarter, you may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity. [40 CFR 63.11527(a)(3)(v)]
- vi. For fabric filters that are discharged to the atmosphere through a stack, the bag leak detector sensor must be installed downstream of the fabric filter and upstream of any wet scrubber.
- vii. The volumetric flow rate through each fan of the capture system must be determined from the fan power consumption, fan pressure drop, and fan performance curve specified under §60.265(e), during any performance test required under §60.8 to demonstrate compliance with the standards under §§60.262(a)(4) and (5). The owner or operator shall determine the volumetric flow rate at a representative temperature for furnace power input levels of 50 and 100 percent of the nominal rated capacity of the electric submerged arc furnace. At all times the electric

submerged arc furnace is operated, the owner or operator shall maintain the fan power consumption and fan pressure drop at levels such that the volumetric flow rate is at or above the levels established during the most recent performance test for that furnace power input level. If emissions due to tapping are captured and ducted separately from emissions of the electric submerged arc furnace, during each tapping period the owner or operator shall maintain the fan power consumption and fan pressure drop at levels such that the volumetric flow rate is at or above the levels established during the most recent performance test. Operation at lower flow rates may be considered by the District to be unacceptable operation and maintenance of the affected facility. The owner or operator may request that these flow rates be reestablished by conducting new performance tests under §60.8. The District may require the owner or operator to verify the fan performance curve by monitoring necessary fan operating parameters and determining the gas volume moved relative to Methods 1 and 2 of appendix A to 40 CFR 60.²⁵ [40 CFR 60.265(f)]

d. SO₂

- i. The owner or operator shall maintain daily records of the sulfur content of the coke used in production of calcium carbide. These daily records shall be combined to provide a monthly average. This monthly average sulfur content and the monthly carbide production records will serve as a surrogate measurement for actual SO₂ emissions.²⁶

- (1) The owner or operator shall calculate the maximum sulfur content of the coke using the following formula:²⁷

$$S = \left[\left(\frac{39}{P-BL} \right) \left(\frac{1}{1-C} \right) + 0.0116 \right] \times \frac{1}{1.12}$$

Where: P = PSD production limit of 126,887 tons of carbide,
 BL = Baseline year production of 111,376 tons, and
 C = Scrubber control efficiency of 99%, as determined in the December 2012 stack test (conducted by Golden Specialty), or a different value approved by the Air Pollution Control District.

- ii. The owner or operator shall maintain daily records of the airflow through the scrubber and temperature of the exhaust gas, to ensure compliance

²⁵ The dry volumetric flow rate of 51,062 scfm was determined in the December 2012 stack test.

²⁶ The SO₂ emission factor for calcium carbide production is dependent on the sulfur content of the coke used in production.

²⁷ This methodology was provided in the PTE analysis performed for Construction Permit 32752-11-C. (See comment 3 of that permit.)

with SO₂ Standards. These daily readings must be conducted after the furnace has stabilized at its nominal production rate for the day.²⁸

- iii. The owner or operator shall maintain daily records of any periods of time when the process was operating, and the control device was not operating or a declaration that the control device operated at all times that day when the process was operating. For each period when the control was not operating or was bypassed the record must include:
 - (1) Date;
 - (2) Start time and stop time;
 - (3) Identification of the control device and process equipment;
 - (4) SO₂ emissions during the event in grains/dscf. Monthly emissions and 12-month rolling total emissions;
 - (5) Summary of the cause or reason for each bypass event;
 - (6) Corrective action taken to minimize the extent or duration of the event; and
 - (7) Measures implemented to prevent reoccurrence of the situation that resulted in the event.

e. TAC

See Plantwide TAC Monitoring and Record Keeping.

f. Unit Operations

- i. The owner or operator of any electric submerged arc furnace shall maintain daily records of the following information: [40 CFR 60.265(a)]
 - (1) Product being produced; [40 CFR 60.265(a)(1)]
 - (2) Description of constituents of the furnace charge, including the quantity, by weight; [40 CFR 60.265(a)(2)]
 - (3) Time and duration of each tapping period and identification of the material tapped; [40 CFR 60.265(a)(3)]

²⁸ Airflow, moisture content of the exhaust stream, and oxygen content of the exhaust stream are required to determine the airflow corrected to "dry standard cubic feet corrected to 0% oxygen." Moisture content of 5.30% and oxygen content of 2.30%, both based on the December 2012 stack test (Golden Specialty Report MW12CI100, dated March 27, 2013), will be used for compliance calculations unless another value is approved by the Air Pollution Control District.

S3. Reporting

[Regulation 2.16, Section 4.1.1]

The owner or operator shall report the following information, as required by General Condition 14:

a. CO

- i. Emission Unit and Emission Point Identification;
- ii. Twelve consecutive month emissions for each month in the reporting period.
- iii. A statement as to whether any equipment bypasses occurred including the following bypass information or a negative declaration if there were no bypasses:
 - (1) Number of times the furnace exhaust stream by-passed the control device (either flare, coke dryer, or utility boiler) and is vented to the atmosphere;
 - (2) Duration of each by-pass to the atmosphere;
 - (3) A calculation of monthly and 12-month rolling CO emissions, accepted control factors (as defined in U3 CO Standards), calcium carbide production, and any control device bypass periods.

b. Opacity

- i. Emission Unit and Emission Point Identification;
- ii. The date, time, and results for each visible emission survey during which visible emissions were detected, or a negative declaration if no visible emission were observed;
- iii. The date, time, and results of each Method 9 or Method 22 observation conducted, or a negative declaration if no or observations were required;
- iv. Description of any corrective action taken pursuant to U3 Opacity Monitoring and Record Keeping.
- v. For baghouses equipped with a continuous opacity monitoring system, the owner or operator shall report as excess emissions all six-minute periods in which the average opacity is 15 percent or greater.
[40 CFR 60.264(b)]
 - (1) The magnitude of the excess emissions, as determined by the

- COMS²⁹, the date and time of the beginning and end of the period of excess emissions;
- (2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility, including the nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted;
 - (3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments;
 - (4) A negative declaration if there were no periods of excess emissions.
- vi. The owner or operator shall provide the following information in an annual compliance monitoring report according to the following:
[40 CFR 63.11529(c)]
- (1) Emission Unit and Emission Point Identification;
 - (2) The results of any visual monitoring events required by §63.11527 (b)(1), alarm-based visual monitoring at sources equipped with bag leak detection systems as required by §63.11527(a)(4), or readings outside of the operating range at sources using CPMS on wet scrubbers required by §63.11527(b)(4); [40 CFR 63.11529(c)(1)]
 - (3) The results of the follow up Method 22 (appendix A-7 of 40 CFR part 60) tests that are required if VE are observed during the daily or weekly visual monitoring, alarm-based visual monitoring, or out-of-range operating readings as described in §63.11529(c)(1). [40 CFR 63.11529(c)(2)]
 - (4) The date, time, and results of the Method 22 or Method 9 observations required by the semi-annual compliance observations of the control device (baghouse C5) and furnace fugitive emissions, as specified in U3 Opacity Monitoring and Record Keeping; [40 CFR 63.11529(c)(3)]
 - (5) If you operate a bag leak detection system for a fabric filter or a CPMS for a wet scrubber, submit annual reports according to the requirements in §63.10(e) and include summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other calibration checks, if applicable). [40 CFR 63.11529(c)(4)]

²⁹ Continuous Opacity Monitoring Systems

c. PM/PM₁₀/PM_{2.5}

- i. Emission Unit and Emission Point Identification;
- ii. Monthly total production of calcium carbide, in tons;
- iii. Monthly average electrical power consumption;
- iv. Identification of all periods of exceedance of the hourly PM emissions rate standards established in U3 PM Standards, including calculation of the emission rate and the quantity of excess emissions during such periods, or a negative declaration if there were no such periods;
- v. Identification of all periods during which a PM control device was bypassed during operation of the associated process equipment, including the date, time, and duration of each such bypass event and the calculated emission rate and quantity of emissions during such periods, or a negative declaration if there were no such periods;
- vi. A calculation of monthly and 12-month rolling PM, PM₁₀, and PM_{2.5} emissions, based on accepted emission factors, control factors (which must be stated in the report), calcium carbide production, and any control device bypass periods.
- vii. Description of any corrective action taken to correct abnormal operating conditions, or a negative declaration if no corrective action was taken.

d. SO₂

- i. Emission Unit and Emission Point Identification;
- ii. Monthly average sulfur content of the coke used for carbide production;
- iii. Monthly average air flow volume and temperature of the exhaust exiting the scrubber stack;
- iv. Description of any periods during which sulfur content standard was exceeded, what was done to correct the exceedance, and the duration of the exceedance, and what actions were taken to assure that the limits of U3 SO₂ Standards were not exceeded.
- v. A negative declaration if no control equipment bypasses occurred or the following bypass information:
 - (1) Number of times the furnace exhaust stream by-passed the control device (either flare, coke dryer, or utility boiler) and is vented to the atmosphere;
 - (2) Duration of each by-pass to the atmosphere;

- vi. A statement as to whether the any of the instantaneous, monthly, or 12-month limits in paragraph U3 SO₂ Standards were exceeded or a negative declaration if there were no exceedances.

e. TAC

See Plantwide TAC Reporting.

f. Unit Operations

The owner or operator subject to the provisions of this subpart shall submit a written report of any product change to the District. Reports of product changes must be postmarked no later than 30 days after implementation of the product change. [40 CFR 60.264(c)]

Emission Unit U4: Primary Crushing

U4 Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
6.09	Standards of Performance for Existing Process Operations	1, 2, 3
6.43	Volatile Organic Compound Emission Reduction Requirements	9

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

U4 Equipment

Emission Point	Description	Applicable Regulations	Control ID	Release ID
E033	Chill molds/grillage	6.43, STAR	NA	Fug U4
E034 E035	Crusher box #1 Crusher box #2	6.09, 6.43, STAR	C6	S6
E036 E037	Primary crusher #1 Primary crusher #2	6.09, 6.43, STAR	C6	S6
E038 E039	North conveyor (Unit #1a) South conveyor (Unit #1b)	6.09, 6.43, STAR	C6	S6
E040	Unit #2 Conveyor	6.09, 6.43, STAR	C6	S6
E041 E042	North crusher (Unit #3a) South crusher (Unit #3b)	6.09, 6.43, STAR	C6	S6

Emission Point	Description	Applicable Regulations	Control ID	Release ID
E043 E044	North bucket elevator (Unit #4a) South bucket elevator (Unit #4b)	6.09, 6.43, STAR	C6	S6
E045 E046	North screen (Unit #5a) South screen (Unit #5b)	6.09, 6.43, STAR	C6	S6
E047 E048	North bucket elevator (Unit #9a) South bucket elevator (Unit #9b)	6.09, 6.43, STAR	C6	S6
E049	Louisville bin	6.09, 6.43, STAR	BV3	BV03
E050	Receiving bin from C6	6.43, STAR	BV4	BV04
E051	Receiving bin from cyclone	6.43, STAR		

U4 Control Devices

Control ID	Description	Control Efficiency
C6	F6 Baghouse - (Standard Havens, model Alpha/ Mark 1, Size 39) 37,500 ft ³ /min, ΔP=1-6 in. H ₂ O	95%
BV3	Bin vent (Louisville bin)	95%
BV4	Bin vent (Dense phase receiver)	95%

U4 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. Opacity

The owner or operator shall not cause or allow any discharge from any opening in the building housing the named process equipment, or any control device associated with this equipment to equal or exceed 20% opacity.

