



Louisville Metro Air Pollution Control District
850 Barret Avenue
Louisville, Kentucky 40204-1745



Federally Enforceable District Origin Operating Permit (FEDOOP)

Permit No.: O-1568-15-F

Plant ID: 1568

Effective Date: xx/xx/2015

Expiration Date: xx/xx/2020

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:

NHK Spring Precision of America, Inc.
10600 Freeport Drive
Louisville, KY 40258

The applicable procedures of District Regulation 2.17 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 twelve (12) months and no later than ninety (90) days prior to the expiration date.

Emission limitations to qualify for non-major status:

Pollutant: PM₁₀
Tons/year: <100

Application No.: 23436

Application Received: 9/29/2008

Permit Writer: Shannon Hosey

Public Notice Date: 2/19/2015; 12/16/2015

{manager1}
Air Pollution Control Officer
{date1}

Table of Contents

Permit Revisions/Changes 4

Construction Permit History 4

Acronyms and Abbreviations 6

Preamble 7

General Conditions 8

Emission Unit U1 11

 U1 Unit Description: Grinders, Chamfering, Continuous Shot Peening Machine, and Shot Blaster 11

 U1 Applicable Regulations: 11

 U1 Equipment: 11

 U1 Control Devices: 12

 U1 Specific Conditions 13

 U1 Comments 22

Emission Unit U2 24

 U2 Unit Description: Shot Peening Machines 24

 U2 Applicable Regulations: 24

 U2 Equipment: 24

 U2 Control Devices: 25

 U2 Specific Conditions 26

Emission Unit U3 33

 U3 Unit Description: Anti-Corrosion Coating and Paint/Ink Marking Operation 33

 U3 Applicable Regulations: 33

 U3 Equipment: 33

 U3 Control Devices: 34

 U3 Specific Conditions 35

Off-Permit Documents 39

Alternative Operating Scenario 39

Insignificant Activities 39

Emission Unit IA-1 40

 IA-1 Unit Description: Parts Washer with no secondary reservoir 40

 IA-1 Applicable Regulations: 40

 IA-1 Equipment: 40

 IA-1 Control Devices: 40

 IA-1 Specific Conditions 41

Emission Unit IA-2..... 44
 IA-2 Unit Description: Equipment Subject to STAR only 44
 IA-2 Applicable Regulations: 44
 IA-2 Equipment: 44
 IA-2 Control Devices:..... 44
 IA-2 Specific Conditions 45

Attachment A - General Testing Requirements..... 47

Attachment B - Protocol Checklist for a Performance Test 49

FEDDOOP Fee Comment 50

Permit Revisions/Changes

Permit	Revision No.	Issue Date	Public Notice Date	Type	Page No.	Description
O-1568-15-F	NA	xx/xx/2015	02/19/2015; 12/16/2015	Initial Issuance	All	Initial FEDOOP Permit

Construction Permit History

Permit No.	Issue Date	Description
C-1568-1008-15-F	10/30/2015	Edge Grinders (B-4, D-4 and D-5), make Daisho Seiki Co, model GMV4-915, capacity 7200 valve springs/hr for B-4, and capacity 1500 transmission springs/hr each for D-4 and D-5; Two (2) Small Edge Grinders (A-8 and A-9), make Asahi Seiki, model AGI2N, capacity 3600 valve springs/hr each; and Chamfering Machines (B-5A and B-5B), make custom, model custom, capacity 3600 valve spring/hr each Shot Peening Machines (SB-3 and B-8), make Sinto-Kogio, model SNB-30, capacity 12,000 valve springs/hr (959 lb shot/hr) each; Shot Peening Machine (B-6), make Sinto-Kogio, model SNB-50, capacity 12,000 valve springs/hr (959 lb shot/hr); one (1) Continuous Shot Peening Maching (D-6), make Itoh Kikoh, model IMD 27, capacity 6000 transmission springs/hr (959 lb shot/hr); one (1) Pre-shot Peening Machine (GCN-5), make Sinto Kogio, model SNB-30Y, capacity 12,000 valve springs/hr (959 lb shot/hr)
C-1568-1007-15-F	10/30/2015	Grinders; chamfering machines; shot peening machines; and inspection machines that will be used by four new production lines E, F, G, and H and the existing production line A.
35474-12-C(R1)	09/10/2013	Installation of one (1) new Asahi-Seiki model AGI2N small edge grinder, E29 (C-14), controlled by an existing baghouse (OS-6)
35941-12-C(R1)	09/10/2013	Installation of two (2) new Asahi-Seiki model AGI2N small edge grinder, E30 and E31 (C15 and C-16), and one (1) new custom made chamfering machine, E32 (C-17), controlled by an existing baghouse (OS-6)
37302-13-C	09/10/2013	Installation of two (2) new Asahi-Seiki model AGI2N small edge grinders, E33 (C-18) and E34 (C-19, controlled by an existing baghouse (OS-6)

