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

Title V Operating Permit

Permit No.: O-0034-16-V (R2) Plant ID: 0034

Effective Date: 18 Nov 2016 Expiration Date: 30 Nov 2021

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:

Owner/Source: Caldwell Tanks, Inc.
4000 Tower Rd
Louisville, Kentucky 40219

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 (18) months and no later than six (6) months prior to the expiration date.

Application No.:	Application Received:
82769	17 Mar 2017
77604	03 Jun 2016
53664	25 Jan 2013
37803	16 Apr 2012
26302	30 Nov 2010

Administratively Complete: 08 Jun 2016
Date of Public Notice: 15 Oct 2016
Date of Proposed Permit: 15 Oct 2016

Permit writer: Rick Williams

Air Pollution Control Officer
June 14, 2017

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Title V Permit Revisions/Changes

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Description
N/A	134-97-TV	28 Sep 2001	14 Jan 2001	Initial	Initial Permit Issuance
R1	134-97-TV (R1)	06 Dec 2002	N/A	Admin.	Incorporate new performance indicator range for Unit U1, control device C5
R2	134-97-TV (R2)	18 Oct 2011	6 Sep 2011	Revision and renewal	Permit renewal; R.O. addition; For U2, add MACT, 40 CFR 63, Subpart MMMM; for U1, incorporate CAM Plan
N/A	O-0034-16-V	18 Nov 2016	15 Oct 2016	Renewal	Renew permit 134-97-TV (R2), incorporate construction permits 30506-11-C, 36880-13-C, and two emergency generators as an IA emission unit.
R1	O-0034-16-V	11 APR 2017	N/A	Admin.	Cover page: Add Administrative Change application number to list of applications. Renewal Docs Table: Correct the document ID number for the permit renewal application received 3 June 2016. Renewal Docs Table: Update application table. U5 Control Device Table: Update control efficiency and performance indicator in Control Device table; delete footnote regarding 2004 filter test; add footnotes regarding mfg guarantee and input PM loading. U5 NO_x Stds footnote: Change "operating hour" limits to "emission" limits. U5 PM Stds: Add manufacturer's guaranteed PM emission performance and limits of manufacturer's guarantee. U5 TAC Stds footnote: Correct Cr^{+6} percentage for E11 from 0.02% to 20%. U5 PM Monitoring and Recordkeeping: Add monitoring and recordkeeping requirements for plasma cutter exhaust filter units. U5-PM Reporting: Add requirement to report guarantee conditions, if applicable U5-S4: Update text to current standard language. No limits or requirements were changed. Calculation Methodology Table, U5: Update control efficiency to reflect manufacturer's guarantee. Add note defining conversion from gr/dscf to lb/hr. Attachment D: Add this attachment.CAM Plan previously existed as a separate document.
R2	O-0034-16-V	14 JUN 2017	N/A	Admin.	Calculation Methodology Table: correct U3 emission factor due to transcription error of the quoted value in previous versions. Provide equivalent alternate values for E1 – E3.

Construction Permit Summary

Permit No.	Effective Date	Description
30506-11-C	31 Mar 2011	One burn table with two plasma cutting-heads and associated equipment.
36880-13-C	03 May 2013	One burn table with a single plasma cutting-head and associated equipment.
N/A	Received 16 Apr 2012	Application for two emergency generators classified as insignificant activity (Application number 37803)

Permit Renewal Related Documents

Document Number	Date Received	Description
77604	03 Jun 2016	Permit renewal application
77686	08 Jun 2016	"Administratively complete" verification letter from APCD
79787	20 Sep 2016	Letter to Caldwell Tanks requesting additional information
79790	26 Sep 2016	'Certificate of Existence' transmittal, responsive to 20 Sep request for additional information
79789	27 Sep 2016	MSDS and related data responsive to 20 Sep request for additional information
79788	27 Sep 2016	Potential to Emit calculations and STAR Environmental Acceptability demonstration, responsive to 20 Sep request for additional information
79833	11 Oct 2016	Manufacturer's certification for Cummins emergency generator engine, responsive to 20 Sep request for additional information
81914	14 Feb 2017	Filter efficiency e-mail chain
83056	17 Feb 2017	Filter efficiency and stack test discussions
82035	20 Feb 2017	U5 Stack Test protocol proposal
83057	21 Feb 2017	U5 Stack test protocol comments
83058	22 Feb 2017	Followup on filter discussion e-mail chain
82553	10 Mar 2017	Messer Plasma DFT – filter guarantee documents
82551	13 Mar 2017	Filter performance e-mail chain
83059	14 Mar 2017	Preliminary Admin Revision submission
82769	17 Mar 2017	Application for administrative change, with filter performance guarantee
83448	5 Apr 2017	Caldwell comments to draft permit
83449	7 Apr 2017	APCD response to Caldwell comments
84514	31 May 2017	Two e-mail inquiries from Caldwell regarding emission factors listed in Calculation Methodology table, permit Attachment A
84515	1 Jun 2017	APCD response to Caldwell emission factor inquiry

Abbreviations and Acronyms

AFS - AIRS Facility Subsystem
AIRS - Aerometric Information Retrieval System
APCD - Air Pollution Control District
ASL - Adjusted Significant Level
atm - Atmosphere
BACT - Best Available Control Technology
Btu - British Thermal Unit
CEMS - Continuous Emission Monitoring System
CAAA - Clean Air Act Amendments (15 November 1990)
HAP - Hazardous Air Pollutant
hr - hour
lbs - Pounds
l - Liter
MACT - Maximum Achievable Control Technology
m - Meter
mg - Milligram
mm - Millimeter
MM - Million
MOCS - Management of Change System
NAICS - North American Industry Classification System
NSR - New Source Review
NO_x - Nitrogen oxides
NSPS - New Source Performance Standards
PM - Particulate Matter
PM_{10} - Particulate matter less than 10 microns
ppm - Parts per million
PSD - Prevention of Significant Deterioration
PMP - Preventive Maintenance Plan
psia - Pounds per square inch absolute
RACT - Reasonably Available Control Technology
SC - Specific Condition
SIC - Standard Industrial Classification
SIP - State Implementation Plan
SO_2 - Sulfur dioxide
TAC - Toxic Air Contaminant
TAL - Threshold Ambient Limit
TAP - Toxic Air Pollutant
tpy - Tons per year
UTM - Universal Transverse Mercator
VOC - Volatile Organic Compound

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

1. **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]

2. **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

   This certification must be postmarked by 15 April of the year following the year for which the certification is being submitted, or other such due date as required by another applicable regulation.

3. **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.

4. **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.

5. **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]

6. **Emission Fees Payment Requirements** - The owner or operator shall pay annual emission fees in accordance with Regulation 2.08, section 12.3. 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 12.2.4]

7. **Emission Offset Requirements** - The owner or operator shall comply with the requirements of Regulation 2.04.

8. **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]

9. **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]

10. **Hazardous Air Pollutants and Sources Categories** - The owner or operator shall comply with the applicable requirements of Regulations 5.02 and 5.14.

11. **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]

12. **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]

13. **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.

14. **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 postmarked 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:

Reporting Period	Report Due Date
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.

15. **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]

16. **Operational Flexibility** - The owner or operator may make changes without permit revision in accordance with Regulation 2.16, section 5.8.

17. **Permit Amendments (Administrative)** - This permit can be administratively amended by the District in accordance with Regulation 2.16, section 5.4.

18. **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.

19. **Permit Duration** - This permit is issued for a fixed term of 5 years, in accordance with Regulation 2.16, section 4.1.8.3.

20. **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.

21. **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]

22. **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.

23. **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.

24. **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.

25. **Permit Shield** - The permit shield shall apply in accordance with Regulation 2.16, section 4.6.1.

26. **Prevention of Significant Deterioration of Air Quality** - The owner or operator shall comply with the requirements of Regulation 2.05.

27. **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.

28. **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.

29. **Reopening For Cause** - This permit shall be reopened and revised by the District in accordance with Regulation 2.16 section 5.9.

30. **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.

31. **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.

32. **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]

33. **Stack Height Considerations** - The owner or operator shall comply with the requirements of Regulation 2.10.

34. **Startups, Shutdowns, and Upset Conditions Requirements** - The owner or operator shall comply with the requirements of Regulation 1.07.

35. **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

36. **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
2.01	General Application (Permit Requirements)

Regulation	Title
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements
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
2.16	Title V Operating Permits
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.07	Episode Reporting Requirements
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
6.01	General Provisions (Existing Affected Facilities)
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions (New Affected Facilities)
7.02	Adoption and Incorporation by Reference of Federal New Source Performance Standards

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
5.00	Definitions
5.01	General Provisions
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

37. **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 (50) 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]

Emission Unit U1: Abrasive Blast Equipment

Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
2.16	Title V Operating Permits	All
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
7.08	Standards of Performance for New Process Operations	1, 2, 3
40 CFR 64	Compliance Assurance Monitoring for Major Stationary Sources	64.1 through 64.10

DISTRICT-ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	All
5.01	General Provisions	1 through 4
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

Equipment

Emission Point	Description	Applicable Regulation	Control ID	Stack ID
E1	Wheelabrator blast equipment, make Wheelabrator, serial # A-122157, capacity 198,000 lb/hr internal circulation rate. (16’ x 9’ x 4’high, 8836 cfm airflow) Installed 1968	STAR,[1] 6.09, 40 CFR 64	C1	vents indoors

[1] The STAR regulations comprise APCD regulations 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23.

Emission Point	Description	Applicable Regulation	Control ID	Stack ID
E2	Blast booth, make Clemco, serial# 133231, capacity 825 lb/hr. (58' x 16' x 15'high, 20,000 cfm airflow) Installed 1988	STAR,[1] 7.08 40 CFR 64	C2	vents indoors
E3	Pipeabrator blast equipment, make US Filter/BCP, serial # A4-8279, capacity 132,000 lb/hr internal circulation rate, equipped with an air wash separator and a storage tank/hopper. installed 1998, (23' x 5.5' x 6' high, 7000 cfm airflow)	STAR,[1] 7.08 40 CFR 64	C3	vents indoors

Control Devices:

ID #	Description	Control Efficiency	Performance Indicator
C1	Cartridge-type baghouse, make Carbo-Tech, model 9-4-1800 CUPFL, installed 1968	99.2% [2]	differential pressure
C2	Baghouse, make DCE, model DLM 2/7/15, installed 1988	95% [3]	differential pressure
C3	Cartridge-type baghouse, make Farr, model 16D-T3 installed 1998	99.2% [2]	differential pressure

Alternative Operating Scenarios:

Emission Point	Description	Primary Operating Scenario	Alternative Operating Scenario
E1A	Wheelabrator blast booth E1 controlled by baghouse C1	Baghouse C1 vents inside	Baghouse C1 vents outside through Stack S5
E2A	Clemco shot blast booth E2 controlled by baghouse C2	Baghouse C2 vents inside	Baghouse C2 vents outside through Stack S6
E3A	Pipeabrator blast booth E3 controlled by baghouse C3	Baghouse C3 vents inside	Baghouse C3 vents outside through Stack S7

[2] This control efficiency is based on March 2011 stack test.

[3] This control efficiency is the APCD default, to be used when test data demonstrating a different efficiency is not available.

U1 Specific Conditions

S1. **Standards**
[Regulation 2.16, section 4.1.1]

a. **Opacity**

i. The owner or operator shall not allow visible emissions from any abrasive blasting equipment to equal or exceed 20% opacity.
[Regulation 6.09, section 3.1 and Regulation 7.08, section 3.1.1]

b. **PM**

i. The owner or operator shall not allow PM emissions from Wheelabrator blast booth (E1) to exceed 51.2 lb/hr, based on actual operating hours in a calendar day.[4] [Regulation 6.09, section 3.2]

ii. The owner or operator shall not allow PM emissions from Clemco blast booth (E2) to exceed 2.34 lb/hr, based on actual operating hours in a calendar day.[4] [Regulation 7.08, section 3.3.1]

iii. The owner or operator shall not allow PM emissions from Pipeabrator blast booth (E3) to exceed 33.8 lb/hr, based on actual operating hours in a calendar day. [Regulation 7.08, section 3.3.1]

iv. The owner or operator shall use particulate control equipment (C1, C2, and C3) at all times any abrasive blast equipment is in use, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards.
[Regulation 2.16, section 4.1.1]

c. **TAC**

i. The owner or operator shall not allow TAC emissions to exceed the amounts shown in Table 1 in any 12-consecutive-month period. [5]
[Regulation 5.21, section 4.3]

[4] The EA Demonstration submitted by Caldwell Tanks on January 12, 2011 included PM emission calculations that showed that this emission rate could not be exceeded uncontrolled. APCD has verified these calculations.