[Regulation 6.09, section 3.1]

b. PM

i. The owner or operator shall not allow the emission of particulate matter from this emission unit to exceed the following limits:³⁰

[Regulation 6.09, section 3.2]

- (1) 2.58 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;
- (2) $4.10 \times P^{0.67}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;
- (3) $(55.0 \times P^{0.11}) - 40$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.

ii. For Emission Points E034, E035, E036, E037, E038, E039, E040, E041, E042, E043, E044, E045, E046, E047, and E048, the owner or operator shall operate and maintain the associated control devices at all times that the process equipment is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice for minimizing emissions.

c. TAC

See Plantwide TAC Standards.

d. VOC

See Plantwide VOC Requirements.

³⁰ A one-time PM compliance demonstration for Emission Points E034, E035, E036, E037, E038, E039, E040, E041, E042, E043, E044, E045, E046, E047, and E048 was performed and the hourly standard cannot be exceeded controlled. Therefore, controls must be operational at all times for Emission Points E034, E035, E036, E037, E038, E039, E040, E041, E042, E043, E044, E045, E046, E047, and E048.

S2. Monitoring and Record Keeping

[Regulation 2.16, Section 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. Opacity

- i. The owner or operator shall conduct a weekly one-minute visible emissions survey of all emission points during normal operation and daylight hours. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.
- ii. For emission points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to reduce the visible emission frequency to monthly.
- iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 or Method 22 observation, as appropriate, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07, and take all practicable steps to eliminate the exceedance. In addition, if the visible emission survey frequency had been reduced to monthly, weekly survey frequency must be resumed until the 12-week criterion is again met.
- iv. The owner or operator shall keep records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include:
 - (1) The date of the survey,
 - (2) The name of the person conducting the survey,
 - (3) Whether or not visible emissions were observed, and
 - (4) What, if any, corrective action was performed.
- v. If an emission point is not being operated during a given survey period, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

b. PM

- i. The owner or operator shall maintain records of the monthly throughput of calcium carbide at each emission point.³¹
- ii. The owner or operator shall:
 - (1) Calculate the rate of PM emission from the affected emission point(s) using an emission factor of 0.11 lb_{PM}/ton_{carbide}³² for controlled sources and 2.2 lb_{PM}/ton_{carbide} for uncontrolled sources³³ unless a different emission factor has been approved by APCD.
 - (2) Record the following information:
 - (a) Date of the excess emission;
 - (b) Start and stop time of the excess emission;
 - (c) Affected process equipment;
 - (d) PM emissions during the excess throughput event, in pounds per hour;
 - (e) Cause of the excess emission.
- iii. The owner or operator shall maintain records of any periods when a process was operating and an associated control device was not operating, or a declaration that the control device operated at all times that day when the process was operating. For each period which the control was not operating or was bypassed the record must include:
 - (1) Date;
 - (2) Start time and stop time;
 - (3) Identification of the control device and process equipment;
 - (4) PM emissions during the event, in lb/hr;
 - (5) Summary of the cause or reason for each event;
 - (6) Corrective action taken to minimize the extent or duration of the event; and
 - (7) Measures implemented to prevent reoccurrence of the situation that resulted in the event.

³¹ The throughput at units operating as a pair (e.g. E034 and E035) may be combined and reported as a single throughput value.

³² The value specified here is from AP-42 table 11.4-2, SCC 3-05-004-05.

³³ This value is based on the controlled emission factor and a control efficiency of 95%.

- iv. For Baghouse C6, the owner or operator shall monitor and record the pressure drop at least once during each operating day to ensure it is maintained at ≥ 1 and ≤ 6 in. water column.
- v. For any period of operating outside the established pressure drop range for Baghouse C6, the owner or operator shall maintain the following records:
 - (1) The date,
 - (2) The observed pressure drop, and
 - (3) Corrective action taken to minimize the extent of the excursion, and measures implemented to prevent reoccurrence.
- vi. The owner or operator shall perform the following inspections:
 - (1) Daily, verify that the fans associated with the equipment are operating;
 - (2) Monthly:
 - (a) Verify that dampers are working properly;
 - (b) Verify the bag cleaning mechanisms are working properly;
 - (c) Verify baghouse bags are clean and not filled with dust;
 - (d) Inspect the bags for excessive wear or damage, and replace if necessary;
 - (e) Inspect exhaust stacks for signs of dust accumulation; and
 - (f) Inspect the mechanical integrity of the baghouses for excessive wear or damage.

c. TAC

See Plantwide TAC Monitoring and Record Keeping.

d. VOC

- i. See Plantwide VOC Monitoring and Record Keeping.
- ii. The owner or operator shall record daily:
 - (1) The weight of calcium carbide processed through Emission Unit U4;
 - (2) The time, date, and weight of calcium carbide captured by and emptied from each air pollution control device;
 - (3) The VOC emissions from this emission unit. For the purposes of this calculation, emissions from material collected from control devices shall be assigned to the day that the material is collected, if collection occurs less frequently than daily. Uncontrolled VOC

emissions shall be calculated using an emission factor of 4.8 lb_{VOC}/ton_{carbide}³⁴ unless a different emission factor has been approved by APCD.

S3. Reporting

[Regulation 2.16, section 4.1.1]

The owner or operator shall report the following information, as required by General Condition 14:

a. Opacity

- i. Emission Unit and Emission Point Identification;
- ii. The date, time, and results for each visible emission survey during which visible emissions were detected, or a negative declaration if no visible emission were observed;
- iii. The date, time, and results of each Method 9 or Method 22 observation required to be conducted as a result of visual emission monitoring required by U4 Opacity Monitoring and Record Keeping, or a negative declaration if no observations were required;
- iv. Description of any corrective action taken pursuant to U4 Opacity Monitoring and Record Keeping.

b. PM

- i. Emission Unit and Emission Point Identification;
- ii. Monthly total throughput of calcium carbide, in tons;
- iii. Monthly total hours of operation;
- iv. Identification of all periods of exceedance of the hourly PM emissions rate standards established in U4 PM Standards, including calculation of the emission rate and the quantity of excess emissions during such periods, or a negative declaration if there were no such periods;
- v. Identification of all periods during which a PM control device was bypassed during operation of the associated process equipment, including the date, time, and duration of each such bypass event and the calculated emission rate and quantity of emissions during such periods, or a negative declaration if there were no such periods.

³⁴ The emission factor of 4.8 lb/ton is the value used in the permittee's potential to emit (PTE) calculation submitted as part of the permit renewal application.

c. TAC

See Plantwide TAC Reporting.

d. VOC

See Plantwide VOC Reporting.

Emission Unit U5: Pack and Screen**U5 Applicable Regulations**

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
1.14	Control of Fugitive Particulate Emissions	1, 2, 8
6.09	Standards of Performance for Existing Process Operations	1, 2, 8
6.43	Volatile Organic Compound Emission Reduction Requirements	9

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

U5 Equipment

Emission Point	Description	Applicable Regulations	Control ID	Release ID
E052	Apron conveyor #13	6.09, 6.43, STAR	C7	S7
E053	Unit #14 bucket elevator	6.09, 6.43, STAR	C7	S7
E054	Unit #14A bucket elevator	6.09, 6.43, STAR	C7	S7
E055	Cooling Bin	6.09, 6.43, STAR	BV5	BV05
E056	Louisville Belt Conveyor	6.09, 6.43, STAR	C7	S7
E057	Cooling Bin Oil Screw Conveyor	1.14, 6.09, 6.43, STAR	NA	Fug U5
E058	Unit #12 bucket elevator	6.09, 6.43, STAR	C7	S7

Emission Point	Description	Applicable Regulations	Control ID	Release ID
E059	Unit #16 screen (2x1/ Nut Screen)	6.09, 6.43, STAR	C7	S7
E060	18A Magnetic Belt Conveyor	6.09, 6.43, STAR	C7	S7
E061	18B Magnetic Belt Conveyor FEP	6.09, 6.43, STAR	C7	S7
E062	Conveyor 18C	6.09, 6.43, STAR	C7	S7
E063	Conveyor 40A	1.14, 6.09, 6.43, STAR	NA	Fug U5
E064	Conveyor 40B	1.14, 6.09, 6.43, STAR	NA	Fug U5
E065	Unit 22 bucket elevator	6.09, 6.43, STAR	C7	S7
E066	#20 Magnetic Belt Conveyor	6.09, 6.43, STAR	C7	S7
E067	Unit #21 crusher	1.14, 6.09, 6.43, STAR	NA	Fug U5
E068	Unit #23 screen (Miner's screen)	6.09, 6.43, STAR	C7	S7
E069	#25A Magnetic Belt Conveyor	6.09, 6.43, STAR	C7	S7
E070	#25B Magnetic Belt Conveyor	6.09, 6.43, STAR	C7	S7
E071	Unit #29 – 9” Screw Conveyor	1.14, 6.09, 6.43, STAR	NA	Fug U5
E072	Unit #29A – 9” Screw Conveyor	1.14, 6.09, 6.43, STAR	NA	Fug U5
E073	Miner's Screw	1.14, 6.09, 6.43, STAR	NA	Fug U5
E074	Quarter Oil Screw Conveyor	1.14, 6.09, 6.43, STAR	NA	Fug U5
E075	Unit #27 crusher (Quartermaker)	6.09, 6.43, STAR	C7	S7
E076	Transfer screw	6.09, 6.43, STAR	C7	S7
E077	Unit #34 conveyor	6.09, 6.43, STAR	C7	S7
E078	Unit #31 Bucket Elevator	6.09, 6.43, STAR	C7	S7
E079	Unit #32 Screw Conveyor	1.14, 6.09, 6.43, STAR	NA	Fug U5
E080	Unit #33 screen (Rice screen)	6.09, 6.43, STAR	C7	S7
E081	Cooling bin load-out	1.14, 6.09, 6.43, STAR	NA	Fug U5
E083	Quarter bag bin bucket elevator	6.09, 6.43, STAR	C7	S7
E084	Unit #37 Screw Conveyor	1.14, 6.09, 6.43, STAR	NA	Fug U5
E085	14ND Oil Screw	1.14, 6.09, 6.43, STAR	NA	Fug U5
E088	Unit #34A Belt conveyor	6.09, 6.43, STAR	C7	S7