Permit No.	Issue Date	Description
333-06-C	11/30/2007	Edge Grinders (B-4, D-4 and D-5), make Daisho Seiki Co, model GMV4-915, capacity 7200 valve springs/hr for B-4, and capacity 1500 transmission springs/hr each for D-4 and D-5; Two (2) Small Edge Grinders (A-8 and A-9), make Asahi Seiki, model AGI2N, capacity 3600 valve springs/hr each; and Chamfering Machines (B-5A and B-5B), make custom, model custom, capacity 3600 valve spring/hr each
334-06-C	11/30/2007	Two (2) New Baghouses (OS-5 and OS-7), make Donaldson, model DFT-4-48 with an additional filer on each exit vent
335-06-C	11/30/2007	Shot Peening Machines (SB-3 and B-8), make Sinto-Kogio, model SNB-30, capacity 12,000 valve springs/hr (959 lb shot/hr) each; Shot Peening Machine (B-6), make Sinto-Kogio, model SNB-50, capacity 12,000 valve springs/hr (959 lb shot/hr); one (1) Continuous Shot Peening Maching (D-6), make Itoh Kikoh, model IMD 27, capacity 6000 transmission springs/hr (959 lb shot/hr); one (1) Pre-shot Peening Machine (GCN-5), make Sinto Kogio, model SNB-30Y, capacity 12,000 valve springs/hr (959 lb shot/hr)
336-06-C	11/30/2007	Baghouse (B-7, B-9 and GCN-6) each equipped with a HEPA filter

Acronyms and Abbreviations

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

Preamble

This permit covers only the provisions of Kentucky Revised Statutes Chapter 77 Air Pollution Control, the regulations of the Louisville Metro Air Pollution Control District (District) and, where appropriate, certain federal regulations. The issuance of this permit does not exempt any owner or operator to whom it has been issued from prosecution on account of the emission or issuance of any air contaminant caused or permitted by such owner or operator in violation of any of the provisions of KRS 77 or District regulations. Any permit shall be considered invalid if timely payment of applicable fees is not made after receipt of the statement of fees (SOF). The permit contains general permit conditions and specific permit conditions. General conditions are applicable unless a more stringent requirement is specified elsewhere in the permit.

General Conditions

1. The owner or operator shall comply with all General Conditions herein and all terms and conditions in the referenced process/process equipment list.
2. All terms and conditions in this FEDOOP are enforceable by EPA, except those terms and conditions specified as District-only enforceable, and those which are not required pursuant to the Clean Air Act Amendments of 1990 (CAAA) or any of the Act's applicable requirements.
3. All application forms, reports, compliance certifications, and other relevant information submitted to the District shall be certified by a responsible official. 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.
4. The owner or operator shall submit an annual compliance certification, signed by the responsible official, to the District, on or before April 15 of the year following the year for which the certification applies. This certification shall include completion of District Form 9440-0.
5. Periodic testing, instrumental monitoring, or non-instrumental monitoring, which may include record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstrating continuing compliance with the terms and conditions of this permit.
6. The owner or operator shall retain all records required by the District or any applicable requirement, including all required monitoring data and supporting information, for a period of five years from the date of the monitoring, sampling, measurement, report, or application, unless a longer time period for record retention is required by the District or an applicable requirement. Records shall be retrievable within a reasonable time and made available to the District, Kentucky Division for Air Quality, or the EPA upon request.
7. The owner or operator shall provide written notification to the District, and receive approval, prior to making any changes to equipment or processes that would result in emissions of any regulated pollutant in excess of the allowable emissions specified in this permit.
8. This permit may be reissued, revised, reopened, or revoked pursuant to District Regulation 2.17. Repeated violations of permit conditions are sufficient cause for revocation of this permit. The filing of a request by the owner or operator for any reissuance, revision, revocation, termination, or a notification of planned changes in equipment or processes, or an anticipated noncompliance shall not alter any permit requirement.
9. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed either 10 tons per year, or such lesser quantity as the EPA has established by rule, of any one Hazardous Air Pollutant (HAP) or 25 tons per year of all HAPs combined. Fugitive HAP emissions shall be included in this limit. HAPs are listed in Section 112(b) of the CAAA and as amended in 40 CFR 63, Subpart C.
10. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed 100 tons per year of any regulated pollutant, including particulate matter, PM₁₀, PM_{2.5}, sulfur dioxide, carbon monoxide, nitrogen oxides, lead, hydrogen sulfide, gaseous fluorides, total fluorides, or Volatile Organic Compounds (VOC); any pollutant subject to any standard in District Regulation 7.02; any substance listed in sections 112(r), 602(a) and 602(b) of the CAAA; or any combination of greenhouse gasses whose combined global warming potential equals or exceeds 100,000 tons CO₂-equivalent, as defined in 40 CFR 98). Fugitive emissions shall be included in these limits for source categories listed in District Regulation 2.16.

11. 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.
12. Unless specified elsewhere in this permit, the owner or operator shall submit annual reports demonstrating compliance with the emission limitations specified. The report shall contain monthly and consecutive 12-month totals for each pollutant that has a federally enforceable limitation on the potential to emit. 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 annual compliance reports shall include the following per Regulation 2.17, section 3.5.
 - A certification 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 report must be postmarked no later than March 1 of the year following the calendar year covered in the annual report.