[5] These TAC limits are established based on the TAC concentrations in the PM emissions: Manganese, 1.2%; Nickel, 0.2%; and Cr^{+3}, 0.1%. These concentrations were determined from data submitted by Caldwell Tanks on 27 Sept, 2016 as a supplement to their Title V renewal application. The limits established here assure that TAC emissions remain environmentally acceptable.

Maximum Emissions, pounds per 12-consecutive-month period			
	Mn	Ni	Cr^{+3}
E1-Wheelabrator	370	61.8	30.9
E2-Blast booth	N/A	N/A	N/A
E3-Pipeabrator	370	61.8	30.9

Table 1 - Emission unit U1 maximum TAC emissions.

ii. The owner or operator shall not allow emission of any category 1 or 2 TACs to exceed environmentally acceptable levels, whether specifically established by modeling or determined by the District to be *de minimis*. [Regulations 5.01 and 5.21]

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 required records for a minimum of 5 years and make the records readily available to the District upon request.

a. **Opacity**

i. A regular visual emission survey must be conducted for E1, E2, and E3:

(1) For *primary operating scenarios*:

Conduct a monthly one-minute visible emissions survey of the emission points (E1, E2, and E3) during normal operation. No more than four emission points shall be observed simultaneously. The opacity surveys may be performed at the building exhaust points if the process vents indoors.

(2) For *alternative operating scenarios*:

Conduct a weekly one-minute visible emissions survey of the emission points during normal operation. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the outside emission points (stacks S5, S6, and S7). For an emission point without observed visible emissions during 12 consecutive operating weeks, the owner or operator may elect to conduct a monthly one-minute visible emission survey, during normal operation, of the emission points.

ii. At emission points where visible emissions are observed, initiate corrective action within eight hours of the initial observation. If the visible emissions persist, perform or cause to be performed a Method 9 visual determination of opacity, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.

iii. Maintain monthly records (or weekly records for alternative operating scenarios) of the results of all visible emissions surveys and Method 9 determinations performed. The records 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 period, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

b. **PM**

i. At least once per calendar month, perform a visual inspection of the structural and mechanical integrity of the baghouses (C1, C2, and C3) for signs of damage, air leakage, corrosion, etc. and repair as needed. Maintain monthly records of these inspections of the structural and mechanical integrity of the baghouses. The records shall include:
[40 CFR 64]

(1) the date of the inspection,

(2) the name of the person that performed the inspection,

(3) identification and description of any equipment defects observed, and

(4) the date of repair or replacement of defective components.[6]

ii. Monitor and record the pressure drop across the baghouses at least once each operating day during normal operation of the equipment. Take corrective action if the pressure drop for any baghouse is out of the normal pressure drop range, shown in Table 2. It is acceptable that the pressure drop be less than the minimum shown in the table for the first 200 hours of operation after a filter change, if it is first verified that all filters are intact and properly seated.[6]
[40 CFR 64]

Control Device	Acceptable differential pressure, inches of water
C1 - Carbo-Tech, model 9-4-1800 CUPFL	2.0 – 6.0
C2 - DCE, model DLM 2/7/15	0.75 – 5
C3 - Farr, model 16D-T3	2.0 – 8.0

Table 2 - Allowable pressure drop across control device filters.

[6] Caldwell Tanks is a major source for PM, VOC, and HAP. Control devices are required to achieve compliance with the PM/Opacity standards. As required by 40 CFR 64, *Compliance Assurance Monitoring for Major Stationary Sources*, Caldwell Tanks is required to submit a CAM Plan for PM, based on current process and control equipment operating requirements and practices. Caldwell Tanks submitted this plan on October 5, 2009. The requirements of the Plan are incorporated in this permit. The emission points designated E1, E2, and E3 and the control equipment designated C1, C2 and C3 in this permit were originally identified E1, E5, E6, and C1, C5, and C6 in the CAM Plan.

iii. Maintain daily records of the hours of operation of each abrasive blast device E1-E3.

iv. The owner or operator shall monitor and maintain daily record of any period of time when the shot blast booths were operating and the associated baghouses were not operating, or a declaration that the baghouses operated at all times that day when the shot blast booths were operating. If there is any time that the associated baghouses were bypassed or not in operation when the shot blast booths were operating, then the owner or operator shall keep a record of the following for each bypass event:

(1) Date;

(2) Start time and stop time;

(3) Identification of the control device and process equipment;

(4) PM emissions for each hour if the control equipment was bypassed, 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

(7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

v. Calculate the monthly and 12-consecutive-month PM emissions from each abrasive blast devices E1-E3 using the methodology described in Attachment A - Calculation Methodology.[7]

c. **TAC**

i. For any control device bypass, maintain records of the bypass event as specified for PM.

ii. Calculate the monthly and 12-consecutive-month TAC emission for any TAC with an emission standard.

iii. Maintain records sufficient to demonstrate environmental acceptability, including, but not limited to SDS, analysis of emissions, and modeling results.

iv. If a new TAC is introduced or the content of a TAC in a raw material increases, the owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions.

[7] The PM emissions are directly used to calculate the TAC emissions as a percentage of PM.

S3. **Reporting**
[Regulation 2.16, section 4.1.9.3]

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

a. **Opacity**

i. Any deviation from the requirement to perform monthly (or weekly for alternative operating scenarios) visible emission surveys or Method 9 determinations;

ii. Any deviation from the requirement to record the results of each VE survey and Method 9 determination performed;

iii. The number, date, and time of each VE survey where visible emissions were observed, and the results of the Method 9 determination performed;

iv. Identification of all periods of exceeding an opacity standard; and

v. Description of any corrective action taken for each exceedance of the opacity standard.

b. **PM**

i. All periods of exceeding a PM emission rate standard during a reporting period. The report shall include the following:

(1) Emission Unit ID number and emission point ID number;

(2) The date and duration (including the start and stop time) during which a deviation occurred;

(3) The PM emission rate, in lb/hr;

(4) Summary information on the cause or reason for excess emissions and measures implemented to prevent reoccurrence of the situation that resulted in excess PM emissions;

ii. Any deviation from the requirement of performing monthly visual inspection of the structural and mechanical integrity of the baghouses (C1, C2, and C3).

iii. Any deviation from the requirement to use the associated baghouses at all times the shot blast booths are in operation. The report shall include the following:

(1) The date and duration (including the start and stop time) of each by-pass to the atmosphere;

(2) Calculated quantity of PM emitted, in pounds, for each bypass;

(3) Corrective action taken as a result of the baghouse bypass;

(4) Summary information on the cause or reason for the baghouse bypass and measures implemented to prevent reoccurrence of the bypass.

iv. Monthly and 12-consecutive-month PM emissions, calculated using the methodology described in Attachment A.

c. **TAC**

i. Actual TAC emissions at each emission point for each TAC with an emission standard, using the methodology described in Attachment A.

ii. Any conditions that were inconsistent with those conditions analyzed in the most recent Environmental Acceptability Demonstration or a negative declaration stating that operations were within the conditions analyzed. This includes, but is not limited to, control device upset conditions.

iii. For any conditions different than those of the most recent EA demonstration analysis, the owner or operator shall re-analyze TAC to determine whether the new conditions comply with the STAR program. Changes to the air dispersion modeling program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to re-analyze.
[Regulation 5.21 sections 4.22 – 4.24]

iv. The owner or operator shall submit a re-evaluated EA demonstration to APCD no more than six months after a change in materials or processes that requires such a re-evaluation, as described in the preceding paragraph.

S4. **Testing**
[Regulation 2.16, section 4.3.1]

a. **General Requirements**

i. The owner or operator shall retest control devices C1 and C3 within ten years of the most recent District-accepted performance test. [8] For equipment which has been tested but not within ten years prior to the effective date of this permit, the Company may submit within 90 days of the effective date of this permit, contingent on approval by the District, a schedule which shall, at a minimum, propose testing for all affected equipment within this permit cycle. Thereafter the Company shall retest each affected device at least once every ten years. Devices of adequately similar design and filter media may be represented by a common performance test contingent upon review and approval of the testing protocol by the District. In lieu of the control efficiency testing, the owner or operator may submit a signature guarantee from the control device manufacture stating the control device efficiency. Control devices for which Caldwell Tanks will accept the District-standard default efficiency do not need to be tested or retested.

ii. The owner or operator shall use the most recent District-accepted performance test results to demonstrate compliance with the emission limits and in the annual emission inventory reporting.[9]

iii. If performance testing is not completed by the required date, then the company shall calculate emissions using expired test result data, methods such as EPA-approved emission factors and guidance documents such as EIIP and AP-42, or other methods upon written approval by the District, whichever results in the greater (more conservative) emissions.

a. **PM**

i. The owner or operator shall perform an EPA Reference Method 5 PM performance test on the inlet and outlet of the control device or emission point to determine the emission rate and control efficiency. The test shall be performed at 90% or higher of maximum capacity, or allowable/permitted capacity, or at a level of capacity which results in the greatest emissions and is representative of the operations. Failure to

[8] Control baghouse C2 has not been tested and emission calculations are based on the default control efficiency of 95%. Periodic testing of this equipment will also be required if Caldwell Tanks uses an efficiency value greater than this default value. Testing must be completed before APCD will accept the non-default efficiency value as valid.

[9] The Carbotech baghouse (C1) used to control PM emissions from the Wheelabrator (E1) was tested 29 March 2011. The control efficiency was determined to be 99.2%. Because of the similarity of their designs, this efficiency may also be used for the Farr baghouse (C3), associated with the Pipeabrator (E3). The DCE baghouse (C2) has not been tested and Caldwell will accept the default 95% control efficiency for this equipment.

perform the test, at maximum capacity, allowable/permitted capacity, or at a level of capacity which resulted 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 test plan. The plan shall include the EPA test methods that will be used for testing, the process operating parameters that will be monitored during the performance test, and the control device performance indicators (e.g. pressure drop) that will be monitored during the performance test. The test plans shall be furnished to the District at least 30 days prior to the actual date of the performance test. Attached to the permit (Attachment B) is a performance test protocol checklist with the information that must be submitted in the protocol.

iii. The owner or operator shall provide the District at least 10 days prior notice of any performance 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 performance test within 60 days following the actual date of completion of the performance test.

Emission Unit U2: Paint Spray Booths

Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.05	Compliance with Emission Standards and Maintenance Requirements	1.1, 4.1, 4.1.1
2.16	Title V Operating Permits	All
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
6.31	Standard of Performance for Existing Miscellaneous Metal Parts and Products Surface Coating Operations	1 - 7
40 CFR 63 Subpart MMMM	National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products	

DISTRICT-ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	All
5.01	General Provisions	1 through 4
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants	1, 2, 4.74
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

Equipment

Emission Point	Description	Applicable Regulation	Control ID	Stack ID
E4	Custom-made paint booth, designated as South Paint Booth #1. Installed 1975; 19,900 cfm exhaust per stack	STAR,[10] 1.05, 2.16, 5.02, 6.09, 6.31, 40CFR63, Subpart MMMM	C4, C5	S1, S2
E5	Custom-made paint booth, designated as North Paint Booth #2. Installed 1975; 19,900 cfm exhaust per stack	STAR,[10] 1.05, 2.16, 5.02, 6.09, 6.31, 40CFR63, Subpart MMMM	C6, C7	S3, S4

Control Devices

ID #	Description	Control Efficiency	Performance Indicator
C4, C5	Custom-made dry filter consisted of primary pre-filters and secondary pleated filters, Koch102-701-022 and 541-055-90 OR PaintPocket 04CC99202152P, or equivalent	95%	differential pressure
C6, C7	Custom-made dry filter consisted of primary pre-filters and secondary pleated filters, Koch102-701-022 and 541-055-90 OR PaintPocket 04CC99202152P, or equivalent	95%	differential pressure

[10] The STAR regulations comprise APCD regulations 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23.