Emission Point	Description	Applicable Regulations	Control ID	Release ID
E089	Unit #40C Conveyor	1.14, 6.09, 6.43, STAR	NA	Fug U5
E090	Unit #35 Bucket elevator	6.09, 6.43, STAR	C7	S7
E091	Unit #36 Bucket elevator	6.09, 6.43, STAR	C7	S7
E092	Nut screw	1.14, 6.09, 6.43, STAR	NA	Fug U5
E093	Nut vibrator, South bulk load	6.09, 6.43, STAR	C7	S7
E094	Nut vibrator, Track 2 bulk load	6.09, 6.43, STAR	C7	S7
E095	Quarter vibrator, south bulk load	6.09, 6.43, STAR	C7	S7
E096	Quarter vibrator, Track 2 bulk load	6.09, 6.43, STAR	C7	S7
E098	Universal bin	6.09, 6.43, STAR	BV6	BV06
E099	Universal Bin Vibratory feeder	1.14, 6.09, 6.43, STAR	NA	Fug U5
E100	Universal Bin Container Pack	6.09, 6.43, STAR	C7	S7
E101	Universal Bin Drum Pack	1.14, 6.09, 6.43, STAR	NA	Fug U5
E103	2x1 Tramp Iron bin	1.14, 6.09, 6.43, STAR	NA	Fug U5
E104	2x1 Tramp Iron load-out	1.14, 6.09, 6.43, STAR	NA	Fug U5
E105	Nut Tramp Iron bin	1.14, 6.09, 6.43, STAR	NA	Fug U5
E106	Nut Tramp Iron load-out	1.14, 6.09, 6.43, STAR	NA	Fug U5
E107	2x1 Surge hopper	6.09, 6.43, STAR	BV7	BV07
E108	OT Nut surge hopper	6.09, 6.43, STAR	BV7	BV07
E110	Miner's Screw load-out	1.14, 6.09, 6.43, STAR	NA	Fug U5
E111	Quarter Tramp Iron bin	1.14, 6.09, 6.43, STAR	NA	Fug U5
E112	Quarter Tramp Iron load-out	1.14, 6.09, 6.43, STAR	NA	Fug U5
E114	Miners Container Pack load-out	1.14, 6.09, 6.43, STAR	NA	Fug U5
E117	Rice Bin (2.5 ton)	6.09, 6.43, STAR	BV8	BV08
E118	Rice Bin load-out	1.14, 6.09, 6.43, STAR	NA	Fug U5
E119	16x80 Bin (2.5 ton)	6.09, 6.43, STAR	BV9	BV09
E120	16x80 Bin load-out	1.14, 6.09, 6.43, STAR	NA	Fug U5
E121	14ND Bin (5.5 ton)	6.09, 6.43, STAR	BV10	BV10

Emission Point	Description	Applicable Regulations	Control ID	Release ID
E122	14ND Bin load-out	1.14, 6.09, 6.43, STAR	NA	Fug U5
E123	Unit #38 Bag Bin (25 tons)	6.09, 6.43, STAR	BV11	BV11
E124	Bag Bin Container pack	1.14, 6.09, 6.43, STAR	NA	Fug U5
E125	Bag Bin Drum pack	6.09, 6.43, STAR	C7	S7
E126	40C hopper (6 tons)	1.14, 6.09, 6.43, STAR	NA	Fug U5
E127	40C load-out	1.14, 6.09, 6.43, STAR	NA	Fug U5
E128	Unit #45 - Nut bin (100 ton)	6.09, 6.43, STAR	BV13	BV13
E129	Unit #49 Quarter bin (100 ton)	6.09, 6.43, STAR	BV14	BV14
E130	Unit #48 South bulk load weigh bin	6.09, 6.43, STAR	C7	S7
E131	South bulk load chute	1.14, 6.09, 6.43, STAR	NA	Fug U5
E132	Unit #52 Track #2 weigh bin	6.09, 6.43, STAR	C7	S7
E133	Track #2 load chute	1.14, 6.09, 6.43, STAR	NA	Fug U5

U5 Control Devices

Control ID	Description	Control Efficiency
C7	F7 Baghouse - (R.L. Flowers) (model H-E-12-43-8142) 30,000 ft ³ /min, $\Delta P=2-5$ inH ₂ O	95%
BV5	Bin vent (Cooling bin)	95%
BV6	Bin vent (Universal bin)	95%
BV7	Bin vent (2x1 Surge hopper and OT Nut Surge hopper)	95%
BV8	Bin vent (Rice bin)	95%
BV9	Bin vent (16x80 bin)	95%
BV10	Bin vent (14ND bin)	95%
BV11	Bin vent (Bag bin)	95%
BV12	Bin vent (Nut bin)	95%
BV13	Bin vent (Quarter bin)	95%

U5 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. Opacity

The owner or operator shall not cause or allow any discharge from any opening in the building housing the named process equipment, or any control device associated with this equipment to equal or exceed 20% opacity.

[Regulation 6.09, section 3.1]

b. PM

i. The owner or operator shall take reasonable precautions to prevent the discharge of visible fugitive emissions beyond the lot line of the property on which the emissions originate. [Regulation 1.14, section 2.4]

ii. The owner or operator shall not allow the emission of particulate matter from this emission unit to exceed the following limits:³⁵

[Regulation 6.09, section 3.2]

(1) 2.58 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;

(2) $4.10 \times P^{0.67}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;

(3) $(55.0 \times P^{0.11}) - 40$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.

iii. For Emission Points E052, E053, E054, E056, E058, E059, E060, E061, E062, E065, E066, E068, E069, E070, E075, E076, E077, E078, E080, E083, E088, E090, E091, E093, E094, E095, E096, E100, E125, E130, and E132, the owner or operator shall operate and maintain the associated control devices at all times that the process equipment is in operation,

³⁵ A one-time PM compliance demonstration for Emission Points E052, E053, E054, E056, E058, E059, E060, E061, E062, E065, E066, E068, E069, E070, E075, E076, E077, E078, E080, E083, E088, E090, E091, E093, E094, E095, E096, E100, E125, E130, and E132 was performed and the hourly standard cannot be exceeded controlled. Therefore, controls must be operational at all times for Emission Points E052, E053, E054, E056, E058, E059, E060, E061, E062, E065, E066, E068, E069, E070, E075, E076, E077, E078, E080, E083, E088, E090, E091, E093, E094, E095, E096, E100, E125, E130, and E132.

including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards.

c. TAC

See Plantwide TAC Standards.

d. VOC

See Plantwide VOC Standards.

S2. Monitoring and Record Keeping

[Regulation 2.16, section 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. Opacity

- i. The owner or operator shall conduct a weekly one-minute visible emissions survey of all emission points during normal operation and daylight hours. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.
- ii. For emission points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to reduce the visible emission frequency to monthly.
- iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 or Method 22 observation, as appropriate, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07, and take all practicable steps to eliminate the exceedance. In addition, if the visible emission survey frequency had been reduced to monthly, weekly survey frequency must be resumed until the 12-week criterion is again met.
- iv. The owner or operator shall keep records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include:
 - (1) The date of the survey,
 - (2) The name of the person conducting the survey,
 - (3) Whether or not visible emissions were observed, and

- (4) What, if any, corrective action was performed.
- v. If an emission point is not being operated during a given survey period, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

b. PM

- i. The owner or operator shall maintain records of the monthly throughput of calcium carbide at each emission point.
- ii. The owner or operator shall:
 - (1) Calculate the rate of PM emission from the affected emission point(s) using an emission factor of 0.11 lb_{PM}/ton_{carbide},³⁶ for controlled sources and 2.2 lb_{PM}/ton_{carbide} for uncontrolled sources³⁷ unless a different emission factor has been approved by APCD.
 - (2) Record the following information:
 - (a) Date of the excess emission;
 - (b) Start and stop time of the excess emission;
 - (c) Affected process equipment;
 - (d) PM emissions during the excess throughput event, in pounds per hour;
 - (e) Cause of the excess emission.
- iii. The owner or operator shall maintain records of any periods when a process was operating and an associated control device was not operating, or a declaration that the control device operated at all times that day when the process was operating. For each period which the control was not operating or was bypassed the record must include:
 - (1) Date;
 - (2) Start time and stop time;
 - (3) Identification of the control device and process equipment;
 - (4) PM emissions during the bypass, in lb/hr;
 - (5) Summary of the cause or reason for each bypass event;
 - (6) Corrective action taken to minimize the extent or duration of the bypass event; and

³⁶ The value specified here is from AP-42 table 11.4-2, SCC 3-05-004-05.

³⁷ This value is based on the controlled emission factor and a control efficiency of 95%.