13. The owner or operator shall comply with all applicable requirements of the following federally enforceable District Regulations:

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, Emissions 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)
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 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
2.17	Federally Enforceable District Origin Operating Permits
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.07	Episode Reporting Requirements
6.01	General Provisions

Regulation	Title
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions

14. The owner or operator shall comply with all applicable requirements of the following District-only enforceable regulations:

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

15. The owner or operator shall submit emission inventory reports, as required by Regulation 1.06, if so notified by the District.
16. The owner or operator shall submit timely reports of abnormal conditions or operational changes that may cause excess emissions, as required by Regulation 1.07.
17. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit shall be submitted to:

***Air Pollution Control District
Room 205
850 Barret Ave
Louisville, KY 40204-1745***

Emission Unit U1

U1 Unit Description: Grinders, Chamfering, Continuous Shot Peening Machine, and Shot Blaster

U1 Applicable Regulations:

Regulation	Title	Applicable Sections
2.17	Federally Enforceable District Origin Operating Permits	All
5.00	Definitions	All
5.01	General Provisions	All
5.20	Methodology for Determining Benchmark Ambient	All
5.21	Environmental Acceptability for Toxic Air Contaminants	All
5.22	Procedures for Determining the Maximum Ambient	All
5.23	Categories of Toxic Air Contaminants	All
7.08	Standards of Performance for New Process Operations	All

U1 Equipment:

Emission Point ID	Description Make/Model	Applicable Regulation	Control Device (Control ID)
A-4	Edge Grinder, Daisho Seiki Co, model GMV4-915	STAR* 7.08	OS-4
A-8	Edge Grinder, Asahi Seiki, model AGI2N		OS-6
A-9	Edge Grinder, Asahi Seiki, model AGI2N		OS-4
B-4	Edge Grinder, Daisho Seiki Co, model GMV4-915		OS-6
B-5A	Chamfering Machine Custom		OS-5
B-5B	Chamfering Machine Custom		OS-6
D-4	Edge Grinder, Daisho Seiki Co, model GMV4-915		OS-6
D-5	Edge Grinder, Daisho Seiki Co, model GMV4-915		OS-8
D-6	Continuous Shot Peening Machine, Itoh Kikoh, model IMD 27		NA
SB-1	Shot Blaster (Dry Horning), Sinto Kogio, SJA11D		OS-6
OS-1	Cooling Tower, Marley, model 496 (This equipment is an insignificant activity)		
C-14	Edge Grinder, Asahi-Seiki, model AG12N		OS-6
C-15	Edge Grinder, Asahi-Seiki, model AG12N		
C-16	Edge Grinder, Asahi-Seiki, model AG12N		OS-6
A-5A ¹	Chamfering machine, make Asahi Seiki, model AA, capacity 3,600 piece/hr		
A-5B ¹	Chamfering machine, make Asahi Seiki, model AA,		

¹ New chamfering machine A-5A and A-5B will replace existing chamfering machine A-5.

Emission Point ID	Description Make/Model	Applicable Regulation	Control Device (Control ID)
	capacity 3,600 piece/hr		
E-4	Gardner grinder, make Gardner, model 4V36T, capacity 6,000 piece/hr		OS-11
E-5A	Chamfering machine, make Asahi Seiki, model AA, capacity 3,600 piece/hr		
E-5B	Chamfering machine, make Asahi Seiki, model AA, capacity 3,600 piece/hr		
F-4	Edge grinder, make Daisho Seiki, model GMV4-915, capacity 7,200 piece/hr		
G-4	Edge grinder, make Dorn, model DR660-2VE, capacity 6,000 piece/hr		OS-12
G-5	Chamfering machine, make NHK INA, capacity 3,600 piece/hr		
H-4	Edge grinder, make Dorn, model DR660-2VE, capacity 6,000 piece/hr		
* STAR rules consist of Regulation 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23.			

U1 Control Devices:

Control ID	Description	Pollutant Controlled	Stack ID
OS-4	Donaldson Torit, Baghouse with filter, model DFT4-48	PM	S-OS-4
OS-5	Donaldson Torit, Baghouse with filter, model DFT4-48		S-OS-5
OS-6	Donaldson Torit, Baghouse with filter, model DFT4-48		S-OS-6
OS-8	Sinto Kogio, Baghouse, model NCF-64U1R.		S-OS-8
OS-11	Baghouse with filter, make Donaldsont, model DFT4-48		S-OS-11
OS-12	Baghouse with filter, make UAS, model SCR 48-4		S-OS-12

U1 Specific Conditions

S1. Standards (Regulation 2.17, section 5.2)

a. PM/PM₁₀

- i. The owner or operator shall not allow the plant-wide PM₁₀ emissions to equal or exceed 100 tons per 12 consecutive month period. (Regulation 2.17, section 5.1)
- ii. The owner or operator shall not allow PM emissions to exceed the following limits based on actual operating hours in a calendar day. (Regulation 7.08, section 3.1.2)

Emission Point ID	Emission Limit (lb/hr)
(A-4) Edge Grinder ²	2.34 (Construction Permit 342-05-C)
(D-6) Continuous Shot Peening Machine ³	3.12 (Construction Permit 335-06-C)
(B-4) Grinder ²	2.34 (Construction Permit C-1568-1008-15-F)
(D-4) Grinder ²	2.34 (Construction Permit C-1568-1008-15-F)
(D-5) Grinder ²	2.34 (Construction Permit C-1568-1008-15-F)
(A-8) Grinder ²	2.34 (Construction Permit C-1568-1008-15-F)
(A-9) Grinder ²	2.34 (Construction Permit C-1568-1008-15-F)
(B-5A) Chamfering Machines ²	2.34 (Construction Permit C-1568-1008-15-F)
(B-5B) Chamfering Machines ²	2.34 (Construction Permit C-1568-1008-15-F)
(SB-1) Shot Blaster ²	2.34 (Construction Permit 344-05-C)
(C-14) Edge Grinder ²	2.34 (Construction Permit 35474-12-C(R1))
(C-15) Edge Grinder ²	2.34 (Construction Permit 35941-12-C(R1))
(C-16) Edge Grinder ²	2.34 (Construction Permit 35941-12-C(R1))
(OS-1) Cooling Tower ³	2.34

² A one-time compliance demonstration has been performed for each piece of equipment for PM, and the lb/hr standards cannot be exceeded controlled. Therefore, the control devices will be operated as needed to meet the lb/hr standard.