U2 Specific Conditions

S1. **Standards**
[Regulation 2.16, section 4.1.1]

a. **HAP**

i. The affected source subject to these limits is the collection of all of the following components that are used for surface coating of miscellaneous metal parts and products: [40 CFR 63.3882(b)]

(1) All coating operations as defined in §63.3981;

(2) All storage containers and mixing vessels in which coatings, thinners and/or other additives, and cleaning materials are stored or mixed;

(3) All manual and automated equipment and containers used for conveying coatings, thinners and/or other additives, and cleaning materials; and

(4) All storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation.

ii. The owner or operator shall limit the organic HAP emissions to the atmosphere to no more than 2.6 lb organic HAP per gallon of coating solids used during each 12-month compliance period.
[40 CFR 63.3890(b)(1)]

iii. The owner or operator must include all coatings (as defined in §63.3981), thinners and/or additives, and cleaning materials used in the affected source when determining whether the organic HAP emission rate is equal to or less than the applicable emission limit, set forth in the previous paragraph and specified in §63.3890(b). To make this determination, you must use at least one of the compliance options specified in 40 CFR 63.3891.[11] You may apply any of the compliance options to an individual coating operation, or to multiple coating operations as a group, or to the entire affected source. You may use different compliance options for different coating operations or at different times on the same coating operation. You may employ different compliance options when different coatings are applied to the same part, or when the same coating is applied to different parts. However, you may not use different compliance options at the

[11] This regulation allows for three options to demonstrate compliance: (1) 'use of compliant materials' [§63.3891(a)], (2) 'emission rate without add-on controls' [§63.3891(b)], or (3) 'emission rate with add-on controls' [§63.3891(c)]. Caldwell Tanks has historically used the second option (for which the requirements are set forth in this permit), but is not restricted from using either of the other methods in the future, provided that they follow the compliance protocols and reporting requirements set forth in 40 CFR 63, Subpart MMMM.

same time on the same coating operation. If you switch between compliance options for any coating operation or group of coating operations, you must document this switch as required by §63.3930(c), and you must report it in the next semiannual compliance report required in §63.3920.
[40 CFR 63.3891]

iv. *Emission rate without add-on controls option.* The owner or operator must demonstrate that, based on the coatings, thinners, and/or other additives, and cleaning material used in the coating operation(s), the organic HAP emission rate for the coating operation(s) is less than or equal to set forth in the previous paragraph and specified in §63.3890(b), calculated as a rolling 12-month emission rate and determined on a monthly basis.
[40 CFR 63.3891(b)]

v. Any coating operation(s) for which you use the *emission rate without add-on controls* compliance option must be in compliance with the emission limit specified above and in 63.3890(b) at all times.
[40 CFR 63.3900(a)(1)]

vi. The owner or operator must always operate and maintain the affected source, including all air pollution control and monitoring equipment you use for purposes of complying with Subpart MMMM, in a manner consistent with safety and good air pollution control practices for minimizing emissions. [40 CFR 63.3900(b)]

b. **Opacity**

i. The owner or operator shall not allow visible emissions from the spray booth to equal or exceed 20% opacity. [Regulation 6.09, section 3.1]

c. **PM**

i. The owner or operator shall not allow PM emissions from either paint booth E4 or E5 to exceed 2.58 lb/hr based on actual operating hours in a calendar day.[12] [Regulation 6.09, section 3.2]

ii. The owner or operator shall use particulate filters (C4-C7) at all times the spray booth is in use, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards.
[Regulation 2.16, section 4.1.1]

[12] Caldwell Tanks performed a one-time compliance demonstration for PM in the second 2001 semi-annual compliance report and demonstrated that the controlled PM emissions from the paint booths cannot exceeded the hourly PM emission limit. Therefore, the requirements to use filters at all time and monitor the pressure drop across the filters, as a surrogate of the requirement of monthly PM calculation, will ensure compliance with PM standard. Should a new coating with higher solids content be introduced to the process a new demonstration must be submitted.

d. **TAC**

i. The owner or operator shall not allow emissions of any category 1 or 2 TAC to exceed environmentally acceptable levels, whether specifically established by modeling or determined by the District to be *de minimis*.[13] [Regulation 5.21]

e. **VOC**

i. The owner or operator shall not cause or allow the emission of VOC from any affected facility resulting from the coating of metallic surfaces in excess of the amounts shown in Table 3. Compliance with these emission limits shall be based on a calendar-day averaging period. If more than one limit in Table 3 applies for a specific coating, the least stringent limit shall apply. [Regulation 6.31, section 3.1]

Coating Description	**VOC content (kg/l)**	**VOC content (lb/gal)**
	(Less water and exempt solvents)	
Clear coats	0.52	4.3
Air-dried coating	0.42	3.5
Extreme-performance coating	0.42	3.5
All other coatings	0.36	3.0

Table 3 - Allowable VOC content for Miscellaneous Metal Coating

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 required records for a minimum of 5 years and make the records readily available to the District upon request.

a. **HAP**

i. The owner or operator shall meet the following requirements to demonstrate continuous compliance with emission limitation when using the *emission rate without add-on controls* option.

[13] Caldwell Tanks has identified six category 2 TACs in the paints in use at the facility and there were no category 1 TACs: 1,6 Hexamethylene diisocyanate, polymeric diphenylmethane diisocyanate, ethylene glycol monopropyl ether, trimethyl benzene, and xylene. Xylene was the only category 2 TAC reported in the 2006 Toxics Release Inventory (TRI). Modeling submitted 20 June 2014 demonstrates that the uncontrolled potential emission of xylene was environmentally acceptable.

(1) To demonstrate continuous compliance, the organic HAP emission rate for each compliance period must be less than or equal to the emission limit in the HAP Standards of this permit and in §63.3890(b). A compliance period consists of 12 months. Each month is the end of a compliance period consisting of that month and the preceding 11 months. To determine the organic HAP emission rate for each compliance period, you must perform the following calculations on a monthly basis using data from the previous 12 months of operation. [40 CFR 63.3952(a)]

(a) *Determine the mass fraction of organic HAP for each material.* The owner or operator shall determine the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during each month using one of the methods specified in §63.3941(a). [40 CFR 63.3951(a)]

(b) *Determine the volume fraction of coating solids.* The owner or operator shall determine the volume fraction of coating solids [liter (gal) of coating solids per liter (gal) of coating] for each coating used during each month using one of the methods specified in §63.3941(b). [40 CFR 63.3951(b)]

(c) *Determine the density of each material.* The owner or operator shall determine the density of each liquid coating, thinner and/or other additive, and cleaning material used during each month from test results using ASTM Method D1475-98, "Standard Test Method for Density of Liquid Coatings, Inks, and Related Products" (incorporated by reference, see §63.14); information from the supplier or manufacturer of the material; or reference sources providing density or specific gravity data for pure materials. If you are including powder coatings in the compliance determination, determine the density of powder coatings, using ASTM Method D5965- 02, "Standard Test Methods for Specific Gravity of Coating Powders" (incorporated by reference, see §63.14), or information from the supplier. If there is disagreement between ASTM Method D1475-98 or ASTM Method D5965-02 test results and other such information sources, the test results will take precedence unless, after consultation, you demonstrate to the satisfaction of the enforcement agency that the formulation data are correct. If you purchase materials or monitor consumption by weight instead of volume, you do not need to determine material density. Instead, you may use the material weight in place of the combined terms for density and volume in Equations 1A, 1B, 1C, and 2, below. [40 CFR 63.3951(c)]

(d) *Determine the volume of each material used.* The owner or operator shall determine the volume (liters) of each coating, thinner and/or other additive, and cleaning material used during each month by measurement or usage records. If you purchase materials or monitor consumption by weight instead of volume, you do not need to determine the volume of each material used. Instead, you may use the material weight in place of the combined terms for density and volume in Equations 1A, 1B, and 1C, below.
[40 CFR 63.3951(d)]

(e) *Calculate the mass of organic HAP emissions.* The mass of organic HAP emissions is the combined mass of organic HAP contained in all coatings, thinners and/or other additives, and cleaning materials used during each month minus the organic HAP in certain waste materials. The owner or operator shall calculate the mass of organic HAP emissions using Equation 1. [40 CFR 63.3951(e)]

$$H_e = A + B + C - R_w \qquad \text{(Equation 1)}$$

where:

H_e = Total mass of organic HAP emissions during the month, kg;

A = Total mass of organic HAP in the coatings used during the month, kg, as calculated in Equation 1A.

B = Total mass of organic HAP in the thinners and/or other additives used during the month, kg, as calculated in Equation 1B.

C = Total mass of organic HAP in the cleaning materials used during the month, kg, as calculated in Equation 1C.

R_w = Total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste TSDF for treatment or disposal during the month, in kg, determined according to paragraph (e)(4) of §63.3951. (You may assign a value of zero to R_w if you do not wish to use this allowance.)

(i) Calculate the kg organic HAP in the coatings used during the month using Equation 1A:
[40 CFR 63.3951(e)(1)]

$$A = \sum_{i=1}^{m} (Vol_{c,i})(D_{c,i})(W_{c,i}) \qquad \text{(Equation 1A)}$$

where:

A = Total mass of organic HAP in the coatings used during the month, kg;

$Vol_{c,i}$ = Total volume of coating *i* used during the month, liters;

$D_{c,i}$ = Density of coating *i*, kg coating per liter coating;

$W_{c,i}$ = Mass fraction of organic HAP in coating *i*, kg organic HAP per kg coating;

M = Number of different coatings used during the month.

(ii) Calculate the kg of organic HAP in the thinners and/or other additives used during the month using Equation 1B: [40 CFR 63.3951(e)(2)]

$$B = \sum_{j=1}^{m} (Vol_{t,j})(D_{t,j})(W_{t,j}) \qquad \text{(Equation 1B)}$$

where:

B = Total mass of organic HAP in the thinners and/or other additives used during the month, kg;

$Vol_{t,j}$ = Total volume of thinner and/or other additive *j* used during the month, liters;

$D_{t,}$ = Density of thinner and/or other additive *j*, kg per liter;

$W_{t,j}$ = Mass fraction of organic HAP in thinner and/or other additive *j*, kg organic HAP per kg thinner and/or other additive;

N = Number of different thinners and/or other additives used during the month.

(iii) Calculate the kg organic HAP in the cleaning materials used during the month using Equation 1C: [40 CFR 63.3951(e)(3)]

$$C = \sum_{k=1}^{p} (Vol_{s,k})(D_{s,k})(W_{s,k}) \qquad \text{(Equation 1C)}$$

where:

C = Total mass of organic HAP in the cleaning materials used during the month, kg;

$Vol_{s,k}$ = Total volume of cleaning material *k* used during the month, liters;

$D_{s,k}$ = Density of cleaning material *k*, kg per liter;

$W_{s,k}$ = Mass fraction of organic HAP in cleaning material *k*, kg organic HAP per kg material;

P = Number of different cleaning materials used during the month.

(iv) If you choose to account for the mass of organic HAP contained in waste materials sent or designated for shipment to a hazardous waste TSDF in Equation 1 of this section, then you must determine the mass according to paragraphs §63.3951(e)(4)(i) through (iv).
[40 CFR 63.3951(e)(4)]

(f) *Determine the total volume of coating solids used.* Determine the total volume of coating solids used, liters, which is the combined volume of coating solids for all the coatings used during each month, using Equation 2:
[40 CFR 63.3951(f)]

$$V_{st} = \sum_{i=1}^{m} (Vol_{c,i})(V_{s,i}) \qquad \text{(Equation 2)}$$

where:

V_{st} = Total volume of coating solids used during the month, liters;

$Vol_{c,i}$ = Total volume of coating *i* used during the month, liters.

$V_{s,i}$ = Volume fraction of coating solids for coating *i*, liter solids per liter coating, determined according to §63.3941(b).

M = Number of coatings used during the month.