- (7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.
- iv. The owner or operator shall perform the following inspections:
 - (1) Daily:

Verify that the fans associated with the equipment are operating;
 - (2) Monthly:
 - (a) Verify that dampers are working properly;
 - (b) Verify the bag cleaning mechanisms are working properly;
 - (c) Verify baghouse bags are clean and not filled with dust;
 - (d) Inspect the bags for excessive wear or damage, and replace if necessary;
 - (e) Inspect exhaust stacks for signs of dust accumulation; and
 - (f) Inspect the mechanical integrity of the baghouses for excessive wear or damage.
 - v. For Baghouse C7, the owner or operator shall monitor and record the pressure drop at least once during each operating day to ensure it is maintained at ≥ 2 and ≤ 5 in. water column.
 - vi. For any period of operating outside the established pressure drop range for Baghouse C7, the owner or operator shall maintain the following records:
 - (1) The date,
 - (2) The observed pressure drop, and
 - (3) Corrective action taken to minimize the extent of the excursion, and measures implemented to prevent reoccurrence.

c. TAC

See Plantwide TAC Monitoring and Record Keeping.

d. VOC

- i. See Plantwide VOC Monitoring and Record Keeping.
- ii. The owner or operator shall record daily:
 - (1) The weight of calcium carbide processed through Emission Unit U5;
 - (2) The time, date, and weight of calcium carbide captured by and emptied from each air pollution control device;

- (3) The VOC emissions from this emission unit. For the purposes of this calculation, emissions from material collected from control devices shall be assigned to the day that the material is collected, if collection occurs less frequently than daily. VOC emission shall be calculated using an emission factor of $0.54 \text{ lb}_{\text{VOC}}/\text{ton}_{\text{carbide}}$ ³⁸ unless a different emission factor has been approved by APCD.

S3. Reporting

[Regulation 2.16, section 4.1.1]

The owner or operator shall report the following information, as required by General Condition 14:

a. Opacity

- i. Emission Unit and Emission Point Identification;
- ii. The date, time, and results for each visible emission survey during which visible emissions were detected, or a negative declaration if no visible emission were observed;
- iii. The date, time, and results of each Method 9 or Method 22 observation required to be conducted as a result of visual emission monitoring required by U4 Opacity Monitoring and Record Keeping, or a negative declaration if no observations were required;
- iv. Description of any corrective action taken pursuant to U5 Opacity Monitoring and Record Keeping.

b. PM

- i. Emission Unit and Emission Point Identification;
- ii. Monthly total throughput of calcium carbide, in tons;
- iii. Monthly total hours of operation;
- iv. Identification of all periods of exceedance of the hourly PM emissions rate standards established in U5 PM Standards, including calculation of the emission rate and the quantity of excess emissions during such periods, or a negative declaration if there were no such periods;
- v. Identification of all periods during which a PM control device was bypassed during operation of the associated process equipment, including

³⁸ The emission factor of $0.54 \text{ lb}_{\text{VOC}}/\text{ton}_{\text{carbide}}$ is the value used in permittee's PTE calculations, submitted as part of the permit renewal application.

the date, time, and duration of each such bypass event and the calculated emission rate and quantity of emissions during such periods, or a negative declaration if there were no such periods;

c. TAC

See Plantwide TAC Reporting.

d. VOC

See Plantwide VOC Reporting.

Emission Unit U6: Back End – Final processing and handles waste materials collected**U6 Applicable Regulations**

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
1.14	Control of Fugitive Particulate Emissions	1, 2, 8
6.09	Standards of Performance for Existing Process Operations	1, 2, 8
6.43	Volatile Organic Compound Emission Reduction Requirements	9

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6

STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23

U6 Equipment

Emission Point	Description	Applicable Regulations	Control ID	Release ID
E134	Louisville conveyor	1.14, 6.09, 6.43, STAR	NA	Fug U6
E136	Track 3 rail loading	1.14, 6.09, 6.43, STAR	NA	Fug U6
E141	Bin #6 – Wet generator	6.09, 6.43, STAR	BV14	BV14
E142	Bin #5 – Wet generator	6.09, 6.43, STAR	BV15	BV15
E143	Bin #4	1.14, 6.09, 6.43, STAR	NA	NA
E144	Bin #3	1.14, 6.09, 6.43, STAR	NA	NA
E145	Bin #2 – Ball mill	6.09, 6.43, STAR	BV16	BV16

Emission Point	Description	Applicable Regulations	Control ID	Release ID
E146	Bin #1 – Ball mill	6.09, 6.43, STAR	BV17	BV17
E147	East elevator	1.14, 6.09, 6.43, STAR	NA	Fug U6
E148	West elevator	1.14, 6.09, 6.43, STAR	NA	Fug U6
E149	Hood flop gate	6.09, 6.43, STAR	BV18	BV18
E150	#1 Mill	1.14, 6.09, 6.43, STAR	NA	Fug U6
E151	#2 Mill	1.14, 6.09, 6.43, STAR	NA	Fug U6
E152	#1 Screw conveyor	1.14, 6.09, 6.43, STAR	NA	Fug U6
E153	#2 Screw conveyor	1.14, 6.09, 6.43, STAR	NA	Fug U6
E154	#3 Screw conveyor	1.14, 6.09, 6.43, STAR	NA	Fug U6
E155	Calvert City belt conveyor	1.14, 6.09, 6.43, STAR	NA	Fug U6
E156	Undercar conveyor	1.14, 6.09, 6.43, STAR	NA	Fug U6
E157	Silo	1.14, 6.09, 6.43, STAR	NA	Fug U6
E158	Vibratory feeder @ silo	1.14, 6.09, 6.43, STAR	NA	Fug U6
E159	Silo elevator	1.14, 6.09, 6.43, STAR	NA	Fug U6
E163	Calvert City RR hopper	1.14, 6.09, 6.43, STAR	NA	Fug U6
E164	Vibratory feeder @ Calvert City hopper	1.14, 6.09, 6.43, STAR	NA	Fug U6

U6 Control Devices

Control ID	Description	Control Efficiency
BV14	Bin vent (Bin #6 – Wet generator)	95%
BV15	Bin vent (Bin #5 - Wet generator)	95%
BV16	Bin vent (Universal bin)	95%
BV17	Bin vent (Bin #1 - Ball mill)	95%
BV18	Bin Vent (Back end dense phase system)	95%

U6 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. Opacity

The owner or operator shall not cause or allow any discharge from any opening in the building housing the named process equipment, or any control device associated with this equipment to equal or exceed 20% opacity.

[Regulation 6.09, section 3.1]

b. PM

i. The owner or operator shall take reasonable precautions to prevent the discharge of visible fugitive emissions beyond the lot line of the property on which the emissions originate. [Regulation 1.14, section 2.4]

ii. The owner or operator shall not allow the emission of particulate matter from this emission unit to exceed the following limits:³⁹

[Regulation 6.09, section 3.2]

(1) 2.58 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;

(2) $4.10 \times P^{0.67}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;

(3) $(55.0 \times P^{0.11}) - 40$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.

c. TAC

See Plantwide TAC Standards.

d. VOC

See Plantwide VOC Standards.

S2. Monitoring and Record Keeping

[Regulation 2.16, section 4.1.9.1 and 4.1.9.2]

³⁹ A one-time PM compliance demonstration was performed for this EU U6 equipment and the hourly standard cannot be exceeded uncontrolled.

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. Opacity

- i. The owner or operator shall conduct a weekly one-minute visible emissions survey of all emission points during normal operation and daylight hours. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.
- ii. For emission points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to reduce the visible emission frequency to monthly.
- iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 or Method 22 observation, as appropriate, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07, and take all practicable steps to eliminate the exceedance. In addition, if the visible emission survey frequency had been reduced to monthly, weekly survey frequency must be resumed until the 12-week criterion is again met.
- iv. The owner or operator shall keep records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include:
 - (1) The date of the survey,
 - (2) The name of the person conducting the survey,
 - (3) Whether or not visible emissions were observed, and
 - (4) What, if any, corrective action was performed.
- v. If an emission point is not being operated during a given survey period, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

b. PM

- i. The owner or operator shall maintain records of the monthly throughput of calcium carbide at each emission point.
- ii. The owner or operator shall:

- (1) Calculate the rate of PM emissions from the affected emission point(s) using an emission factor of 0.11 lb_{PM}/ton_{carbide},⁴⁰ for controlled sources and 2.2 lb_{PM}/ton_{carbide} for uncontrolled sources⁴¹ unless a different emission factor has been approved by APCD.

iii. The owner or operator shall perform the following inspections:

- (1) Daily:
Verify that the fans associated with the equipment are operating;
- (2) Monthly:
 - (a) Verify that dampers are working properly;
 - (b) Verify the bag cleaning mechanisms are working properly;
 - (c) Verify baghouse bags are clean and not filled with dust;
 - (d) Inspect the bags for excessive wear or damage, and replace if necessary;
 - (e) Inspect exhaust stacks for signs of dust accumulation; and
 - (f) Inspect the mechanical integrity of the baghouses for excessive wear or damage.

c. TAC

See Plantwide TAC Monitoring and Record Keeping.

d. VOC

i. See Plantwide VOC Monitoring and Record Keeping.

ii. The owner or operator shall record daily:

- (1) The weight of calcium carbide processed through the Back End system;
- (2) The time, date, and weight of calcium carbide captured by and emptied from each air pollution control device;
- (3) The VOC emissions from this emission unit. For the purposes of this calculation, emissions from material collected from control devices shall be assigned to the day that the material is collected, if collection occurs less frequently than daily. VOC emission shall be calculated using an emission factor of 0.54 lb_{VOC}/ton_{carbide} for uncontrolled emissions and 0.0399 lb_{VOC}/ton_{carbide} for controlled

⁴⁰ The value specified here is from AP-42 table 11.4-2, SCC 3-05-004-05.

⁴¹ This value is based on the controlled emission factor and a control efficiency of 95%.

emissions⁴² unless different emission factors are approved by APCD.

S3. Reporting

[Regulation 2.16, section 4.1.1]

The owner or operator shall report the following information, as required by General Condition 14:

a. Opacity

- i. Emission Unit and Emission Point Identification;
- ii. The date, time, and results for each visible emission survey during which visible emissions were detected, or a negative declaration if no visible emission were observed;
- iii. The date, time, and results of each Method 9 or Method 22 observation required to be conducted as a result of visual emission monitoring required by U5 Opacity Monitoring and Record Keeping, or a negative declaration if no observations were required;
- iv. Description of any corrective action taken pursuant to U5 Opacity Monitoring and Record Keeping.

b. PM

There are no reporting requirements for this equipment.

c. TAC

See Plantwide TAC Reporting.

d. VOC

See Plantwide VOC Reporting.