³ A one-time PM compliance demonstration was performed and the lb/hr standards cannot be exceeded uncontrolled for this process. Therefore, there are no monitoring, record keeping, or reporting requirements with respect to the PM lb/hr limits.

Emission Point ID	Emission Limit (lb/hr)
(A-5A) Chamfering machine ²	2.34 (Construction Permit C-1568-1007-15-F)
(A-5B) Chamfering machine ²	2.34 (Construction Permit C-1568-1007-15-F)
(E-4) Gardner Grinder ²	2.34 (Construction Permit C-1568-1007-15-F)
(E-5A) Chamfering machine ²	2.34 (Construction Permit C-1568-1007-15-F)
(E-5B) Chamfering machine ²	2.34 (Construction Permit C-1568-1007-15-F)
(F-4) Edge Grinder ²	2.34 (Construction Permit C-1568-1007-15-F)
(G-4) Edge Grinder ²	2.34 (Construction Permit C-1568-1007-15-F)
(G-5) Chamfering machine ²	2.34 (Construction Permit C-1568-1007-15-F)
(H-4) Edge Grinder ²	2.34 (Construction Permit C-1568-1007-15-F)

- iii. The owner or operator shall not allow the pressure drop to fall outside of the ranges listed below for each baghouse: (Regulation 2.17, section 5.1)

Baghouse	Range
OS-4 ⁴	0.2 to 10
OS-5 ⁴	0.2 to 10
OS-6 ⁴	0.2 to 10
OS-8 ⁴	0.2 to 10
OS-11 ⁵	0.2 to 10
OS-12 ⁵	0.2 to 10

- iv. The owner or operator shall operate and maintain the control device at all times an associated emission point is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards.⁶ (Regulation 2.17, section 5.1)

b. Opacity

The owner or operator shall not cause or permit the discharge of emissions equal to or in excess of 20% opacity. (Regulation 7.08, section 3.1.1)

c. TAC

⁴ Control efficiencies for OS-4, OS-5, OS-6, and OS-8 are based on 2007 stack test results

⁵ Control efficiencies for OS-11 and OS-12 are based on stack test results of similar control devices OS-4 and OS-5

⁶ Control devices for this unit are required to be operated at all times in order to comply with the lb/hr PM emission limits per Regulation 7.08.

- i. The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be de minimis. (Regulations 5.00 and 5.21) (See U1 Comment 1)⁷
- ii. The owner or operator shall not allow TAC emissions to exceed the TAC emission standards listed in the following table.⁸ (Regulation 5.21, section 4.2 and section 4.3) (See U1 Comment 2)

Emission Point	Description	TAC Emission Limits (lb/12 consecutive month period)			
		Chromium III (16065-83-1)	Copper (7440-50-8)	Nickel (7440-02-0)	Manganese (7439-96-5)
A-4	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	9.501	<i>De Minimis</i>
B-4	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	9.501	<i>De Minimis</i>
D-4	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	11.103	27.758
D-5	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	11.103	27.758
A-8	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	12.668	31.67
A-9	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	12.668	31.67
C-14	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	12.668	31.67
C-15	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	12.668	31.67
C-16	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	12.668	31.67
B-5A	Chamfering	<i>De Minimis</i>	<i>De Minimis</i>	2.733	<i>De Minimis</i>
B-5B	Chamfering	<i>De Minimis</i>	<i>De Minimis</i>	2.733	<i>De Minimis</i>
D-6	Continuous Shot Peening	<i>De Minimis</i>	<i>De Minimis</i>	2.178	<i>De Minimis</i>
SB-1	Shot Blaster	<i>De Minimis</i>	<i>De Minimis</i>	2.723	<i>De Minimis</i>
A-5A	Chamfering	<i>De Minimis</i>	<i>De Minimis</i>	2.73	<i>De Minimis</i>
A-5B	Chamfering	<i>De Minimis</i>	<i>De Minimis</i>	2.73	<i>De Minimis</i>
E-4	Garden Grinder	<i>De Minimis</i>	<i>De Minimis</i>	7.42	<i>De Minimis</i>
E-5A	Chamfering	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
E-5B	Chamfering	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
F-4	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	10.56	26.39
G-4	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	8.8	<i>De Minimis</i>

⁷ Cooling Tower OS-1 is an insignificant activity and therefore de minimis by definition.

⁸ The TAC emission standards were established for the chamfering machines, grinders and shot peening since the EA Demonstration was based on controlled PTE. If the controlled PTE for the TAC is less than de minimis level, use De Minimis as limit. If the controlled PTE for the TAC is greater than de minimis level, modeling results were used to calculate risk value to compare to the EA Goals and controlled PTE is used as limit.