(g) *Calculate the organic HAP emission rate.* Calculate the organic HAP emission rate for the compliance period, kg organic HAP emitted per liter coating solids used, using Equation 3: [40 CFR 63.3951(g)]

$$H_{yr} = \frac{\sum_{y=1}^{n} H_e}{\sum_{y=1}^{n} V_{st}} \quad \text{(Equation 3)}$$

where:

H_{yr} = Average organic HAP emission rate for the compliance period, kg organic HAP emitted per liter coating solids used.

H_e = Total mass of organic HAP emissions from all materials used during month *y*, kg, as calculated by Equation 1.

V_{st} = Total volume of coating solids used during month *y*, liters, as calculated by Equation 2.

y = Identifier for months.

n = Number of full or partial months in the compliance period (for all compliance periods, n equals 12).

ii. Regardless of the compliance method the owner or operator shall maintain the following records:

(1) The owner or operator must collect and keep records of the data and information below. Failure to collect and keep these records is a deviation from the applicable standard. [40 CFR 63.3930]

(a) A copy of each notification and report that you submitted to comply with Subpart MMMM, and the documentation supporting each notification and report.
[40 CFR 63.3930(a)]

(b) A current copy of information provided by materials suppliers or manufacturers, such as manufacturer's formulation data, or test data used to determine the mass fraction of organic HAP and density for each coating, thinner and/or other additive, and cleaning material, and the volume fraction of coating solids for each coating. If you

conducted testing to determine mass fraction of organic HAP, density, or volume fraction of coating solids, you must keep a copy of the complete test report. If you use information provided to you by the manufacturer or supplier of the material that was based on testing, you must keep the summary sheet of results provided to you by the manufacturer or supplier. You are not required to obtain the test report or other supporting documentation from the manufacturer or supplier. [40 CFR 63.3930(b)]

(c) For each compliance period, the following records: [40 CFR 63.3930(c)]

(i) A record of the coating operations on which you used each compliance option and the time periods (beginning and ending dates and times) for each option you used. [40 CFR 63.3930(c)(1)]

(ii) For the *emission rate without add-on controls* option, a record of the calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month using Equations 1, 1A through 1C, and 2, and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.3951(e)(4); the calculation of the total volume of coating solids used each month using Equation 2; and the calculation of each 12-month organic HAP emission rate using Equation 3. [40 CFR 63.3930(c)(3)]

(2) A record of the name and volume of each coating, thinner and/or other additive, and cleaning material used during each compliance period. [(40 CFR 63.3930(d)]

(3) A record of the mass fraction of organic HAP for each coating, thinner and/or other additive, and cleaning material used during each compliance period unless the material is tracked by weight. [40 CFR 63.3930(e)]

(4) A record of the volume fraction of coating solids for each coating used during each compliance period. [40 CFR 63.3930(f)]

(5) If you use the *emission rate without add-on controls* compliance option, the density for each coating, thinner and/or other additive, and cleaning material used during each compliance period. [40 CFR 63.3930(g)]

(6) If you use an allowance in Equation 1 for organic HAP contained in waste materials sent to or designated for shipment to a treatment, storage, and disposal facility (TSDF) according to

§63.3951(e)(4), you must keep records of the information specified in paragraphs §63.3930(h)(1) through (3) as follows:
[40 CFR 63.3930(h)]

(a) The name and address of each TSDF to which you sent waste materials for which you use an allowance in Equation 1; a statement of which subparts under 40 CFR parts 262, 264, 265 , and 266 apply to the facility; and the date of each shipment.
[40 CFR 63.3930(h)(1)]

(b) Identification of the coating operations producing waste materials included in each shipment and the month or months in which you used the allowance for these materials in Equation 1 of §63.3951. [40 CFR 63.3930(h)(2)]

(c) The methodology used in accordance with §63.3951(e)(4) to determine the total amount of waste materials sent to or the amount collected, stored, and designated for transport to a TSDF each month; and the methodology to determine the mass of organic HAP contained in these waste materials. This must include the sources for all data used in the determination, methods used to generate the data, frequency of testing or monitoring, and supporting calculations and documentation, including the waste manifest for each shipment. [40 CFR 63.3930(h)(3)]

(7) The owner or operator shall keep records of the date, time, and duration of each deviation. [40 CFR 63.3930(j)]

iii. The owner or operator shall keep records in the form and time period as the following:

(1) The owner or operator must keep records in a form suitable and readily available for expeditious review. Where appropriate, the records may be maintained as electronic spreadsheets or as a database. [40 CFR 63.3931(a)]

(2) You must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63.3931(b)]

(3) The owner or operator must keep each record on-site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. You may keep the records off-site for the remaining 3 years.
[40 CFR 63.3931(c)]

iv. The owner or operator shall maintain a copy of the Safety Data Sheet (SDS) for each HAP-containing material used at this plant.
[Regulation 2.16, section 4.1.9]

b. **Opacity**

i. At least once per calendar month, inspect the filters in the paint booths to ensure proper installation (i.e. proper alignment/placement, gaps, etc.) and replace as needed.

ii. Keep a record that shows the date and the name of the person who inspected the filters and if filters were replaced.

c. **PM**

i. At least once per calendar week, monitor and record the pressure drop across the filters.[14] The owner or operator shall take corrective action if the pressure drop across the filters outside of the normal pressure drop range of 0.05-2.0 inches water column.

ii. Monitor and maintain daily records of any periods of time where the paint booths were operating and the filters were damaged or not used, or record a declaration that the filters were properly in place at all times that day when the paint booth was operating. If there was any time during which any filters were not in place when the paint booths was operating, keep a record of the following:

(1) Date;

(2) Start time and stop time of the filter bypass event;

(3) Identification of the control device and process equipment;

(4) PM emissions for each hour during the bypass, in lb/hr, using the methodology described in Attachment A - Calculation Methodology;

(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.

[14] Caldwell Tanks performed a one-time compliance demonstration for PM in the second 2001 semi-annual compliance report and demonstrated that the controlled PM emissions from the paint booths cannot exceeded the hourly PM emission limit. Therefore, the requirements to use filters at all time and monitor the pressure drop across the filters, as a surrogate of the requirement of monthly PM calculation, will ensure compliance with PM standard. Should a new coating with higher solids content be introduced to the process a new demonstration must be submitted.

d. **TAC**

i. Maintain records sufficient to demonstrate environmental acceptability, including, but not limited to SDS, analysis of emissions, and/or modeling results.

ii. If a new TAC is introduced or the content of a TAC in a raw material increases, the owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions.

e. **VOC**

i. Maintain records that include, but not be limited to, the following: [Regulation 6.31, 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, plastic, etc.) [15]

(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 averaging period.

(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 averaging period.

ii. The VOC content shall be calculated using a percent solids basis (excluding water and exempt solvents) for coatings using EPA Method 24. [Regulation 6.31, section 6.2]

iii. The averaging period weighted average VOC content, which means the VOC content of two or more coatings as applied on a coating line during any averaging period and weighted according to the fraction of the total coating volume that each coating represents, shall be calculated using the following equation:

[15] Application method will be HVLP spray gun application of solvent-based paint, and the substrate type will be metal. Compliance with this paragraph may be demonstrated by maintaining a one-time record of this information and notification to APCD if any changes to this information occur.

$$VOC_W = \sum_{i=1}^{n} \frac{V_i C_i}{VT}$$

where:

VOC_w = The average VOC content of two or more coatings as applied each averaging period on a coating line, in kg VOC/l (lb of VOC/gal) of coating, excluding water and exempt solvents.

V_i = The volume of each coating as applied each averaging period on a coating line in units of liters (gallons), excluding water and exempt solvents.

C_i = The VOC content of each coating as applied each averaging period on a coating line in units of kg of VOC/l (lb of VOC/gal) of coating, excluding water and exempt solvents.

VT = The total volume of all coatings as applied each averaging period on a coating line in units of liters (gallons), excluding water and exempt solvents.

n = The number of different coatings as applied each averaging period on a coating line.

By performing the daily record keeping, as defined in Regulation 6.31 and specified above, the owner or operator complies with the requirements of Regulation 1.05, section 4.1.1.

S3. **Reporting**
[Regulation 2.16, section 4.1.9.3]

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

a. **HAP**

i. *General Requirements.* The semi-annual compliance report must contain the information specified in §63.3920, paragraphs (a)(3)(i) through (vii) , and the information specified in §63.3920, paragraphs (a)(4) through (7) and (c)(1) that are applicable to your affected source as follows:
[40 CFR 63.3920(a)(3)]

(1) Company name and address. [40 CFR 63.3920(a)(3)(i)]

(2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. [40 CFR 63.3920(a)(3)(ii)]

(3) Date of report and beginning and ending dates of the reporting period. The reporting period is the 6-month period ending on June 30 or December 31. Note that the information reported for each of the 6 months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation. [40 CFR 63.3920(a)(3)(iii)]

(4) Identification of the compliance option or options specified in 63.3891 that you used on each coating operation during the reporting period. If you switched compliance options during the reporting period, you must report the beginning and ending dates for each option you used. [40 CFR 63.3920(a)(3)(iv)]

(5) The calculations results for the organic HAP emission rate (in lb_{HAP}/gal_{solids}) for each rolling 12-month period during the 6-month reporting period. [40 CFR 63.3920(a)(3)(v)]

ii. *No deviations*.[16] If there were no deviations from the emission limitations in §§63.3890(b), 63.3892, and 63.3893 that apply to you, the semiannual compliance report must include a statement that there were no deviations from the emission limitations during the reporting period. [40 CFR 63.3920(a)(4)]

iii. *Deviations*: If there was a deviation from the applicable emission limit in the HAP Standards of this permit and §63.3890(b), the semiannual compliance report must contain the following information: [40 CFR 63.3920(a)(6)]

(1) The beginning and ending dates of each compliance period during which the 12-month organic HAP emission rate exceeded the applicable emission limit in §63.3890(b); [40 CFR 63.3920(a)(6)(i)]

(2) The calculations used to determine the 12-month organic HAP emission rate for the compliance period in which the deviation occurred. You must submit the calculations for Equations 1, 1A through 1C, 2, and 3 of §63.3951; and if applicable, the calculation used to determine mass of organic HAP in waste materials according to §63.3951(e)(4). You do not need to submit

[16] Deviation means any instance in which an affected source subject to Subpart MMMM, or an owner or operator of such a source: (40 CFR 63.3981)

- Fails to meet any requirement or obligation established by this Subpart MMMM including but not limited to, any emission limit or operating limit or work practice standard;
- Fails to meet any term or condition that is adopted to implement an applicable requirement in Subpart MMMM and that is included in the operating permit for any affected source required to obtain such a permit; or
- Fails to meet any emission limit, or operating limit, or work practice standard in Subpart MMMM during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by Subpart MMMM.

background data supporting these calculations (e.g., information provided by materials suppliers or manufacturers, or test reports); [40 CFR 63.3920(a)(6)(ii)]

(3) A statement of the cause of each deviation. [40 CFR 63.3920(a)(6)(iii)]

iv. As part of each semiannual compliance report required by §63.3920, you must identify the coating operation(s) for which you used the *emission rate without add-on controls* option. If there were no deviations from the emission limitations, you must submit a statement that the coating operation(s) was (were) in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in the HAP Standards of this permit and §63.3890(b), determined according to §63.3951(a) through (g). [40 CFR 63.3952(c)]

v. *Inclusion with Title V report.* Each affected source that has obtained a Title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71 must report all deviations as defined in 40 CFR Part 63, Subpart MMMM in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a semiannual compliance report pursuant to §63.3920 along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the semiannual compliance report includes all required information concerning deviations from any emission limitation in Subpart MMMM, its submission will be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a semiannual compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permitting authority.[17] [40 CFR 63.3920(a)(2)]

vi. *Dates.* Unless the District has approved or agreed to a different schedule for submission of reports under §63.10(a), you must prepare and submit each semiannual compliance report according to the dates specified in 40 CFR 63.3920(a)(1)(i) through (iv). Note that the information reported for each of the months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.[17] [40 CFR 63.3920(a)(1)]

(1) Each semiannual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. [40 CFR 63.3920(a)(1)(ii)]

[17] 40 CFR 63.3920(a)(1) provides the option for the reporting company to submit these Subpart MMMM reports on the same schedule as the Title V operating permit reports.