⁴² These emission factors are the values used in the permittee's PTE calculations submitted as part of the permit renewal application and supported by testing performed by TRC Solutions on April 23, 2008.

Emission Unit U7: Desulfurization Operations

U7 Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
1.14	Control of Fugitive Particulate Emissions	1, 2, 8
6.43	Volatile Organic Compound Emission Reduction Requirements	9
7.08	Standards of Performance for New Process Operations	1, 2, 3

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

U7 Equipment

Emission Point	Description	Applicable Regulations	Control ID	Release ID
E165	CaC2 Container #1	1.14, 6.43, 7.08, STAR	NA	Fug U7
E166	CaC2 Container #2	1.14, 6.43, 7.08, STAR	NA	Fug U7
E167	CaC2 Transporter	1.14, 6.43, 7.08, STAR	NA	Fug U7
E168	Carbide bin	1.14, 6.43, 7.08, STAR	NA	Fug U7
E169	Carbide feedscrew	1.14, 6.43, 7.08, STAR	NA	Fug U7
E170	C Stand lime bin	1.14, 6.43, 7.08, STAR	NA	Fug U7
E171	D Stand lime bin	1.14, 6.43, 7.08, STAR	NA	Fug U7

Emission Point	Description	Applicable Regulations	Control ID	Release ID
E172	Ball mill	1.14, 6.43, 7.08, STAR	NA	Fug U7
E173	Additive feedscrew	1.14, 6.43, 7.08, STAR	NA	Fug U7
E174	Mixer bin	6.43, 7.08, STAR	BV19	S7
E175	Elevator	6.43, 7.08, STAR	BV19	S7
E176	Sizing screen	1.14, 6.43, 7.08, STAR	NA	Fug U7
E177	Loading screw	6.43, 7.08, STAR	BV20	S7
E178	Shipping vessel loading (1)	1.14, 6.43, 7.08, STAR	NA	Fug U7
E179	Oversize return bin	1.14, 6.43, 7.08, STAR	NA	Fug U7
E180	First loading screw	1.14, 6.43, 7.08, STAR	NA	Fug U7
E181	Holding bin	1.14, 6.43, 7.08, STAR	NA	Fug U7
E182	Shipping vessel loading (2)	1.14, 6.43, 7.08, STAR	NA	Fug U7
E183	Second loading screw	6.43, 7.08, STAR	BV21	S7
E184	Shipping vessel loading (3)	1.14, 6.43, 7.08, STAR	NA	Fug U7
E185	Transporter fill station	1.14, 6.43, 7.08, STAR	NA	Fug U7
E186	E Stand	1.14, 6.43, 7.08, STAR	NA	Fug U7
E187	#7 bin	6.43, 7.08, STAR	BV22	None
E188	Screw conveyor from bin #7	1.14, 6.43, 7.08, STAR	NA	Fug U7
E189	Container loading station	1.14, 6.43, 7.08, STAR	NA	Fug U7

U7 Control Devices

Control ID	Description	Control Efficiency
BV19	Bin vent (Mixer bin/elevator)	95%
BV20	Bin vent (Loading screw)	95%
BV21	Bin vent (Second loading screw)	95%
BV22	Bin vent (Bin #7)	95%

U7 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. Opacity

The owner or operator shall not cause or allow any discharge from any opening in the building housing the named process equipment, or any control device associated with this equipment to equal or exceed 20% opacity.

[Regulation 7.08, section 3.1.1]

b. PM

i. The owner or operator shall take reasonable precautions to prevent the discharge of visible fugitive emissions beyond the lot line of the property on which the emissions originate. [Regulation 1.14, section 2.4]

ii. The owner or operator shall not allow the emission of particulate matter from this emission unit to exceed the following limits:⁴³

[Regulation 7.08, section 3.1.2]

- (1) 2.34 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;
- (2) $3.59 \times P^{0.62}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;
- (3) $(17.31 \times P^{0.16}) - 40$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.

c. TAC

See Plantwide TAC Standards.

d. VOC

See Plantwide VOC Standards.

⁴³ A one-time PM compliance demonstration was performed for this EU U7 equipment and the hourly standard cannot be exceeded uncontrolled.

S2. Monitoring and Record Keeping

[Regulation 2.16, section 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. Opacity

- i. The owner or operator shall conduct a weekly one-minute visible emissions survey of all emission points during normal operation and daylight hours. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.
- ii. For emission points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to reduce the visible emission frequency to monthly.
- iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 or Method 22 observation, as appropriate, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07, and take all practicable steps to eliminate the exceedance. In addition, if the visible emission survey frequency had been reduced to monthly, weekly survey frequency must be resumed until the 12-week criterion is again met.
- iv. The owner or operator shall keep records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include:
 - (1) The date of the survey,
 - (2) The name of the person conducting the survey,
 - (3) Whether or not visible emissions were observed, and
 - (4) What, if any, corrective action was performed.
- v. If an emission point is not being operated during a given survey period, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

b. PM

- i. The owner or operator shall maintain records of the monthly throughput of calcium carbide at each emission point.

- ii. The owner or operator shall:
 - (1) Calculate the rate of PM emission from the affected emission point(s) using an emission factor of 0.11 lb_{PM}/ton_{carbide},⁴⁴ for controlled sources and 2.2 lb_{PM}/ton_{carbide} for uncontrolled sources⁴⁵ unless a different emission factor has been approved by APCD.
- iii. The owner or operator shall perform the following inspections:
 - (1) Daily, verify that the fans associated with the equipment are operating;
 - (2) Monthly:
 - (a) Verify that dampers are working properly;
 - (b) Verify the bag cleaning mechanisms are working properly;
 - (c) Verify baghouse bags are clean and not filled with dust;
 - (d) Inspect the bags for excessive wear or damage, and replace if necessary;
 - (e) Inspect exhaust stacks for signs of dust accumulation; and
 - (f) Inspect the mechanical integrity of the baghouses for excessive wear or damage.

c. TAC

See Plantwide TAC Monitoring and Record Keeping.

d. VOC

- i. See Plantwide VOC Monitoring and Record Keeping.
- ii. The owner or operator shall record daily:
 - (1) The weight of calcium carbide processed through the Desulfurization system;
 - (2) The time, date, and weight of calcium carbide captured by and emptied from each air pollution control device;
 - (3) The VOC emissions from this emission unit. For the purposes of this calculation, emissions from material collected from control devices shall be assigned to the day that the material is collected, if collection occurs less frequently than daily. VOC emission shall be calculated using an emission factor of 0.54 lb_{VOC}/ton_{carbide} for uncontrolled emissions and 0.0399 lb_{VOC}/ton_{carbide} for controlled

⁴⁴ The value specified here is from AP-42 table 11.4-2, SCC 3-05-004-05.

⁴⁵ This value is based on the controlled emission factor and a control efficiency of 95%.

emissions⁴⁶ unless different emission factors are approved by the District.

S3. Reporting

[Regulation 2.16, section 4.1.1]

The owner or operator shall report the following information, as required by General Condition 14:

a. Opacity

- i. Emission Unit and Emission Point Identification;
- ii. The date, time, and results for each visible emission survey during which visible emissions were detected, or a negative declaration if no visible emission were observed;
- iii. The date, time, and results of each Method 9 or Method 22 observation required to be conducted as a result of visual emission monitoring required by U7 Opacity Monitoring and Record Keeping, or a negative declaration if no observations were required;
- iv. Description of any corrective action taken pursuant to U7 Opacity Monitoring and Record Keeping.

b. PM

There are no reporting requirements for this pollutant.

c. TAC

See Plantwide TAC Reporting.

d. VOC

See Plantwide VOC Reporting.

⁴⁶ These emission factors are the values used in the permittee's PTE calculations submitted as part of the permit renewal application and supported by testing performed by TRC Solutions on April 23, 2008.

Emission Unit U8: Wet Generator**U8 Applicable Regulations**

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
1.14	Control of Fugitive Particulate Emissions	1, 2, 8
6.09	Standards of Performance for Existing Process Operations	1, 2, 8
6.39	Standard of Performance for Equipment Leaks of Volatile Organic Compounds in Existing Synthetic Organic and Polymer Manufacturing Plants	1, 2, 3, 5
6.43	Volatile Organic Compound Emission Reduction Requirements	9
40 CFR 60 Subpart VV	Standards of Performance for Equipment Leaks of VOC in Synthetic Organic Chemical Manufacturing	60.482-3, 60.482-9, 60.485(b), 60.486(f)(1), 60.482-10(d), 60.482-10(f), 60.482-10(h), 60.482-10(j)

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

U8 Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E192	Dense phase pneumatic conveyor	1967	1.14, 6.09, 6.43, STAR	NA	Fug U8

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E193	Elevator	1967	6.09, 6.43, STAR	BV23	BV23
E194	Batch hopper	1967	1.14, 6.09, 6.43, STAR	NA	Fug U8
E195	Purge hopper	1967	1.14, 6.09, 6.43, STAR	NA	Fug U8
E196	Feed hopper	1967	1.14, 6.09, 6.43, STAR	NA	Fug U8
E197	Wet generator feed screw	1967	1.14, 6.09, 6.43, 40 CFR 60 Subpart VV, STAR	NA	Fug U8
E198	Wet generator	1967	6.09, 6.43, 40 CFR 60 Subpart VV, STAR	NA	Fug U8
E199	Cooling tower	1967	6.09, 6.43, STAR	NA	Fug U8
E200	Acetylene holding tank	1967	6.09, 6.43, 6.39, 40 CFR 60 Subpart VV, STAR	C10	S10
E201	Recuperator	1967	6.09, 6.43, 40 CFR 60 Subpart VV, STAR	NA	Fug U8
E202	Hydrate slurry pit	1967	6.09, 6.43, STAR	NA	Fug U8
E203	160 foot Thickener tank	1967	6.09, 6.43, 40 CFR 60 Subpart VV, STAR	NA	Fug U8
E204	North 90 Thickener tank	1967	6.09, 6.43, 40 CFR 60 Subpart VV, STAR	NA	Fug U8

U8 Control Devices

Control ID	Description	Control Efficiency
C10	Acetylene flare – NAO, Inc., model#3 NMJM-AA 4,200 ft ³ /min acetylene, with 48,000 ft ³ /min air (installed 2007)	98.5%
BV23	Bin vent (elevator)	99.5%

U8 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. Opacity

The owner or operator shall not cause or allow any discharge from any opening in the building housing the named process equipment, or any control device associated with this equipment to equal or exceed 20% opacity.