Emission Point	Description	TAC Emission Limits (lb/12 consecutive month period)			
		Chromium III (16065-83-1)	Copper (7440-50-8)	Nickel (7440-02-0)	Manganese (7439-96-5)
G-5	Chamfering	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
H-4	Edge Grinder	<i>De Minimis</i>	<i>De Minimis</i>	8.8	<i>De Minimis</i>

- iii. The owner or operator shall operate and maintain the control device at all times an associated emission point is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards.⁹

S2. Monitoring and Record Keeping (Regulation 2.17, section 5.2)

Records shall be readily retrievable and shall be maintained for five (5) years prior to disposal.

a. PM/PM₁₀

- i. The owner or operator shall daily monitor and record the pressure drop in inches water column of each baghouse (OS-4, OS-5, OS-6, OS-8, OS-11, and OS-12). If the values of the gauges are outside of the range for the baghouse, the control efficiency of the baghouse will be considered zero in the PM and PM₁₀ emission calculations for the period of time the values of the gauges are outside of the range for the baghouse.
- ii. The owner or operator shall keep a daily record of the hours of operation for the continuous shot peening machine and the shot blast machine.
- iii. The owner or operator shall keep a daily record of the number and type of springs that are ground by each grinding and chamfering machine.
- iv. The owner or operator shall maintain daily records of any periods of time where the process was operating and the control device was not operating.
- v. If there is any time that the control device is not in operation when the process is operating, then the owner or operator shall keep a record of the following for each event:
 - 1) Date;
 - 2) Start time and stop time;
 - 3) Identification of the control device and process equipment;
 - 4) PM emissions for each hour during the event in lb/hr;

⁹ Control devices for this unit are required to be operated at all times in order to comply with the TAC emission limits established per Regulation 5.00 and 5.21.

- 5) Summary of the cause or reason for each event;
 - 6) Corrective action taken to minimize the extent or duration of the event; and
 - 7) Measures implemented to prevent reoccurrence of the situation that resulted in the event.
- vi. The owner or operator shall monthly calculate and record the monthly and 12 consecutive month PM₁₀ emissions for each process equipment (including all chamfering machines, grinder, continuous shot peening machines, shot blast equipment, and the cooling tower) using the following equations for controlled emissions or other methods approved in writing by the District. For uncontrolled emissions use the same methods and remove the control efficiencies:

For the Edge Grinders:

$$PM_{E-lineVSGrinder} = \left(\frac{\# \text{ springs}}{\text{month}} \right) \left(\frac{\text{lb}}{\text{spring}} \right) (0.0695)(1 - CE_{Baghouse})(1 - CE_{Filter})$$

$$PM_{SmallVSGrinder} = \left(\frac{\# \text{ springs}}{\text{month}} \right) \left(\frac{\text{lb}}{\text{spring}} \right) (0.0849)(1 - CE_{Baghouse})(1 - CE_{Filter})$$

$$PM_{LargeVSGrinder} = \left(\frac{\# \text{ springs}}{\text{month}} \right) \left(\frac{\text{lb}}{\text{spring}} \right) (0.0735)(1 - CE_{Baghouse})(1 - CE_{Filter})$$

$$PM_{LargeTSGrinder} = \left(\frac{\# \text{ springs}}{\text{month}} \right) \left(\frac{\text{lb}}{\text{spring}} \right) (0.1166)(1 - CE_{Baghouse})(1 - CE_{Filter})$$

For the Chamfering Machines:

$$PM_{Chamfering} = \left(\frac{\# \text{ springs}}{\text{month}} \right) \left(\frac{\text{lb}}{\text{spring}} \right) (0.015)(1 - CE_{Baghouse})(1 - CE_{Filter})$$

Where,

springs/month = The sum of the daily number of each type of springs processed for each piece of equipment for the month.

lb/spring = The average weight of each type of spring (0.0644 lb/spring for valve spring, VS, for grinding operations and 0.060 lb/spring for valve spring, VS, for chamfering operations).

EF (0.0695) = Emission factor for the E-Line valve spring grinders representing pounds of PM generated per pound of springs processed (lb PM/lb springs).

EF (0.0735)	=	Emission factor the large valve spring grinders representing pounds of PM generated per pound of springs processed (lb PM/lb springs).
EF (0.0849)	=	Emission factor for the small valve spring grinders representing pounds of PM generated per pound of springs processed (lb PM/lb springs).
EF (0.1166)	=	Emission factor for the large transmission spring grinders representing pounds of PM generated per pound of springs processed (lb PM/lb springs).
EF (0.015)	=	Emission factor for the chamfering machine representing pounds of PM generated per pound of springs processed (lb PM/lb springs).
CE _{Baghouse}	=	0.95 for baghouses, unless stack testing indicated a different value.
CE _{Filter}	=	0.90 for other filters, unless stack testing indicates a different value.

For Cooling Tower:

$$PM_{10CT} = \left(\text{Flow Rate} \frac{\text{Gal}}{\text{hr}} \right) \left(\text{TDS} \frac{\text{lbPM}}{\text{gal}} \right) (\text{Total Liquid Drift}(AP - 42) (\%))$$

Where,

Flow Rate = Flow Rate of the cooling tower

TDS = Total Dissolved Solids obtained from Louisville MSD Report

Total Liquid Drift (AP-42) = AP-42 emission factor for PM

For Continuous Shot Peening (D-6):

$$PM_{SP} = \left(\text{Shot Capacity} \frac{\text{lb}}{\text{hr}} \right) \left(\frac{27\text{lbPM}}{1000\text{lb}} \right) (0.10) \left(\frac{\text{OperatingHours}}{\text{Month}} \right) (1 - CE_{\text{Baghouse}}) (1 - CE_{\text{Filter}})$$

$$PM_{10SP} = \left(\text{Shot Capacity} \frac{\text{lb}}{\text{hr}} \right) \left(\frac{13\text{lbPM}}{1000\text{lb}} \right) (0.10) \left(\frac{\text{OperatingHours}}{\text{Month}} \right) (1 - CE_{\text{Baghouse}}) (1 - CE_{\text{Filter}})$$