(2) Each semiannual compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [40 CFR 63.3920(a)(1)(iii)]

(3) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the date specified in paragraph (a)(1)(iii) of this section. [40 CFR 63.3920(a)(1)(iv)]

b. **Opacity**

The owner or operator shall report any deviation from the requirement to perform the monthly inspection of the filters during a reporting period.

c. **PM**

i. Any deviation from the requirement to use the filters at all times the paint booth is in operation. The report shall include the following:

(1) Emission Unit ID and Emission Point ID numbers;

(2) The date and duration (including the start and stop time) of each time the filters are damaged or not used while the paint booth is in operation;

(3) The PM emission rate, in lb/hr;

(4) Summary information on the cause or reason for missing or damaged filters and measures implemented to prevent reoccurrence of the situation that resulted in excess PM emissions.

d. **TAC**

i. For any conditions different than those of the most recent EA demonstration analysis, the owner or operator shall re-analyze TAC to determine whether the new conditions comply with the STAR program. Changes to the air dispersion modeling program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to re-analyze.
[Regulation 5.21 sections 4.22 – 4.24]

ii. The owner or operator shall submit a re-evaluated EA demonstration to APCD no more than six months after a change in materials or processes that requires such a re-evaluation, as described in the preceding paragraph.

e. **VOC**

i. All periods of exceeding a VOC emission standard during a reporting period. The report shall include the following:

(1) Emission Unit ID number and emission point ID number;

(2) The date and duration during which a deviation from the coating VOC limits occurred;

(3) The quantity of excess emissions;

(4) Summary information on the cause or reason for excess emissions;

(5) Corrective action taken to minimize the extent and duration of each excess emissions event;

(6) Measures implemented to prevent reoccurrence of the situation that resulted in excess VOC emissions;

Emission Unit U3: Non-halogenated cold solvent parts washers (Insignificant Activity)

Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
6.18	Standards of Performance for Solvent Metal Cleaning Equipment	1, 2, 3, 4

DISTRICT-ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	All
5.01	General Provisions	1 through 4
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

Equipment

Emission Point	Description	Applicable Regulation	Control ID	Stack ID
E6	Non-halogenated cold solvent metal parts washer with secondary reservoir, make Selig, rated capacity 30 gallon. Installed 1998 (Insignificant activity)	STAR,[18,19] 6.18	N/A	Fugitive
E7	Non-halogenated cold solvent metal parts washer with secondary reservoir, make Selig, rated capacity 30 gallon. Installed 1998 (Insignificant activity)	STAR,[18,19] 6.18	N/A	Fugitive

Control Devices:

There are no control devices associated with Emission Unit U3.

[18] The STAR regulations comprise APCD regulations 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23.
[19] The equipment in this emission unit is *de minimis* for STAR by definition, per Regulation 5.21, section 2.3.

U3 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 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 mmHg (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 required records for a minimum of 5 years and make the records readily available to the District upon request.

a. **VOC**

i. Maintain records that include the following for each purchase: [Regulation 6.18, section 4.4.2]

(1) Name and address of the solvent supplier;

(2) Date of the purchase;

(3) Type of the solvent; and

(4) Vapor pressure of the solvent, measured in mm_{Hg} at 20° C.

S3. **Reporting**
[Regulation 2.16, section 4.1.9.3]

There are no semi-annual reporting requirements under General Condition 14 for this emission unit.

Emission Unit U5: Plasma cutters

Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
2.04	Construction or Modification of Major Sources In or Impacting Upon Non-Attainment Areas (Emission Offset Requirements)	1, 2, 3, 5, 9
2.05	Prevention of Significant Deterioration of Air Quality	All
7.08	Standards of Performance for New Process Operations	1, 2, 3

DISTRICT-ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	All
5.01	General Provisions	1 through 4
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

Equipment

Emission Point	Description	Applicable Regulation	Control ID	Stack ID
E11	"Big Messer": Messer Cutting Systems, model 4514, incorporating: Two Hypertherm Hyperformance Plasma HPR400XD plasma cutters, cutting table, slagger table. (Installed 2011) [From permit 30506-11-C]	STAR,[20] 2.04, 2.05, 7.08	C8	vents indoors
E14	"Little Messer": Messer Cutting Systems, model 5815, incorporating: 1 Hypertherm Hyperformance Plasma HPR400XD plasma cutters, cutting table, slagger table. (installed 2013) [From Permit 36880-13-C]	STAR,[20] 7.08	C9	vents indoors

Control Devices:

ID	Description	Control Efficiency	Performance Indicator
C8	Donaldson Torit DFT 4-32, 7000 cfm cartridge air filter unit.	0.002 grain/dscf [21,22]	date and hours of operation, ΔP
C9	Donaldson Torit DFT 3-24, 7000 cfm cartridge air filter unit.	0.002 grain/dscf [21]	date and hours of operation, ΔP

[20] The STAR regulations comprise APCD regulations 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23.

[21] Caldwell Tanks has submitted a manufacturer's signature guarantee for this emission rate for these filters. This emission rate is equivalent to 0.111 lb/hr at 7000 dscfm.

[22] A statement from the manufacturer states that this output PM emission is guaranteed for input loading less than 5 grain/dscf. Based on the emission factors given in Attachment A - Calculation Methodology, this input loading cannot be exceeded using the specified equipment.

U5 Specific Conditions

S1. **Standards**
[Regulation 2.16, section 4.1.1]

a. **NO_x**

i. The owner or operator shall not allow any NOx fumes in excess of 300 ppm by volume, expressed as NO_2, to be discharged into the atmosphere from either E11 or E14 or from any air pollution control equipment installed on the equipment.[23] [Regulation 7.08, section 4]

b. **Opacity**

i. The owner or operator shall not allow visible emissions from either plasma cutter or control device to equal or exceed 20% opacity.
[Regulation 7.08, section 3.1.1]

c. **PM / PM_{10} / $PM_{2.5}$**

i. The owner or operator shall not allow PM emissions from either plasma cutter E11 or E14 to exceed 2.34 lb/hr based on actual operating hours in a calendar day.[23] [Regulation 7.08, section 3.1.2]

ii. For emission unit E11, the owner or operator shall limit the annual PM emissions to less than 25 tons, PM_{10} emissions to less than 15 tons, and $PM_{2.5}$ emissions to less than 10 tons per 12-consecutive-month.[24]
[Regulation 2.04, section 1 and Regulation 2.05, section 1]

iii. The owner or operator shall use PM filter units (C8 and C9) at all times any plasma cutter are in use, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards.
[Regulation 2.16, section 4.1.1]

iv. In accordance with the General Testing requirements set forth in section S4 for this emission unit, a manufacturer's guarantee of performance was submitted on 10 March 2017 for filters used in control devices C8 and C9. Terms of this guarantee are:

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[23] A one-time compliance demonstration was completed on February 27, 2013 and it has been determined that this emission standard cannot be exceeded uncontrolled.

[24] This emission unit (E11) has the potential to exceed these annual emission values. These limits were established to avoid the requirements established by District Regulations 2.04: *Construction or Modification of Major Sources In or Impacting Upon Non-Attainment Areas* (for $PM_{2.5}$) and 2.05: *Prevention of Significant Deterioration of Air Quality* (for PM_{10}). Compliance with the emission limits established for each emission unit for TAC emissions will ensure that these PM limits are also met.

(1) Filter make and model: Donaldson Torit P199407 Ultra Web FR;

(2) Guaranteed emission rate: 0.002 grains per dry standard cubic foot of air through the filters for the length of the guarantee;

(3) Guarantee period: 12 months or 8000 hours from the date of shipment of the filters, whichever comes first.

v. The terms of this guarantee can be renewed if the following conditions are met:

(1) The filters must be replaced within 30 days of the end of the guarantee period;

(2) The new filters are of the same model number from the same manufacturer as those being replaced; OR

(3) If the manufacturer renews the guarantee based on performance data supplied by Caldwell Tanks

vi. If the new filters are from a different manufacturer or they are a different model number from the same manufacturer, a new signature guarantee must be obtained and submitted to the District for approval.

vii. If the guarantee period expires and new filters are not installed or if, when replaced, filters of the same make and model are not used and a guarantee for the new filters being used cannot be obtained, the owner or operator must either:

(1) Conduct control device testing under the terms set forth in the Testing section for this emission unit must be completed within 180 of the expiration of the guarantee, OR

(2) Determine emissions from the affected emission source using the default values specified in Attachment A - Calculation Methodology.

d. **TAC**

i. The owner or operator shall not allow TAC emissions to exceed the amounts shown in Table 4 in any 12-consecutive-month period.[25] [Regulation 5.21, section 4.3]

Maximum Emissions, pounds per 12-consecutive-month period				
	Mn	Ni	Cr^{+3}	Cr^{+6}
E11-'Big Messer' Plasma cutter	45.5	7.58	3.79	0.76
E14-'Little Messer' Plasma cutter	316	1740	3001	31.6

Table 4 - Emission unit U5 maximum TAC emissions.

ii. The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable levels, whether specifically established by modeling or determined by the District to be *de minimis*.
[Regulations 5.01 and 5.21]

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 required records for a minimum of 5 years and make the records readily available to the District upon request.

a. **NO_x**

i. There are no routine monitoring and recordkeeping requirements for this pollutant.

b. **Opacity**

i. Conduct a monthly one-minute visible emissions survey of the emission points (E11 and E14) during normal operation. No more than four emission points shall be observed simultaneously. The opacity surveys may be performed at the building exhaust points if the process vents indoors.

ii. At emission points where visible emissions are observed, initiate corrective action within eight hours of the initial observation. If the visible emissions persist, perform or cause to be performed a Method 9

[25] These TAC limits are established based on the TAC concentrations in the PM emissions. These concentrations were determined from data submitted by Caldwell Tanks on 27 Sept, 2016 as a supplement to their Title V renewal application., For E11, these are: Mn, 1.2%; Ni, 0.2%; Cr^{+3}, 0.1%; Cr^{+6}, 20%Cr^{+3} For E14, these are: Mn, 2%; Ni, 11%; Cr^{+3}, 19%; Cr^{+6}3.8%

visual determination of opacity, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.

iii. Maintain monthly records of the results of all visible emissions surveys and Method 9 determinations. These records 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.

c. **PM / PM_{10} / $PM_{2.5}$**

i. At least once per calendar month, perform a visual inspection of the structural and mechanical integrity of the dust collector (C8 and C9) for signs of damage, air leakage, corrosion, etc. and repair as needed. Maintain monthly records of these inspections of the structural and mechanical integrity of the baghouses. The records shall include:

(1) the date of the inspection,

(2) the name of the person that performed the inspection,

(3) identification and description of any equipment defects observed, and

(4) the date of repair or replacement of defective components.

ii. Maintain daily records of the hours of operation of each plasma cutter E11 and E14. These records shall include:

(1) Date;

(2) Start time and stop time;

(3) Identification of the control device and process equipment;

(4) A negative declaration if there were no control device bypass occurrences. If there are any control device bypasses you must record the following:

(a) PM emissions for each hour if the control equipment was bypassed, in lb/hr;

(b) Summary of the cause or reason for each bypass event;

(c) Corrective action taken to minimize the extent or duration of the bypass event; and

(d) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

(5) The pressure drop (ΔP) across the filter cartridges.

(a) If the measured pressure differential is less than 0.1 inches of water, you must immediately

(i) Cease operation of the plasma cutter;

(ii) Determine and correct the cause of the low pressure reading;

(iii) Record the cause of the low pressure reading and the actions taken to restore the equipment to proper operating conditions;

(b) If the measured pressure differential is greater than 8.0 inches of water, you must immediately

(i) Cease operation of the plasma cutter;

(ii) Determine and correct the cause of the high pressure reading;

(iii) Record the cause of the high pressure reading and the actions taken to restore the equipment to proper operating conditions;

iii. If the control device is being operated under a guarantee of performance (rather than performance by stack testing) the following records must be kept:

(1) The make and model of the filters installed;

(2) The date the filters were shipped from the manufacturer;

(3) The date the filters were installed in the control device;

(4) The daily hours of operation of the control device;

(5) The cumulative hours of operation of the control device since installation of the current set of filters.

iv. Calculate the monthly and 12-consecutive-month PM, PM_{10}, and $PM_{2.5}$ emissions from each plasma cutter E11 and E14, using either the most recent District-accepted performance test results, guaranteed performance, or default emission factors and control efficiencies as specified in Attachment A - Calculation Methodology to demonstrate compliance with the emission limits

d. **TAC**

i. For any control device bypass, maintain records of the bypass event as specified for PM.

ii. Calculate the monthly and 12-consecutive-month TAC emissions for any TAC with an emission standard. [26]

iii. Maintain records sufficient to demonstrate environmental acceptability, including, but not limited to SDS, analysis of emissions, and/or modeling results.

iv. If a new TAC is introduced or the content of a TAC in a raw material increases, the owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions.