[Regulation 6.09, section 3.1]

b. PM

i. The owner or operator shall take reasonable precautions to prevent the discharge of visible fugitive emissions beyond the lot line of the property on which the emissions originate. [Regulation 1.14, section 2.4]

ii. The owner or operator shall not allow the emission of particulate matter from Emission Points E192-E197 to exceed 13.0 lb/hr.^{47, 48}

[Regulation 6.09, section 3.2]

c. TAC

See Plantwide TAC Standards.

d. VOC

i. See Plantwide VOC Standards.

ii. Flares used to comply with this subpart shall comply with the requirements of §60.18. [40 CFR 60.482-10(d)]

iii. Owners or operators of control devices used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.

[40 CFR 60.482-10(e)]

⁴⁷ This limit is based on the maximum throughput specified in the revised permit renewal application after accounting for alternative flow paths for processing and the calculation of emission rate specified in Table 1 of Regulation 6.09.

⁴⁸ A one-time PM compliance demonstration was performed for this EU U8 equipment and the hourly standard cannot be exceeded uncontrolled.

- iv. Each valve used for the control of the flow of acetylene gas shall be monitored monthly to detect leaks, as specified in 40 CFR 60.485(b). [40 CFR 60.482-7(a)(1)]
- v. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [40 CFR 60.482-7(b)]
- vi. Any valve for which a leak has not been detected for 2 successive months may be monitored during the first month of every quarter, beginning with the next quarter, until a leak is detected. [40 CFR 60.482-7(c)(1)(i)]
 - (1) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months. [40 CFR 60.482-7(c)(2)]
- vii. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 60.482-9. [40 CFR 60.482-7(d)(1)]
 - (1) A first attempt at repair shall be made no later than 5 days after the leak is detected. [40 CFR 60.482-7(2)(d)(2)]
 - (a) First attempts at repair include, but are not limited to, the following best practices where practicable: [40 CFR 60.482-7(e)]
 - (b) Tightening of bonnet bolts; [40 CFR 60.482-7(e)(1)]
 - (c) Replacement of bonnet bolts; [40 CFR 60.482-7(e)(2)]
 - (d) Tightening of packing gland nuts; [40 CFR 60.482-7(e)(3)]
 - (e) Injection of lubricant into lubricated packing. [40 CFR 60.482-7(e)(4)]
- viii. Any valve that is designated, as described in §60.486(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of §60.482-7(a) if the valve: [40 CFR 60.482-7(f)]
 - (1) Has no external actuating mechanism in contact with the process fluid, [40 CFR 60.482-7(f)(1)]
 - (2) Is operated with emissions less than 500 ppm above background as determined by the method specified in §60.485(c), and [40 CFR 60.482-7(f)(2)]
 - (3) Is tested for compliance with §60.482-7(f)(2) initially upon designation, annually, and at other times requested by the District. [40 CFR 60.482-7(f)(3)]

- ix. Any valve that is designated, as described in §60.486(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of §60.482-7(a) if:
[40 CFR 60.482-7(g)]
 - (1) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with §60.482-7(a), and [40 CFR 60.482-7(g)(1)]
 - (2) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times. [40 CFR 60.482-7(g)(2)]

- x. Any valve that is designated, as described in §60.486(f)(2), as a difficult-to-monitor valve is exempt from the requirements of §60.482-7(a) if:
[40 CFR 60.482-7(h)]
 - (1) The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.
[40 CFR 60.482-7(h)(1)]
 - (2) The process unit within which the valve is located either becomes an affected facility through §60.14 or §60.15 or the owner or operator designates less than 3.0 percent of the total number of valves as difficult-to-monitor, and [40 CFR 60.482-7(h)(2)]
 - (3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.
[40 CFR 60.482-7(h)(3)]

S2. Monitoring and Record Keeping

[Regulation 2.16, section 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. Opacity

- i. The owner or operator shall conduct a weekly one-minute visible emissions survey of all emission points during normal operation and daylight hours. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.
- ii. For emission points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to reduce the visible emission frequency to monthly.
- iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial

observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 or Method 22 observation, as appropriate, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07, and take all practicable steps to eliminate the exceedance. In addition, if the visible emission survey frequency had been reduced to monthly, weekly survey frequency must be resumed until the 12-week criterion is again met.

- iv. The owner or operator shall keep records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include:
 - (1) The date of the survey,
 - (2) The name of the person conducting the survey,
 - (3) Whether or not visible emissions were observed, and
 - (4) What, if any, corrective action was performed.
- v. If an emission point is not being operated during a given survey period, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

b. PM

- i. The owner or operator shall maintain records of the monthly throughput of calcium carbide at each emission point.
- ii. The owner or operator calculate shall the rate of PM emission from the affected emission point(s) using an emission factor of 0.11 lb_{PM}/ton_{carbide},⁴⁹ for controlled sources and 2.2 lb_{PM}/ton_{carbide} for uncontrolled sources⁵⁰ unless a different emission factor has been approved by APCD.

c. TAC

See Plantwide TAC Monitoring and Record Keeping.

d. VOC

- i. See Plantwide VOC Monitoring and Record Keeping.
- ii. The owner or operator shall record daily:

⁴⁹ The value specified here is from AP-42 table 11.4-2, SCC 3-05-004-05.

⁵⁰ This value is based on the controlled emission factor and a control efficiency of 95%.

- (1) The weight of calcium carbide processed through the wet generator;
 - (2) The volume of acetylene (in pounds or standard cubic feet) burned at the flare, C10;
 - (3) The total VOC emissions from this emission unit.⁵¹
 - (a) For Emission Points E192-E197, emissions shall be calculated using an emission factor of 0.54 lb_{VOC}/ton_{carbide};
 - (b) For Emission Points E202, emissions shall be calculated using an emission factor of 0.60 lb_{VOC}/ton_{carbide};
 - (c) For the acetylene flare, C10, emissions shall be calculated based on an acetylene destruction efficiency of 98.5%;
 - (d) These emission factors may be modified if a different value is approved by APCD.
- iii. For batch-process equipment that operates less than 365 days per year, the owner or operator may perform monitoring to detect leaks from valves at a reduced frequency as specified in this table instead of the monitoring as specified in §60.482-7: [40 CFR 60.482-1(f)(1)]

Table 1 – Subpart VV of Part 60: General

Operating time (percent of hours during the year)	Specified Monitoring Frequency		
	Monthly	Quarterly	Semiannually
0 to <25%	Quarterly	Annually	Annually
25% to <50%	Quarterly	Semiannually	Annually
50% to <75%	Bimonthly	Three quarters	Semiannually
75% to 100%	Monthly	Quarterly	Semiannually

- iv. The monitoring frequencies specified are not requirements for monitoring at specific intervals, and can be adjusted to accommodate process operations. The owner or operator may monitor at any time during the specified monitoring period, provided: [40 CFR 60.482-1(f)(3)]
- (1) For quarterly monitoring, monitoring events must be separated by at least 30 calendar days; [40 CFR 60.482-1(f)(3)(i)]
 - (2) For semiannual monitoring, monitoring events must be separated by at least 60 calendar days; [40 CFR 60.482-1(f)(3)(ii)]
 - (3) For monitoring 3 quarters per year, monitoring events must be separated by at least 90 calendar days; [40 CFR 60.482-1(f)(3)(iii)]

⁵¹ These emission factors are those used in the permittee's PTE calculations submitted as part of the permit renewal application.

- (4) For annual monitoring, monitoring events must be separated by at least 120 calendar days. [40 CFR 60.482-1(f)(3)(iv)]
- v. When each leak is detected, the following requirements apply:
[40 CFR 60.486(b)]
- (1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. [40 CFR 60.486(b)(1)]
 - (2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in §60.482-7(c) and no leak has been detected during those 2 months.
[40 CFR 60.486(b)(2)]
 - (3) The identification on equipment except on a valve, may be removed after it has been repaired. [40 CFR 60.486(b)(3)]
- vi. When each leak is detected, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:
[40 CFR 60.486(c)]
- (1) The instrument and operator identification numbers and the equipment identification numbers. [40 CFR 60.486(c)(1)]
 - (2) The date the leak was detected and the dates of each attempt to repair the leak. [40 CFR 60.486(c)(2)]
 - (3) Repair methods applied in each attempt to repair the leak.
[40 CFR 60.486(c)(3)]
 - (4) "Above 10,000" if the maximum instrument reading measured after each repair attempt is equal to or greater than 10,000 ppm;
[40 CFR 60.486(c)(4)]
 - (5) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
[40 CFR 60.486(c)(5)]
 - (6) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown. [40 CFR 60.486(c)(6)]
 - (7) The expected date of successful repair if the leak cannot be repaired within 15 days. [40 CFR 60.486(c)(7)]
 - (8) Dates of process unit shutdowns that occur while the equipment is unrepaired. [40 CFR 60.486(c)(8)]
 - (9) The date of successful repair of the leak.[40 CFR 60.486(c)(9)]
- vii. A list of identification numbers for valves that are designated as unsafe-to-monitor, an explanation for each valve stating why the valve is unsafe-to-

monitor, and the plan for monitoring each valve shall be recorded in a log that is kept in a readily accessible location. [40 CFR 60.486(f)(1)]

- viii. A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve shall be recorded in a log that is kept in a readily accessible location. [40 CFR 60.486(f)(2)]
- ix. For the acetylene flare, the owner or operator shall record and keep the following information in a readily accessible location: [40 CFR 60.486(d)]
 - (1) Detailed schematics, design specifications, and piping and instrumentation diagrams. [40 CFR 60.486(d)(1)]
 - (2) The dates and descriptions of any changes in the design specifications; [40 CFR 60.486(d)(2)]
 - (3) A description of the parameter or parameters monitored as required in §60.482-10(e), to ensure that the flare is operated and maintained in accordance with its design, and an explanation of why that parameter (or parameters) was selected for monitoring; [40 CFR 60.486(d)(3)]
 - (4) Periods when the flare is not operated as designed, including periods when the flare pilot light does not have a flame. [40 CFR 60.486(d)(4)]
 - (5) Dates of startups and shutdowns of the flare. [40 CFR 60.486(d)(5)]