For Shot Blast Equipment (SB-1):

$$PM_{SB} = \left(\text{Shot Capacity} \frac{\text{lb}}{\text{hr}} \right) \left(\frac{27\text{lbPM}}{1000\text{lb}} \right) \left(\frac{\text{OperatingHours}}{\text{Month}} \right) (0.10) (1 - CE_{\text{Baghouse}})$$

$$PM_{10SB} = \left(\text{Shot Capacity} \frac{\text{lb}}{\text{hr}} \right) \left(\frac{13 \text{lbPM}}{1000 \text{lb}} \right) (0.10) \left(\frac{\text{OperatingHours}}{\text{Month}} \right) (1 - CE_{\text{Baghouse}})$$

Where,

Shot Capacity = Shot capacity based on nozzle size and air pressure (i.e. <http://www.marco.us/docs/library/technical/other/air-abrasive-consumption-chart---1091029.pdf?sfvrsn=6>)

CE_{Baghouse} = 0.95 for baghouses, unless stack testing indicated a different value.

CE_{Filter} = 0.90 for other filters, unless stack testing indicates a different value.

$CE_{\text{HEPA Filter}}$ = 0.99 for HEPA filters, unless stack testing indicates a different value.

OperatingHours/Month = The sum of the daily operating hours for each piece of equipment

(27lbPM/1000 lb)(0.10) = AP-42, section 13.2.6 Abrasive Blasting using steel shot emission factor for PM

(13lbPM/1000 lb)(0.10) = AP-42, section 13.2.6 Abrasive Blasting using steel shot emission factor for PM_{10}

vii. The owner or operator shall, monthly, calculate and record the plant-wide and 12 consecutive month PM_{10} emissions to ensure ongoing compliance with the 100 tpy plant-wide limit.

b. Opacity

i. The owner or operator shall conduct a monthly one-minute visible emissions survey, during normal operation, of each emission point. No more than four (4) emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight (8) hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within twenty-four (24) hours of the initial observation.

- iii. The owner or operator shall maintain records, monthly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what, if any, corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

c. **TAC**

- i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to MSDS, analysis of emissions, and/or modeling results.
- ii. The owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions if a new TAC is introduced or the content of a TAC in a raw material increases above de minimis uncontrolled.
- iii. If there is any time that the control device is not in operation when the process is operating, then the owner or operator shall keep a record of the following for each event:
 - 1) Date;
 - 2) Start time and stop time;
 - 3) Identification of the control device and process equipment;
 - 4) Each TAC emission during the event in lb/hr and lb/12 consecutive month;
 - 5) Summary of the cause or reason for each event;
 - 6) Corrective action taken to minimize the extent or duration of the event; and
 - 7) Measures implemented to prevent reoccurrence of the situation that resulted in the event.

S3. **Reporting (Regulation 2.17, section 5.2)**

The owner or operator shall submit annual compliance reports in accordance with General Condition 12.

a. **PM/PM₁₀**

- i. The owner or operator shall report the plant-wide 12-consecutive month PM₁₀ emission for each month in the report period.
- ii. The owner or operator shall clearly identify all deviations from permit requirements in the annual report and include the following information:
 - 1) Emission unit ID number and emission point ID number;

- 2) Identification of all times any control device was not in operation when associated emission units were operating;
- 3) Identification of all times any control device exceeds the pressure drop range;
- 4) Calculated lb/hr PM emissions during the bypass event;
- 5) Reason for excess emissions; and
- 6) Description of corrective action taken to prevent future exceedances.
- 7) A negative declaration if no deviations occur during the reporting period.

b. Opacity

- i. Emission Unit number and Emission Point number for each exceedance;
- ii. The beginning and ending date of the reporting period;
- iii. The number of surveys where visible emissions were observed;
- iv. The date, time, and results of each Method 9 that exceeded the opacity standard; and
- v. Description of any corrective action taken for each exceedance.

c. TAC

- i. The owner or operator shall report 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.
- ii. For any conditions outside the analysis, the owner or operator shall re-analyze to determine whether these 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)
- iii. The owner or operator shall submit the re-evaluated EA demonstration to the District within 6 months after a change of a raw material as described in S2.c.ii.
- iv. The owner or operator shall clearly identify all deviations from permit requirements in the annual report and include the following information:
 - 1) Emission unit ID number and emission point ID number;
 - 2) Identification of all times the baghouse is not in operation and exceeded the any lb/hr or lb/12 consecutive month TAC limit;

- 3) Calculated lb/hr and lb/12 consecutive month for each TAC emission during the event;
- 4) Reason for excess emissions; and
- 5) Description of corrective action taken to prevent future exceedances.
- 6) A negative declaration if no deviations occur during the reporting period.

U1 Comments

1. The source submitted the original and updated plant-wide STAR Environmental Acceptability Demonstration (EA Demo) on September 26, 2008, August 20, 2012, May 01, 2013, September 19, 2015, October 09, 2015, and October 29 2015. The source also included a STAR EA Demo for each construction application. SCREEN3 air dispersion modeling air dispersion modeling was performed for each emission unit that has non-de minimis TAC emissions. As shown in the following tables, all the cumulative and individual carcinogen risk and non-carcinogen risk values are in compliance with Goals:

Plant-wide Sum	Risk	EAG
Industrial Total R _C	15.60	< 38
Non-Ind. Total R _C	2.81	< 3.8
Industrial Total R _{NC} (max)	2.40	< 3.0
Non-Ind. Total R _{NC} (max)	0.60	< 1.0