S3. **Reporting**
[Regulation 2.16, section 4.1.9.3]

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

a. **NO_x**

i. There are no routine reporting requirements for this pollutant.

b. **Opacity**

i. Any deviation from the requirement to perform monthly visual emission surveys or Method 9 determinations;

ii. Any deviation from the requirement to record the results of each VE survey and Method 9 determination performed;

iii. The number, date, and time of each VE Survey where visible emissions were observed and the results of the Method 9 determination performed;

iv. Identification of all periods of exceeding an opacity standard; and

v. Description of any corrective action taken for each exceedance of the opacity standard.

c. **PM / PM_{10} / $PM_{2.5}$**

i. All periods of exceeding a PM emission standard during a reporting period, The report shall include the following:

(1) Emission Unit ID number and emission point ID number;

[26] TAC emissions are determined as a fraction of the PM emissions, as defined by Attachment A - Calculation Methodology.

(2) The date and duration (including the start and stop time) during which a deviation occurred;

(3) The quantity of excess emissions;

(4) Summary information on the cause or reason for excess emissions;

(5) Corrective action taken to minimize the extent and duration of each excess emissions event;

(6) Measures implemented to prevent reoccurrence of the situation that resulted in excess PM emissions.

ii. Any deviation from the requirement to perform monthly visual inspection of the structural and mechanical integrity of the dust collectors (C8 and C9).

iii. Any deviation from the requirement to use the associated baghouses at all times the shot blast booths are in operation. The report shall include the following:

(1) The date and duration (including the start and stop time) of each by-pass to the atmosphere;

(2) Calculated quantity of PM emitted, in pounds, for each bypass;

(3) Corrective action taken as a result of the baghouse bypass;

(4) Summary information on the cause or reason for the baghouse bypass and measures implemented to prevent reoccurrence of the bypass.

iv. Monthly and 12-consecutive-month PM, PM_{10}, and $PM_{2.5}$ emissions using the methodology described in Attachment A.

v. If operating under a filter performance guarantee and the guarantee is for a limited period, you must also report the start and end dates of the guarantee period and the cumulative hours of operation for the current guarantee period.

vi. If the manufacturer renews the guarantee based on performance data supplied by Caldwell Tanks, the renewed guarantee must be submitted to the District.

d. **TAC**

i. Actual TAC emissions at each emission point for each TAC with an emission standard, using the methodology described in Attachment A.

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

declaration stating that operations were within the conditions analyzed. This includes, but is not limited to, control device upset conditions.

iii. For any conditions different than those of the most recent EA demonstration analysis, the owner or operator shall re-analyze TAC to determine whether the new conditions comply with the STAR program. Changes to the air dispersion modeling program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to re-analyze.
[Regulation 5.21 sections 4.22 – 4.24]

iv. The owner or operator shall submit a re-evaluated EA demonstration to APCD no more than six months after a change in materials or processes that requires such a re-evaluation, as described in the preceding paragraph.

S4. **Testing**
[Regulation 2.16, section 4.3.1]

a. **General Requirements**

i. The District may require retesting if there is reasonable belief that currently-used emission factors or control efficiencies do not accurately reflect the actual performance of the device. If performance testing is not completed by the required date, then the company shall calculate emissions using expired test result data, methods such as EPA-approved emission factors and guidance documents such as EIIP and AP-42, or other methods upon written approval by the District, whichever results in the greater (more conservative) emissions.

ii. If the control device is not hard piped to the process equipment, the owner or operator shall perform a capture efficiency test using EPA guidelines. In lieu of performing a capture efficiency test, the owner or operator may submit a reasonable estimate of capture efficiency with thorough justification subject to approval by the District.

iii. Before conducting a performance test, the owner or operator shall submit a written test plan. The plan shall include the EPA test methods that will be used for testing, the process operating parameters that will be monitored during the performance test, and the control device performance indicators that will be monitored during the performance test. The test plans shall be furnished to the District at least 30 days prior to the actual date of the performance test. Attachment B - Protocol Checklist for a Performance Test to this permit provides information that must be submitted in the protocol.

iv. The owner or operator shall provide the District at least 10 days prior notice of any performance test to afford the District the opportunity to have an observer present.

v. The owner or operator shall furnish the District with a written report of the results of the performance test within 60 days following the actual date of completion of the performance test.

b. **PM**

i. When required, the owner or operator shall perform an EPA Reference Method 5 performance test on the inlet and outlet of the control device or emission point to determine the emission rate and control efficiency. The test shall be performed at 90% or higher of maximum capacity, or allowable/permitted capacity, or at a level of capacity which results in the greatest emissions and is representative of the operations. 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.

Emission Unit U7: Emergency Generators (Insignificant Activity)

Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
40 CFR 60, subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	All
40 CFR 63, subpart ZZZZ	National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	All
7.12	Standard of Performance for New Storage Vessels for Volatile Organic Compounds	1 through 5

DISTRICT-ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	All
5.01	General Provisions	1 through 4
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants	1, 2, 4.87, 5, 6
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
7.02	Adoption and Incorporation by Reference of Federal New Source Performance Standards	1, 2, 3.91, 4, 5

Equipment

Emission Point	Description	Applicable Regulation	Control ID	Stack ID
I5a	Caterpillar 3360B-DI, 250 kW Diesel engine for emergency generator. 10.45 L, 6 cylinder, 4 stroke. Manufactured 1999, installed 2009 (Insignificant Activity)	STAR,[27],[28] 5.02, 40 CFR 63, subpart ZZZZ	N/A	5a
I5b	Cummins DQDAA-6380778 250 kW Diesel engine for emergency generator. 8.9 liter, 6 cylinder, 4 stroke. Manufactured and installed 2011. (Insignificant Activity)	STAR,[27,28] 5.02, 7.02, 40 CFR 60, subpart IIII; 40 CFR 63, subpart ZZZZ	N/A	5b
I5c	Above-ground storage tank, 500 gallons Contains Diesel fuel for I5b Cummins emergency generator	STAR,[27, 28] 7.12	N/A	5c

Control Devices:

There are no control devices associated with Emission Unit U7.

[27] The STAR regulations comprise APCD regulations 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23.
[28] The equipment in this emission unit is *de minimis* for STAR by definition, per Regulation 5.21, section 2.3.

U7 Specific Conditions

S1. **Standards**
[Regulation 2.16, section 4.1.1]

a. **Unit Operation**

i. The following requirements apply to the Cummins Diesel engine (I5b):

(1) The owner or operator must operate and maintain stationary CI ICE that achieves the emission standards as required in 40 CFR 60.4205 over the entire life of the engine.
[40 CFR 60.4206]

(2) The owner or operator shall comply with these emission standards:
[40 CFR 60.4205(b), 60.4202(a)(2); 40 CFR 89.112, 89.113]

(a) Non-methane hydrocarbons plus NO_x: 4.0 g/kW•hr

(b) Carbon monoxide (CO): 3.5 g/kW•hr

(c) Particulate matter (PM): 0.20 g/kW•hr

(d) Exhaust opacity:

(i) 20% opacity during acceleration mode

(ii) 15% opacity during lugging mode

(iii) 50% during peaks in either acceleration or lugging mode.

(3) The owner or operator shall do all of the following:
[40 CFR 60.4211(a)]

(a) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;
[40 CFR 60.4211(a)(1)]

(b) Change only those emission-related settings that are permitted by the manufacturer. [40 CFR 60.4211(a)(2)]

(4) The owner or operator shall purchase an engine certified to the emission standards in 40 CFR 60.4205(b), as applicable for the same model year and maximum engine power.[29] The engine must be installed and configured according to the manufacturer's specifications. [40 CFR 60.4211(c)]

(5) In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, is

[29] This certification was received 11 Oct 2016.

prohibited. If the owner or operator does not operate the engine according to these requirements, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. [40 CFR 60.4211(f)]

(a) There is no time limit on the use of emergency stationary ICE in emergency situations. [40 CFR 60.4211(f)(1)]

(b) The owner or operator may operate the emergency stationary ICE for any combination of the purposes specified here for a maximum of 100 hours per calendar year. Any operation for allowed non-emergency situations counts as part of the 100 hours per calendar year allowed by this paragraph. [40 CFR 60.4211(f)(2)]

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. [40 CFR 60.4211(f)(2)(i)]

(ii) Emergency stationary ICE may be operated for emergency demand response in which the NERC Reliability Coordinator has declared an Energy Emergency Alert Level 2.
[40 CFR 60.4211(f)(2)(ii)]

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency. [40 CFR 60.4211(f)(2)(iii)].

(c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part

of a financial arrangement with another entity. [40 CFR 60.4211(f)(3)]

(6) If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows: [40 CFR 60.4211(g)]

(a) You must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.

(b) You must conduct an initial performance test to demonstrate compliance with applicable emission standards within 1 year after an engine and control device is no longer installed , configured, operated and, in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

(7) Beginning October 1, 2010, the owner or operator shall use Diesel fuel that meets the requirements of 40 CFR 80.510(b) for non-road Diesel fuel,[30] except that any existing Diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted: [40 CFR 60.4207(b)]

(a) Sulfur content: 15 parts per million (ppm) maximum for non-road Diesel fuel, and. [40 CFR 80.510(b)(1)(i)]

(b) A minimum cetane index of 40; [40 CFR 80.510(b)(2)(i)]

OR

(c) A maximum aromatic content of 35 volume percent. [40 CFR 60.510(b)(2)(ii)]

b. **HAP**

i. A new compression ignition engine (applicable to the Cummins engine, I5b) must meet the requirements of 40 CFR 63, Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII. There are no further requirements for this engine in Subpart ZZZZ. [40 CFR 63.6590(c)(6)]

[30] The Diesel fuel must meet the sulfur content-requirement. The fuel may then meet either the cetane rating or the aromatic-content specification.

ii. The Caterpillar engine (I5a) must meet the following requirements:

(1) The owner or operator must comply with these operational requirements: [40 CFR 63.6602 and Table 2c, paragraph 1]

(a) Every 500 hours of operation or annually, whichever comes first, you must;

(i) Change the oil and filters

OR

(ii) Utilize an oil analysis program that analyzes, at a minimum: [40 CFR 63.6625(i)]

[1] Total Base Number. Analysis must show that the value is greater than 30% of the Total Base Number when the oil is new.

[2] Viscosity. Analysis must show that the viscosity has changed by less than 20% of the viscosity when the oil was new.

[3] Percent water content. The analysis must show that the water content by volume is less than 0.5 %.

If any of these limits are exceeded, the engine owner or operator must change the oil within two business days of receiving the results of the analysis.

(b) Inspect the air cleaner every 1000 hours of operation or annually, whichever comes first, and replace as necessary;

(c) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary;

(d) During periods of startup, minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.