S3. Reporting

[Regulation 2.16, section 4.1.1]

The owner or operator shall report the following information, as required by General Condition 14:

a. Opacity

- i. Emission Unit and Emission Point Identification;
- ii. The date, time, and results for each visible emission survey during which visible emissions were detected, or a negative declaration if no visible emission were observed;
- iii. The date, time, and results of each Method 9 or Method 22 observation required to be conducted as a result of visual emission monitoring required by U8 Opacity Monitoring and Record Keeping, or a negative declaration if no observations were required;

- iv. Description of any corrective action taken pursuant to U8 Opacity Monitoring and Record Keeping.

b. PM

There are no reporting requirements for this pollutant.

c. TAC

See Plantwide TAC Reporting.

d. VOC

- i. See Plantwide VOC Reporting.
- ii. All semiannual reports to the District shall include the following information: [40 CFR 60.487(c)]
 - (1) Process unit identification. [40 CFR 60.487(c)(1)]
 - (2) For each month during the semiannual reporting period, [40 CFR 60.487(c)(2)]
 - (a) The number of valves for which leaks were detected during each month of the reporting period; [40 CFR 60.487(c)(2)(i)]
 - (b) The number of valves that were not repaired as required. [40 CFR 60.487(c)(2)(ii)]
 - (c) Dates of process unit shutdowns which occurred during the reporting period. [40 CFR 60.487(c)(3)]
 - (d) Revisions to items reported according to §60.487(b) if changes have occurred since the initial report or subsequent revisions to the initial report. [40 CFR 60.487(c)(4)]

Emission Unit U11: Fuel Storage**U11 Applicable Regulations**

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
6.13	Standards of Performance for Existing Storage Vessels for Volatile Organic Compounds	1, 2, 4
6.15	Standards of Performance for Gasoline Transfer to Existing Service Station Storage Tanks (Stage 1 Vapor Recovery)	1, 2, 3, 4, 5
6.43	Volatile Organic Compound Emission Reduction Requirements	9

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

U11 Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E205	Gasoline Storage Tank (550 gal)	Prior to 1978	6.13, 6.15, 6.43, STAR	NA	Fug U11

U11 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. TAC

See Plantwide TAC Standards.⁵²

b. VOC

i. See Plantwide VOC Standards.

ii. The owner or operator shall install, maintain and operate the storage tank with a submerged fill pipe, vent line restrictions, a vapor balance system, and vapor tight connections on the liquid fill and vapor return hoses.⁵³
[Regulation 6.13, section 3.3]

S2. Monitoring and Record Keeping

[Regulation 2.16, section 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. TAC

See Plantwide TAC Monitoring and Record Keeping.

b. VOC

See Plantwide VOC Monitoring and Record Keeping.

S3. Reporting

[Regulation 2.16, section 4.1.1]

The owner or operator shall report the following information, as required by General Condition 14:

a. TAC

See Plantwide TAC Reporting.

⁵² The emissions from a motor vehicle fueling or refueling process and process equipment for gasoline and other liquid fuels are *de minimis* under STAR. (Regulation 5.21, section 2.6)

⁵³ This tank is equipped with submerged fill.

b. VOC

See Plantwide VOC Reporting.

Emission Unit U12: Gas Fired Boiler**U12 Applicable Regulations**

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
7.06	Standards of Performance for New Indirect Heat Exchangers	1, 2, 3, 4, 5

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

U12 Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E208	Gas-Fired Boiler, rated at 3.3 MMBtu/hr maximum heat input. Fueled by either natural gas or carbon monoxide.	1978	7.06, STAR	NA	NA

U12 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. Opacity

The owner or operator shall not allow emissions which exhibit opacity greater than 20% except: [Regulation 7.06, section 4.2]

- i. A maximum of 40% opacity is permissible for not more than 2 consecutive minutes in any 60 consecutive minutes.
- ii. While bringing the boiler to normal operating conditions, provided the method used is that recommended by the boiler manufacturer.

b. PM

The owner or operator shall not allow the emission of PM to exceed 0.56 pounds per million Btu actual heat input. [Regulation 7.06, section 4.1.1]

c. SO₂

The owner or operator shall not allow the emission of SO₂ to exceed 1.0 pounds per million Btu of actual heat input. [Regulation 7.06, section 5.1.1]

d. TAC

See Plantwide TAC Standards.⁵⁴

S2. Monitoring and Record Keeping

[Regulation 2.16, section 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. Opacity

There are no monitoring or record keeping requirements for this pollutant.⁵⁵

⁵⁴ The TAC emissions from the combustion of natural gas are considered to be “*de minimis* emissions” by the District. This includes all of the emissions from a process or process equipment for which the only emissions are the products of combustion of natural gas, such as from a natural gas-fired boiler or turbine, but does not include the other emissions from a process or process equipment that are not the products of the combustion of natural gas. (Regulation 5.21, section 2.7)

⁵⁵ A determination has been made that a natural gas-fired boiler should inherently meet the opacity standard.

b. PM

There are no monitoring or record keeping requirements for this pollutant.

c. SO₂

There are no monitoring or record keeping requirements for this pollutant.

d. TAC

See Plantwide TAC Monitoring and Record Keeping.

S3. Reporting

[Regulation 2.16, section 4.1.1]

The owner or operator shall report the following information, as required by General Condition 14:

a. Opacity

There are no reporting requirements for this pollutant.

b. PM

There are no reporting requirements for this pollutant.

c. SO₂

There are no reporting requirements for this pollutant.

d. TAC

See Plantwide TAC Reporting.

Emission Unit U13: Storm Water Neutralization**U13 Applicable Regulations**

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

U13 Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E209	Storm water treatment plant	1997	STAR	NA	Fug U13

U13 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. TAC

See Plantwide TAC Standards.

S2. Monitoring and Record Keeping

[Regulation 2.16, section 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. TAC

See Plantwide TAC Monitoring and Record Keeping.

S3. Reporting

[Regulation 2.16, section 4.1.1]

The owner or operator shall report the following information, as required by General Condition 14:

a. TAC

See Plantwide TAC Reporting.

Emission Unit U14: Tote Reconditioning

U14 Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
1.14	Control of Fugitive Particulate Emissions	1, 2, 8
7.08	Standards of Performance for New Process Operations	1, 2, 3
7.59	Standards of Performance for New Miscellaneous Metal Parts and Products Surface Coating Operations	1, 2, 5, 6, 7

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

U14 Equipment

Emission Point	Description	Applicable Regulations	Install Date	Control ID	Release ID
E210	Shot blast equipment	1.14, 7.08, STAR	1970	C11	Fug U14
E211	Spray paint booth	7.59, STAR	1970	C11	Fug U14

U14 Control Devices

Control ID	Description	Control Efficiency
C11	Filters	90%

U14 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. Opacity

The owner or operator shall not cause or allow any discharge from any opening in the building housing the named process equipment, or any control device associated with this equipment to equal or exceed 20% opacity.

[Regulation 7.08, section 3.1.1]

b. PM

i. The owner or operator shall take reasonable precautions to prevent the discharge of visible fugitive emissions beyond the lot line of the property on which the emissions originate. [Regulation 1.14, section 2.4]

ii. The owner or operator shall not allow PM emissions to exceed 2.34 lb/hr per piece of equipment based on actual operating hours in a calendar day.⁵⁶ [Regulation 7.08, section 3.1.2]

c. TAC

See Plantwide TAC Standards.

d. VOC

i. The owner or operator shall not allow or cause VOC emissions, including all coatings, additives, catalysts, solvents, thinners, and cleaners from this plant to exceed 5 tons during any 12 consecutive month period. (Regulation 7.59, section 5.2)

Or

ii. The VOC content of the paints applied shall not exceed:
[Regulation 7.59, section 3.1]

(1) 3.5 lb/gal for air-dry and extreme performance coatings;

(2) 3.0 lb/gal for all other base-coat material;

(3) 4.3 lb/gal for clearcoat materials.

⁵⁶ A one-time PM compliance demonstration was performed, and the hourly standard cannot be exceeded uncontrolled.

S2. Monitoring and Record Keeping

[Regulation 2.16, section 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. Opacity

- i. The owner or operator shall, monthly, conduct a one-minute visible emissions survey, during normal operation, of the emission points. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.
- ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.
- iii. The owner or operator shall, monthly, maintain records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

b. PM

- i. For Emission Point E211:
 - (1) The owner or operator shall inspect the filters in the paint booth monthly to ensure that the filters are properly placed and that they allow free airflow. If there is a differential pressure gauge across the filter, filters must be replaced before the pressure difference exceeds the maximum differential recommended by the filter supplier.
 - (2) The owner or operator shall inspect the filters in the abrasive blast enclosure monthly to ensure that the filters are properly placed and that they allow free airflow. If there is a differential pressure gauge across the filter, filters must be replaced before the pressure difference exceeds the maximum differential recommended by the filter supplier.
 - (3) A log of the monthly inspections of the paint booth and blast booth shall be kept. This log must show the date of inspection, the name

or initials of the person making the inspection, the results of the inspection, and any corrective actions taken.

c. TAC

See Plantwide TAC Requirements.

d. VOC

- i. An owner or operator of an affected facility subject to this regulation shall maintain records that include the following: (Regulation 7.59, section 6.1)
 - 1) The regulation and section number applicable to the affected facility for which the records are being maintained,
 - 2) The application method and substrate type (metal),
 - 3) The amount and type of coatings (including catalyst and reducer for multi-component coatings) and solvent (including exempt compounds) used at each point of application during the calendar month,
 - 4) The VOC content as applied in each coating and solvent,
 - 5) The date, or usage record period, for each application of coating and solvent,
 - 6) The amount of surface preparation, clean-up, wash-up of solvent (including exempt compounds) used and the VOC content of each material used during the calendar month.
- ii. The VOC content shall be calculated using a percent solids basis (excluding water and exempt solvents) for coatings using EPA Method 24. (Regulation 7.59, section 6.2)
- iii. The owner or operator shall, monthly, record the total amount used in gallons of each coating, solvent, cleaner, etc.
- iv. The owner or operator shall monthly calculate and record the monthly and consecutive 12-month total VOC emissions each calendar month to demonstrate compliance with the five (5) ton per 12 consecutive month period limit when non-compliant coating are used.