Unit	E Point	Description	Ni R _C (Indus.)	Ni R _C (Res.)	Ni R _{NC} (Indus.)	Ni R _{NC} (Res.)	Mn R _{NC} (Indus.)	Mn R _{NC} (Res.)	EBZ R _C (Indus.)	EBZ R _C (Res.)	EBZ R _{NC} (Indus.)	EBZ R _{NC} (Res.)
U1	A-4	Edge Grinder	0.53	0.13	0.14	0.04						
	A-8	Edge Grinder	0.70	0.18	0.19	0.05	0.13	0.03				
	A-9	Edge Grinder	0.70	0.18	0.19	0.05	0.13	0.03				
	B-4	Edge Grinder	0.53	0.13	0.14	0.04						
	B-5A	Chamfering	0.15	0.04	0.04	0.01						
	B-5B	Chamfering	0.15	0.04	0.04	0.01						
	D-4	Edge Grinder	0.62	0.16	0.17	0.04	0.12	0.03				
	D-5	Edge Grinder	0.62	0.16	0.17	0.04	0.12	0.03				
	D-6	Shot Preening	0.12	0.03	0.03	0.01						
	SB-1	Shot Blaster	0.33	0.05	0.09	0.01						
	C-14	Edge Grinder	0.70	0.18	0.19	0.05	0.13	0.03				
	C-15	Edge Grinder	0.70	0.18	0.19	0.05	0.13	0.03				
	C-16	Edge Grinder	0.70	0.18	0.19	0.05	0.13	0.03				
	A-5A	Chamfering	0.15	0.04	0.04	0.01						
	A-5B	Chamfering	0.15	0.04	0.04	0.01						
	E-4	Grinder	0.42	0.11	0.11	0.03						
	F-4	Grinder	0.59	0.15	0.16	0.04	0.11	0.03				
	G-4	Grinder	0.49	0.12	0.13	0.03						
H-4	Edge Grinder	0.49	0.12	0.13	0.03							
U3	A-17	Ins. Machine							0.84	0.07	0.0003	0.00003
	B-13	Ins. Machine							0.84	0.07	0.0003	0.00003
	AS-2	Ins. Machine							0.84	0.07	0.0003	0.00003
	E-13	Ins. Machine							0.84	0.07	0.0003	0.00003
	D-8	Ins. Machine							0.84	0.07	0.0003	0.00003

Unit	E Point	Description	Ni R _C (Indus.)	Ni R _C (Res.)	Ni R _{NC} (Indus.)	Ni R _{NC} (Res.)	Mn R _{NC} (Indus.)	Mn R _{NC} (Res.)	EBZ R _C (Indus.)	EBZ R _C (Res.)	EBZ R _{NC} (Indus.)	EBZ R _{NC} (Res.)
	F-13	Ins. Machine							0.84	0.07	0.0003	0.00003
	G-13	Ins. Machine							0.84	0.07	0.0003	0.00003
	H-13	Ins. Machine							0.84	0.07	0.0003	0.00003
Industrial Total R _C			8.85						6.75			
Non-Ind. Total R _C				2.22						0.59		
Industrial Total R _{NC}					2.40		1.02				0.002	
Non-Ind. Total R _{NC}						0.60	0.26					0.0002

2. The TAC emission limits determined by de minimis values shall be updated each time when the District revises the BAC/de minimis values for these TACs. The current de minimis values per TAC list revised on 10/14/2013 are as the following:

TAC Name	CAS #	De minimis values	
		(lb/hr)	(lb/12 consecutive month period)
Chromium III	16065-83-1	0.10	109.5
Copper	7440-50-8	0.04	43.8
Nickel	7440-02-0	0.0021	1.82
Manganese compounds	7439-96-5	0.03	24.0
Toluene	108-88-3	2,700	2,400,000
Xylene	1330-20-78	54.00	48,000
Ethyl Benzene	100-41-4	0.22	192

Note 1: Manganese was de minimis for the hourly standard controlled.

Note 2: Modeling for Manganese was performed at a controlled potential of 27.758 lb/yr (D-4 and D-5), 31.670 lb/yr (A-8, A-9, C-14, C-15, and C-16), and 26.39 lb/yr (F-4).

Note 3: Nickel was de minimis for the hourly standard controlled.

Note 4: Modeling for Nickel was performed at a controlled potential of 9.501 lb/yr (A-4 and B-4), 11.103 lb/yr (D-4 and D-5), 12.668 lb/yr (A-8, A-9, C-14, C-15, and C-16), 2.733 lb/yr (B-5A, B-5B, AS-A, and AS-B), 2.178 lb/yr (D-6), 2.723 lb/yr (SB-1), 7.42 lb/yr (E-4), 10.56 lb/yr (F-4) and 8.8 lb/yr (G-4 and H-4).