(2) The owner or operator shall use diesel fuel that meets the requirements of 40 CFR 80.510(b) for non-road diesel fuel,[30] except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted: [40 CFR 63.6604(b)]

(a) Sulfur content: 15 parts per million (ppm) maximum for NR diesel fuel. [40 CFR 80.510(b)(1)(i)]

(b) A minimum cetane index of 40; [40 CFR 80.510(b)(2)(i)]

OR

(c) A maximum aromatic content of 35 volume percent. [40 CFR 80.510(b)(2)(ii)]

(3) The owner or operator must operate and maintain the engine according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with goof air pollution control practices for minimizing emissions. [40 CFR 63.6625(e)]

(4) The owner or operator must install a non-resettable hour meter if one is not already installed. [40 CFR 63.6625(f)]

(5) The owner or operator must minimize the engine's time spent at idle during startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.
[40 CFR 63.6625(h)]

c. **VOC**

i. There are no applicable VOC standards for the fuel storage tank,I5c.
[Regulation 7.12]

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 required records for a minimum of 5 years and make the records readily available to the District upon request.

a. **Unit Operation**

i. The following requirements apply to the Cummins Diesel engine (I5b):

(1) If an emergency engine does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour-meter prior to startup of the engine.
[40 CFR 60.4209(a)]

(2) The owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines must keep records of the operation of the engine in emergency and non-emergency service that are recorded through a non-resettable hour-meter. The owner or operator must record the time of operation of the engine and the reason the engine was in operation during that time.
[40 CFR 60.4214(b)]

(3) If the emergency engine has a Diesel particulate filter to comply with the emission standards in §60.4204, the Diesel particulate

filter must be installed with a backpressure monitor that notifies the owner or operator when the high-backpressure limit of the engine is approached.
[40 CFR 60.4209(b)]

(4) If the emergency engine has a Diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.
[40 CFR 60.4214(c)]

(5) The owner or operator shall maintain records of the fuel SDS sheets and receipts showing dates, amounts of fuel purchased, sulfur content of fuel purchased and supplier's name and address.

b. **HAP**

i. The owner or operator must keep records of the maintenance conducted on the engine to demonstrate that you operated and maintained the engine according to your own maintenance plan. [40 CFR 63.6655(e)]

ii. The owner or operator must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. You must document the hours spent for emergency operation, including what classified as an emergency, and how many hours were spent for non-emergency operation. If the engine is used for emergency demand response, as defined in §63.6640(f)(2)(ii), when there is a voltage or frequency deviation of greater than 5% below standard, or as part of a financial arrangement, as defined in §63.6640(f)(4)(ii), you must keep records of the notification of the emergency situation, and the date, start time, and end time of the emergency engine for these purposes..
[40 CFR 63.6655(f)]

c. **VOC**

i. There are no monitoring or recordkeeping requirements for this pollutant.

S3. **Reporting**
[Regulation 2.16, section 4.1.9.3]

The owner or operator shall report the following information as required by General Condition G14:

a. **Unit Operation**

i. All periods during which the hour limits specified in the Standards were exceeded during the reporting period. The report shall include the following:

(1) Identification of all periods during which a deviation occurred;

(2) A description, including the magnitude, of the deviation;

(3) If known, the cause of the deviation;

(4) A description of all corrective actions taken to abate the deviation.

b. **HAP**

i. For each deviation from an operating limitation, the owner or operator must submit a compliance report that contains:[31] [40 CFR 63.6650(d)]

(1) Company name and address;

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report;

(3) Date of the report and the beginning and ending dates of the reporting period;

(4) The total operating time of the engine at which the deviation occurred during the reporting period;

(5) Information on the number, duration, and cause of the deviations, as applicable, and the corrective action taken.

c. **VOC**

i. There are no reporting requirements for this pollutant.

[31] This deviation report must be included in the semi-annual report required by General Condition 14.

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 an alternative operating scenario for emission unit U1. Emission unit U1, consisting of emission point E1, E2, and E3, normally operates with the baghouses vented inside the building. Under the alternative operating scenario, the owner or operator is allowed to vent the baghouses to the outdoors and the emission points are designated as E1A, E2A, and E3A respectively. The additional conditions needed to demonstrate compliance with this alternative are listed with the emission unit.

Insignificant Activities

Equipment	Number	PTE (t/yr)	Basis for Exemption
Used oil aboveground storage tank, 250 gal	1	VOC: 0.01	Regulation 1.02, Appendix A, paragraph 3.9.2
Small space heaters and make-up air units, natural gas fired, capacity ranged 0.05- 0.395 MMBtu/hr (All are indirect-fired units)[32]	117	NO_x: 0.11 CO: 0.05 each	Regulation 1.02, Appendix A, paragraph 1.1
Research and development activities with potential emissions less than 5 tpy	1	0	Regulation 1.02, Appendix A, paragraph 3.27
Closed system solvent distillation unit, make Finish Thompson, model LS-15D	1	0	Regulation 1.02, section 1.38.1.2

[32] Federal regulation 40 CFR 3, Subpart DDDDD states "You are subject to this subpart if you own or operate an industrial … boiler or process heater … that is located at, or is part of, a major source of HAP…" None of these units meets the definition of boiler or process heater set forth in this regulation. Therefore, the regulation is not applicable to these units.

Equipment	Number	PTE (t/yr)	Basis for Exemption
VOC storage vessel, capacity 15 gal	1	VOC: 0.01	Regulation 1.02, Appendix A, paragraph 3.24
Internal combustion engines, fixed or mobile	5	NO_x: 4.7 CO: 1.0 PM_{10}: 0.3 VOC: 0.4 each	Regulation 1.02, Appendix A, paragraph 2
Separate and mostly mobile stations for performing welding, cutting, and gouging	54	PM_{10}: 1.7	Regulation 1.02, Appendix A, paragraph 3.4
Wood-working operation	1	PM: 0.35	Regulation 1.02, Appendix A, paragraph 3.5
Nitrogen and Oxygen storage tanks	402	0	Regulation 1.02, Appendix A, paragraph 3.26
Paint and solvent storage containers, each less than 250 gallons	500	VOC: 1.3	Regulation 1.02, Appendix A, paragraph 3.24
Portable cylinders of inflammable gases	200	VOC: 0.01	Regulation 1.02, Appendix A, paragraph 3.26
Plate seamer using submerged arc welding	1	PM: 0.1	Regulation 1.02, section 1.38.1.2
Waste storage containers, 55-gallon drums	20	VOC: 0.01	Not regulated
Non-halogenated cold solvent parts washers, Selig, 30 gallon, with secondary reservoir (listed as E6 and E7 in emission unit U3)	2	VOC: 0.02	Regulation 1.02, Appendix A, paragraph 3.22
Direct-fired natural gas roof unit at North Paint Area, make Hartzell, model GR181, with a rated capacity of 1.95 MMBtu/hr. Installed 1968. [32]	1	NO_x: 0.20 CO: 0.17	Regulation 1.02, section 1.38.1.2
Direct-fired natural gas roof unit at Balcony Area, make Hartzell, model GC402, with a rated capacity of 4.0 MMBtu/hr. Installed 1971. [32]	1	NO_x: 0.41 CO: 0.35	Regulation 1.02, section 1.38.1.2
Direct-fired natural gas ground units, with a rated capacity of 3.5 MMBtu/hr for each. Installed 2002. [32]	4	NO_x: 1.44 CO: 1.21	Regulation 1.02, section 1.38.1.2
Caterpillar 3360B-DI, 250 kW Diesel engine for emergency generator. 10.45 L, 6 cylinder, 4-stroke. Manufactured 1999, installed 2009 (listed as I5a in emission unit U7)	1	NO_x: 2.89 CO: 0.62 PM_{10}: 0.20	Regulation 1.02, section 1.38.1.2
Cummins DQDAA-6380778 250 kW Diesel engine for emergency generator. 8.9 liter, 6 cylinder, 4 stroke. Manufactured and installed 2011. (listed as I5b in emission unit U7)	1	NO_x: 2.69 CO: 0.58 PM_{10}: 0.19	Regulation 1.02, section 1.38.1.2

Equipment	Number	PTE (t/yr)	Basis for Exemption
200 gallon Diesel fuel storage tank for Caterpillar engine	1	VOC: 0.01	Regulation 1.02, Appendix A, paragraph 3.25
500 gallon Diesel fuel storage tank for Cummins engine. (listed as I5c in emission unit U7)	1	VOC: 0.01	Regulation 1.02, Appendix A, paragraph 3.25

Insignificant Activity Notes

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 - Calculation Methodology

In general, emissions are calculated by multiplying the process throughput or hours of operation by the emission factor and by the control efficiency of any control device. For example:

$$E_x = \left(throughput\left[\frac{lb}{hr}\right]\right) \bullet \left(Emission\ factor\left[\frac{lb\ emission}{lb_{thruput} hr\ of\ operation}\right]\right) \bullet (1 - control\ efficiency)$$

Alternatively, the mass balance method considers the total throughput and the fraction of that throughput that is made up by the pollutant under consideration. For example:

$$E_x = \left(throughput\left[\frac{gal}{yr}\right]\right) \bullet (pollutant\ percentage) \bullet (1 - control\ efficiency)$$

Other methods of determining emissions may be used if proposed by the Company and approved in writing by the District, or if required by permit conditions.

Emission Source		Description	Pollutant	Emission factor	Source	Control Effic.	Note (a)
Unit	Point						
U1	E1	Wheelabrator	PM	35.54 lb/hr	Stack test	99.2%	1
				0.179 lb/(1000lb$_{abrasive}$) (note f)			
			PM_{10}	PM/2	AP42-13.2.6	95%	2
			$PM_{2.5}$	PM_{10}/10	AP42-13.2.6	95%	2
			Cr	0.1%*PM	Company data, note b.	---	---
			Mn	1.2%*PM			
			Ni	0.2%*PM			
	E2	Clemco Shot Blast Booth	PM	1.14 lb/hr	AP42-13.2.6, note d.	95%	2
			PM_{10}	PM/2	AP42-13.2.6	95%	2
			$PM_{2.5}$	PM_{10}/10	AP42-13.2.6	95%	2
			Cr	0.1%*PM	Company data, note b.	---	---
			Mn	1.2%*PM			
			Ni	0.2%*PM			
	E3	Pipeabrator	PM	23.63 lb/hr	Stack test	99.2%	4
				0.179 lb/(1000lb$_{abrasive}$) (note g)			
			PM_{10}	PM/2	AP42-13.2.6	95%	2
			$PM_{2.5}$	PM_{10}/10	AP42-13.2.6	95%	2
			Cr^{+3}	0.1%*PM	Company data, note b.	---	---
			Mn	1.2%*PM			
			Ni	0.2%*PM			
U2	E4	South paint booth	VOC TAC	Mass balance method		---	---
			PM HAP	Mass balance method		95%	2

Emission Source		Description	Pollutant	Emission factor	Source	Control Effic.	Note (a)
Unit	**Point**						
	E5	North paint booth	VOC TAC	Mass balance method		---	---
			PM HAP	Mass balance method		95%	2
U3	E6	Non-halogenated cold-solvent parts washer	VOC	Mass balance method		---	---
	E7					---	---
U5	E11	Plasma cutter, Messer 4514	PM	22.7 lb/hr	Note c. uncontrolled	95%	2
			PM_{10}	PM/2			
			$PM_{2.5}$	PM_{10}/10			
			$PM/PM_{10}/PM_{2.5}$	0.002 gr/dscf	Manufacturer's guarantee; controlled, note e		3
			Cr^{+3}	0.1%*PM	Company data: note b.		
			Cr^{+6}	0.02%*PM			
			Mn	1.2%*PM			
			Ni	0.2%*PM			
	E14	Plasma cutter, Messer 5815	PM	5.3 lb/hr	Note c. uncontrolled	95%	2
			PM_{10}	PM/2			
			$PM_{2.5}$	PM_{10}/10			
			$PM/PM_{10}/PM_{2.5}$	0.002 gr/dscf	Manufacturer's guarantee; controlled, note e		3
			Cr^{+3}	19%*PM	Company data: note b.		
			Cr^{+6}	0.2%*PM			
			Mn	2.0%*PM			
			Ni	11.%*PM			
U7	I5	Caterpillar 3360B-DI emergency generator engine	NO_x	3.14 g/HP•hr	Manufacturer's spec		
			CO	0.68 g/HP•hr			
			Hydro carbon	0.17 g/HP•hr			
			PM	0.16 g/HP•hr			
	I5a	Cummins DQDAA emergency generator engine	NMHC +NO_x	2.98 g/HP•hr	EPA spec: 40 CFR 89.112		
			CO	2.6 g/HP•hr			
			PM	0.15 g/HP•hr			