S3. Reporting

[Regulation 2.16, section 4.1.1]

The owner or operator shall report the following information, as required by General Condition 14:

a. Opacity

There are no reporting requirements for this pollutant.

b. PM

There are no reporting requirements for this pollutant.

c. TAC

See Plantwide TAC Reporting.

d. VOC

i. The owner or operator shall include the following information in the semi-annual compliance monitoring reports for VOC:

- (1) Emission Unit and Emission Point Identification;
- (2) Summary of the total usage of VOC-containing materials for each month of the reporting period;

Emission Unit IA1: Cold Solvent Parts Cleaners

EU IA1 Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
6.18	Standards of Performance for Solvent Metal Cleaning Equipment	1, 2, 3, 4.1, 4.2

EU IA1 Equipment

Emission Point	Description	Applicable Regulations	Control ID	Release ID
IA1	Two (2) Cold Solvent Parts Cleaners	6.18	NA	NA

EU IA1 Specific Conditions

S1. Standards

[Regulation 2.16, section 4.1.1]

a. VOC

- i. The owner or operator shall install, maintain, and operate the control equipment as follows: [Regulation 6.18, section 4]
 - (1) The cold cleaner shall be equipped with a tightly fitting cover that is free of cracks, holes, or other defects. If the solvent is agitated or heated, then the cover shall be designed so that it can be easily operated with 1 hand. [Regulation 6.18, section 4.1.1]
 - (2) The cold cleaner shall be equipped with a drainage facility that is designed so that the solvent that drains off parts removed from the cleaner will return to the cold cleaner. The drainage facility may be external if the District determines that an internal type cannot fit into the cleaning system. [Regulation 6.18, section 4.1.2]
 - (3) A permanent, conspicuous label summarizing the operating requirements specified in Regulation 6.18, section 4.2 shall be installed on or near the cold cleaner. [Regulation 6.18, section 4.1.3]
 - (4) If used, the solvent spray shall be a fluid stream, not a fine, atomized, or shower type spray, at a pressure that does not cause excessive splashing. Flushing of parts using a flexible hose or other flushing device shall be performed only within the freeboard area of the cold cleaner. Solvent flow shall be directed downward to avoid turbulence at the air-solvent interface and to prevent solvent from splashing outside of the cold cleaner. [Regulation 6.18, section 4.1.4]
 - (5) Work area fans shall be located and positioned so that they do not blow across the opening of the cold cleaner. [Regulation 6.18, section 4.1.6]
 - (6) The solvent-containing portion of the cold cleaner shall be free of all liquid leaks. Auxiliary cold cleaner equipment such as pumps, water separators, steam traps, or distillation units shall not have any visible liquid leaks, visible tears, or cracks. [Regulation 6.18, section 4.1.8]
- ii. The owner or operator shall observe at all times the following operating requirements: (Regulation 6.18, section 4.2)
 - (1) Waste solvent shall neither be disposed of nor transferred to another party in a manner such that more than 20% by weight of the waste solvent can evaporate. Waste solvent shall be stored only

in a covered container. A covered container may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container. [Regulation 6.18, section 4.2.1]

- (2) The solvent level in the cold cleaner shall not exceed the fill line. [Regulation 6.18, section 4.2.2]
 - (3) The cold cleaner cover shall be closed whenever a part is not being handled in the cold cleaner. [Regulation 6.18, section 4.2.3]
 - (4) Parts to be cleaned shall be racked or placed into the cold cleaner in a manner that will minimize drag-out losses. [Regulation 6.18, section 4.2.4]
 - (5) Cleaned parts shall be drained for at least 15 seconds or until dripping ceases, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while the part is draining. During the draining, tipping, or rotating, the parts shall be positioned so that the solvent drains directly back to the cold cleaner. [Regulation 6.18, section 4.2.5]
 - (6) A spill during solvent transfer shall be cleaned immediately, and the wipe rags or other sorbent material shall be immediately stored in a covered container for disposal or recycling, unless enclosed storage of these items is not allowed by fire protection authorities. [Regulation 6.18, section 4.2.6]
 - (7) Sponges, fabric, wood, leather, paper products, and other absorbent material shall not be cleaned in a cold cleaner. [Regulation 6.18, section 4.2.7]
- iii. The owner or operator shall not operate a cold cleaner using a solvent with a vapor pressure that exceeds 1.0 mm Hg (0.019 psi) measured at 20°C (68°F). [Regulation 6.18, section 4.3.2]

S2. Monitoring and Record Keeping

[Regulation 2.16, section 4.1.9.1 and 4.1.9.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. VOC

- i. The owner or operator shall maintain records that include the following for each purchase: [Regulation 6.18, section 4.4.2]
 - (1) The name and address of the solvent supplier,
 - (2) The date of the purchase,
 - (3) The type of the solvent, and

(4) The vapor pressure of the solvent measured in mmHg at 20°C (68°F).

- ii. All records required in Regulation 6.18, section 4.42 shall be retained for 5 years and made available to the District upon request.
[Regulation 6.18, section 4.4.3]

S3. Reporting

[Regulation 2.16, section 4.1.1]

The owner or operator shall report the following information, as required by General Condition 14:

a. VOC

There are no reporting requirements for this pollutant.

Permit Shield

The owner or operator is hereby granted a permit shield that shall apply as long as the owner or operator demonstrates ongoing compliance with all conditions of this permit. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements of the regulations cited in this permit as of the date of issuance, pursuant to Regulation 2.16, section 4.6.1.

Off-Permit Documents

There are no off-permit documents associated with this Title V permit.

Alternative Operating Scenario

The company requested no alternative operating scenario in its Title V application.

Insignificant Activities

Equipment	Qty.	PTE (ton/yr)	Regulation Basis
Storage of lubricating oils or fuel oils with a vapor pressure of less than 10 mm Hg at conditions of 20 °C and 760 mm Hg.	2	1.25 tpy VOC	Regulation 1.02, Appendix A 3.9.2
Diesel or fuel oil storage tanks that are not used for distribution, sale or resale, and that have less than two times the capacity of the vessel in annual turnover of the fluid contained.	1	0.01 tpy VOC	Regulation 1.02, Appendix A 3.25
0.3 MMBtu/hr natural gas commercial service boiler	1	0.08 tpy NO _x	Regulation 1.02, Appendix A 1.1
Natural Gas (NG-fired heaters for bldg heat, on "commercial svc")	4	0.12 tpy NO _x	Regulation 1.02, Appendix A 1.2
Laboratory ventilating and exhausting systems which are not used for radioactive air contaminants.	1	0.41 tpy VOC	Regulation 1.02, Appendix A 3.11
Portable compression engines equipped with water pumps	3	0.78 tpy NO _x	Regulation 1.02, Appendix A 2

1. Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements pursuant to Regulation 2.16, section 3.5.4.1.4.
2. Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements as required by Regulation 2.16, section 4.1.9.4.

3. The Insignificant Activities Table is correct as of the date the permit was proposed for review by U.S. EPA, Region 4.
4. Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.
5. The owner or operator shall submit an updated list of insignificant activities that occurred during the preceding year pursuant to Regulation 2.16, section 4.3.5.3.6.
6. The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) to be reported on the annual emission inventory.
7. The District has determined pursuant to Regulation 2.16, section 4.1.9.4 that no monitoring, record keeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.

Attachment A – Determination of Benchmark Ambient Concentration (BAC)

Category _____ Number _____
 Compound name _____ CAS No. _____
 Molecular weight _____

BAC_C = _____ µg/m³, annual BAC_{NC} = _____ µg/m³, _____ (avg period)
de minimis _____ lb/hr; _____ lb/_____; _____ lb/year

- I. Carcinogen Risk - BAC_C** (annual averaging period) Carcinogen YES NO
1. IRIS 10⁻⁶ risk = _____ µg/m³ URE = _____ (µg/m³)⁻¹ Date _____
 2. Cal 10⁻⁶ risk = _____ µg/m³ IUR = _____ (µg/m³)⁻¹ Date _____
 3. Mich 10⁻⁶ risk = _____ µg/m³ Date _____
 4. NTP Part A YES NO Part B YES NO
 5. IARC Group 1 YES NO Group 2A YES NO Group 2B YES NO
 6. ATSDR
 7. Sec. 3.3.4 Method # _____ 10⁻⁶ risk = _____ µg/m³ Date _____
 8. Default 0.0004 µg/m³

- II. Chronic Noncancer Risk - BAC_{NC}** (averaging period as specified)
1. IRIS RfC = _____ µg/m³, annual Date _____
 2. Cal REL = _____ µg/m³, annual Date _____
 3. IRIS [1] RfD = _____ µg/kg/day × (70/20) = _____ µg/m³, annual Date _____
 4. Mich ITSL = _____ µg/m³, _____ averaging period Date _____
 5. TLV NIOSH = _____ µg/m³ × 0.01 = _____ µg/m³, 8-hour Date _____
 6. RTECS [1] _____ = _____ µg/m³, annual Date _____
 (describe calculation from Reg 5.20, sections 4.6 - 4.10)
 7. Default 0.004 µg/m³

[1] To use data based up on an oral route of exposure, the District must make an affirmative determination that data are not available to indicate that oral-route to inhalation-route extrapolation is inappropriate.

III. De minimis calculations

1. Carcinogen BAC_C _____ µg/m³ × 0.54 = _____ lb/hour
 BAC_C _____ µg/m³ × 480 = _____ lb/year
2. Chronic Noncancer Risk _____ (averaging period)
 BAC_{NC} _____ µg/m³ × F factor = _____ lb/(avg period)

BAC averaging period	F factor for avg period			
	Annual	24 hour	8 hour	1 hour
Annual	480			0.54
24 hours		0.12		0.05
8 hours			0.02	0.02
1 hour				0.001

[Regulation 5.22, table 1]

Prepared by _____ Date _____