Notes:

a. Control efficiency determination options:
   1. On-site stack test, 29 March 2011
   2. APCD default control efficiency
   3. Manufacturer's guaranteed performance – Donaldson Torit P199407 filter cartridge. Use this value when operating controlled and the given emission factor when operating uncontrolled.
   4. Based on this equipment (E3) being equivalent to E1, on which a stack test was performed.

b. EF based on the base emission factor and the TAC content of the raw materials.

c. EF based on *Emission of Fume, Nitrogen Oxides and Noise in Plasma Cutting of Stainless and Mild Steel* by Bromsen et. al.

d. AP42 emission factor for sand in an enclosed booth, controlled, is 0.69 lb/(1000 lb). Emissions using steel shot are 10% of sand emissions, from the same source. AP42 control efficiency is assumed to be 95% since no other value is given. Therefore, the uncontrolled emission factor, in an enclosed booth, uncontrolled is:

$$\frac{\left(\frac{0.69\ lb}{1000\ lb}\right)(10\%)}{(1-95\%)} = \frac{\mathbf{1.38\ lb}}{(\mathbf{1000\ lb})}$$

e. The rated airflow through the filter units C8 and C6 is 7000 ft^3/min. Therefore an emission rate of 0.12 lb/hr $\left[\left(\frac{0.002\ grain}{ft^3}\right)\left(\frac{1\ lb}{7000\ grain}\right)\left(\frac{6500\ ft^3}{min}\right)\left(\frac{60\ min}{hour}\right)\right]$ may be used.

f. Based on the rated maximum abrasive throughput of 198,000 lb/hr, this rate is equivalent to the lb/hr rate.

$$\left(\frac{35.54\ lb_{PM}}{hour}\right)\left(\frac{1\ hour}{198000\ lb_{abrasive}}\right) = \frac{0.179\ lb_{PM}}{1000\ lb_{abrasive}}$$

g. Based on the rated maximum abrasive throughput of 132,000 lb/hr, this rate is equivalent to the lb/hr rate.

$$\left(\frac{23.63\ lb_{PM}}{hour}\right)\left(\frac{1\ hour}{132000\ lb_{abrasive}}\right) = \frac{0.179\ lb_{PM}}{1000\ lb_{abrasive}}$$

Attachment B - Protocol Checklist for a Performance Test

A completed protocol should include the following information:

1. Facility name, location, and ID #;
2. Responsible Official and environmental contact names;
3. Permit numbers that are requiring the test to be conducted;
4. Test methods to be used (i.e. EPA Method 1, 2, 3, 4, and 5);
5. Alternative test methods or description of modifications to the test methods to be used;
6. Purpose of the test including equipment and pollutant to be tested; the purpose may be described in the permit that requires the test to be conducted or may be to show compliance with a federal regulation or emission standard;
7. Tentative test dates (These may change but the District will need final notice at least 10 days in advance of the actual test dates in order to arrange for observation.);
8. Maximum rated production capacity of the system;
9. Production-rate goal planned during the performance test for demonstration of compliance (if appropriate, based on limits);
10. Method to be used for determining rate of production during the performance test;
11. Method to be used for determining rate of production during subsequent operations of the process equipment to demonstrate compliance;
12. Description of normal operation cycles;
13. Discussion of operating conditions that tend to cause worse case emissions; it is especially important to clarify this if worst case emissions do not come from the maximum production rate;
14. Process flow diagram;
15. The type and manufacturer of the control equipment, if any;
16. The control equipment (baghouse, scrubber, condenser, etc.) parameter to be monitored and recorded during the performance test. Note that this data will be used to ensure representative operation during subsequent operations. These parameters can include pressure drops, flow rates, pH, and temperature. The values achieved during the test may be required during subsequent operations to describe what pressure drops, etcetera, are indicative of good operating performance; and
17. How quality assurance and accuracy of the data will be maintained, including;
    - Sample identification and chain-of-custody procedures
    - Audit sample provider and number of audit samples to be used, if applicable
18. Pipe, duct, stack, or flue diameter to be tested;
19. Distances from the testing sample ports to the nearest upstream and downstream flow disturbances such as bends, valves, constrictions, expansions, and exit points for outlet and additionally for inlet;
20. Determine number of traverse points to be tested for outlet and additionally for inlet if required using Appendix A-1 to 40 CFR Part 60:
    - Method 1 if stack diameter is >12"
    - Method 1a if stack diameter is greater than or equal to 4" and less than 12"
    - Alternate method of determination for <4"
    - If a sample location at least two stack or duct diameters downstream and half a diameter upstream from any flow disturbance is not available then an alternative procedure is available for determining the acceptability of a measurement location. This procedure described in Method 1, Section 11.5 allows for the determination of gas flow angles at the sampling points and comparison of the measured results with acceptability criteria.
21. The Stack Test Review fee shall be submitted with each stack test protocol.

Attachment C – Plantwide STAR Summary

Caldwell Tanks submitted their TAC Environmental Acceptability Demonstration to the District on 2 February 2007, 31 March 2008, 9 August 2001, 19 March 2012, 23 June 2014, and 3 June 2016. Revisions were made to the latest submission based on revised TAC concentrations in mild and stainless steel, as provided by Caldwell to APCD on 27 September 2016. SCREEN3 air dispersion modeling was performed for each emission unit that has non-*de minimis* TAC emissions. Based on this revised analysis, several TACs were shown to be non-compliant with STAR goals. Appropriate emission limits were set for non-compliant TACs to ensure that the carcinogen and non-carcinogen risk values comply with the STAR EA goals established in Regulation 5.21. The table below shows the calculated uncontrolled risks after these emission limits have been applied.

STAR Environmental Acceptability Compliance, Uncontrolled Emissions

		Reg 5.21, §3.1.1														§3.1.2	
		E1		E2		E3		E4 & E5		E11		E14		Goal		All Eqpt total	
		R_c	HQ	R_c	HQ	R_c	HQ	R_c	HQ	R_c	HQ	R_c	HQ	R_c	HQ	R_c/ HQ	Goal
Industrial	Manganese	- - -	3.00	- - -	0.97	- - -				- - -	1.00	- - -	0.14			5.11	
	Nickel	6.58	1.79	2.12	0.58	6.58				2.18	0.59	10.00	2.71			5.67	
	Chromium +3	- - -	0.00	- - -	0.00	- - -				- - -	0.00	- - -	0.10	10	3	0.10	10
	Chromium +6									10.00	0.10	8.32	0.09			0.19	
	Xylene								0.24							0.24	
	New and existing (§3.1.3)															35.78	75
	New (§3.1.4)															20.50	38
Non-Industrial	Manganese	- - -	0.45	- - -	0.15	- - -				- - -	0.07	- - -	0.01			0.68	
	Nickel	0.99	0.27	0.32	0.09	0.99				0.15	0.04	0.70	0.19			0.59	
	Chromium +3	- - -	0.01	- - -	0.00	- - -				- - -	0.00	- - -	0.02	1	1	0.03	1
	Chromium +6									0.70	0.01	0.58	0.01			0.02	
	Xylene								0.22							0.22	
	New and existing (§3.1.3)															3.73	7.5
	New (§3.1.4)															1.43	3.8

Attachment D – Compliance Assurance Monitoring Plan

CAM Monitoring Approach Emission Unit U1, E1 Wheelabrator Blast Booth, C1 Dust Collector	
Applicable CAM Requirement	**PM Particulate Matter) Limits**
General Requirements	Per Title V Permit U1 Additional Conditions for PM. This CAM plan does not include the alternative operating scenario as specified in the Title V permit since the dust collector vent discharges indoors and there are no plans to discharge outdoors.
Monitoring Methods	• Monitor differential pressure (ΔP) across the dust collector during normal operation. • Inspect dust collector components.
Normal Indicator Range	• Indicator range of ΔP gauge during normal operations shall be 2.0 to 6.0 inches of water column (wc). However, immediately following dust collector filter replacement, ΔP may be less than 2.0" wc for approximately 200 operating hours. • Absence of dust collector air leaks and/or exterior damage. • Absence of holes in fabric filters and/or damage to other internal components.
Data Collection Frequency	• Dust collector ΔP shall be recorded daily during normal operation. • Record monthly preventative maintenance inspection of dust collector.
Data Collection Procedure	• Record dust collector ΔP gauge reading. If gauge needle is fluctuating, record the value representing the midpoint of the fluctuation. • Complete the monthly dust collector inspection checklist.
Quality Assurance And Control Procedure	• An excursion of PM emissions is considered to occur if the ΔP reading is outside and does not return to the normal indicator range within 4 hours, or if visible dust is discharged from the dust collector vent. It should be noted ΔP may be less than 2.0" wc for approximately one week following dust collector filter replacement. • The facility shall initiate an investigation and corrective action within 8 hours for each excursion. • If the excursion has not ended within 24 hours, shut down the blast booth and make repairs. • The dust collector shall be operated and maintained in accordance with manufacturer's recommendations. • Records of ΔP readings, inspections, and repairs will be maintained for 5 years.

CAM Monitoring Approach Emission Unit U1, E5 Blast House, C5 Dust Collector	
Applicable CAM Requirement	**PM Particulate Matter) Limits**
General Requirements	Per Title V Permit U1 Additional Conditions for PM. This CAM plan does not include the alternative operating scenario as specified in the Title V permit since the dust collector vent discharges indoors and there are no plans to discharge outdoors.
Monitoring Methods	• Monitor differential pressure (ΔP) across the dust collector during normal operation. • Inspect dust collector components.
Normal Indicator Range	• Indicator range of ΔP gauge during normal operations shall be 3.0 to 5.0 inches of water column (wc). However, immediately following dust collector filter replacement, ΔP may be less than 3.0" wc for approximately 200 operating hours. • Absence of dust collector air leaks and/or exterior damage. • Absence of holes in fabric filters and/or damage to other internal components.
Data Collection Frequency	• Dust collector ΔP shall be recorded weekly during normal operation. • Record monthly preventative maintenance inspection of dust collector.
Data Collection Procedure	• Record dust collector ΔP gauge reading. If gauge needle is fluctuating, record the value representing the midpoint of the fluctuation. • Complete the monthly dust collector inspection checklist.
Quality Assurance And Control Procedure	• An excursion of PM emissions is considered to occur if the ΔP reading is outside and does not return to the normal indicator range within 4 hours, or if visible dust is discharged from the dust collector vent. • The facility shall initiate an investigation and corrective action within 8 hours for each excursion. • If the excursion has not ended within 24 hours, shut down the blast booth and make repairs. • The dust collector shall be operated and maintained in accordance with manufacturer's recommendations. • Records of ΔP readings, inspections, and repairs will be maintained for 5 years.

CAM Monitoring Approach Emission Unit U1, E6 Blast House, C6 Dust Collector	
Applicable CAM Requirement	**PM Particulate Matter) Limits**
General Requirements	Per Title V Permit U1 Additional Conditions for PM. This CAM plan does not include the alternative operating scenario as specified in the Title V permit since the dust collector vent discharges indoors and there are no plans to discharge outdoors.
Monitoring Methods	• Monitor differential pressure (ΔP) across the dust collector during normal operation. • Inspect dust collector components.
Normal Indicator Range	• Indicator range of ΔP gauge during normal operations shall be 2.0 to 8.0 inches of water column (wc). However, immediately following dust collector filter replacement, ΔP may be less than 2.0" wc for approximately 200 operating hours. • Absence of dust collector air leaks and/or exterior damage. • Absence of holes in fabric filters and/or damage to other internal components.
Data Collection Frequency	• Dust collector ΔP shall be recorded weekly during normal operation. • Record monthly preventative maintenance inspection of dust collector.
Data Collection Procedure	• Record dust collector ΔP gauge reading. If gauge needle is fluctuating, record the value representing the midpoint of the fluctuation. • Complete the monthly dust collector inspection checklist.
Quality Assurance And Control Procedure	• An excursion of PM emissions is considered to occur if the ΔP reading is outside and does not return to the normal indicator range within 4 hours, or if visible dust is discharged from the dust collector vent. • The facility shall initiate an investigation and corrective action within 8 hours for each excursion. • If the excursion has not ended within 24 hours, shut down the blast booth and make repairs. • The dust collector shall be operated and maintained in accordance with manufacturer's recommendations. • Records of ΔP readings, inspections, and repairs will be maintained for 5 years.