Emission Unit U2**U2 Unit Description:** Shot Peening Machines**U2 Applicable Regulations:**

Regulation	Title	Applicable Sections
2.17	Federally Enforceable District Origin Operating Permits	All
5.00	Definitions	All
5.01	General Provisions	All
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	All
5.21	Environmental Acceptability for Toxic Air Contaminants	All
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	All
5.23	Categories of Toxic Air Contaminants	All
7.08	Standards of Performance for New Process Operations	All

U2 Equipment:

Emission Process ID	Description Make/Model	Applicable Regulation	Control Device (Control ID)
A-10	Shot Peening Machine, Sinto Kogio, model SNB-50W with Internal Baghouse	STAR* 7.08	A-11
A-12	Shot Peening Machine, Sinto Kogio, model SNB-30 with Internal Baghouse		A-13
B-6	Shot Peening Machine, Sinto-Kogio, model SNB-50W with Internal Baghouse		B-7
B-8	Shot Peening Machine, Sinto-Kogio, model SNB-30 with Internal Baghouse		B-9
SB-3	Shot Peening Machine, Sinto-Kogio, model SNB-30 with Internal Baghouse		SB-5
GCN-5	Pre-shot Peening Machine, Sinto Kogio, model SNB-30Y with Internal Baghouse		GCN-6
E-6	Shot peening machine, make Sinto Kogio, model SNB 30W, capacity 3,000 piece/batch		E-7
E-8	Shot peening machine, make Sinto Kogio, model SNB 50W, capacity 3,000 piece/batch		E-9
F-6	Shot peening machine, make Sinto Kogio, model SNB 30W, capacity 3,000 piece/batch		F-7

Emission Process ID	Description Make/Model	Applicable Regulation	Control Device (Control ID)
F-8	Shot peening machine, make Sinto Kogio, model SNB 50W, capacity 3,000 piece/batch		F-9
* STAR rules consist of Regulation 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23.			

U2 Control Devices:

Control ID	Description	Pollutant Controlled	Stack ID
A-11	Donaldson Torit, Internal Baghouse with HEPA filter, model DFO3-3	PM	S-A-11
A-13	Donaldson Torit, Internal Baghouse with HEPA filter, model DFO3-3		S-A-13
B-7	Donaldson Torit, Internal Baghouse with HEPA filter, model DFO3-3		S-B-7
B-9	Donaldson Torit, Internal Baghouse with HEPA filter, model DFO3-3		S-B-9
SB-5	Donaldson Torit, Internal Baghouse with HEPA filter, model DFO3-3		S-SB-5
GCN-6	Donaldson Torit, Internal Baghouse with HEPA filter, model DFO3-3		S-GNC-6
E-7	Cartridge collector with HEPA filter, custom make		S-E-7
E-9	Cartridge collector with HEPA filter, custom make		S-E-9
F-7	Cartridge collector with HEPA filter, custom make		S-F-7
F-9	Cartridge collector with HEPA filter, custom make		S-F-9

U2 Specific Conditions

S1. Standards (Regulation 2.17, section 5.2)

a. PM/PM₁₀

- i. The owner or operator shall not allow the plant-wide PM₁₀ emissions to equal or exceed 100 tons per 12 consecutive month period. (Regulation 2.17, section 5.1)
- ii. The owner or operator shall not allow PM emissions to exceed the following limits based on actual operating hours in a calendar day. (Regulation 7.08, section 3.1.2)

Emission Process ID	Emission Limit (lb/hr)
(B-6) Shot Peening Machine ¹⁰	2.34 (Construction Permit C-1568-1008-15-F)
(B-8) Shot Peening Machine ¹⁰	2.34 (Construction Permit C-1568-1008-15-F)
(SB-3) Shot Peening Machine ¹⁰	2.34 (Construction Permit C-1568-1008-15-F)
(GCN-5) Pre-shot Peening Machine ¹¹	4.80 (Construction Permit 335-06-C)
(A-10) Shot Peening Machine ¹⁰	2.34 (Construction Permit 346-05-C)
(A-12) Shot Peening Machine ¹⁰	2.34 (Construction Permit 346-05-C)
(E-6) Shot Peening Machine ¹⁰	2.34 (Construction Permit C-1568-1007-15-F)
(E-8) Shot Peening Machine ¹⁰	2.34 (Construction Permit C-1568-1007-15-F)
(F-6) Shot Peening Machine ¹⁰	2.34 (Construction Permit C-1568-1007-15-F)
(F-8) Shot Peening Machine ¹⁰	2.34 (Construction Permit C-1568-1007-15-F)

¹⁰ A one-time compliance demonstration has been performed for each piece of equipment for PM, and the lb/hr standards cannot be exceeded controlled. Therefore, the control devices will be operated as needed to meet the lb/hr standard.

¹¹ A one-time PM compliance demonstration was performed and the lb/hr standards cannot be exceeded uncontrolled for this process. Therefore, there are no monitoring, record keeping, or reporting requirements with respect to the PM lb/hr limits.

Emission Process ID	Emission Limit (lb/hr)
	15-F)

iii. The owner or operator shall operate and maintain the control device at all times an associated emission point is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice for minimizing emissions. (Regulation 2.17, section 5.1)

b. Opacity

The owner or operator shall not cause or permit the discharge of emissions equal to or in excess of 20% opacity. (Regulation 7.08, section 3.1.1)

c. TAC

i. The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be de minimis. (Regulations 5.00 and 5.21) (See U1 Comment 1)

ii. The owner or operator shall not allow TAC emissions to exceed the TAC emission standards listed in the following table.¹² (Regulation 5.21, section 4.2 and section 4.3) (See U1 Comment 2)

iii.

Emission Point	Description	TAC Emission Limits (lb/12 consecutive month period)			
		Chromium III (16065-83-1)	Copper (7440-50-8)	Nickel (7440-02-0)	Manganese (7439-96-5)
A-10	Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
A-12	Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
B-6	Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
B-8	Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
SB-3	Shot Peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
GCN-5	Pre-Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
E-6	Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
E-8	Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>

¹² The TAC emission standards were established for the shot peening machines since the EA Demonstration was based on controlled PTE. If the controlled PTE for the TAC is less than de minimis level, use De Minimis as limit. If the controlled PTE for the TAC is greater than de minimis level, modeling results were used to calculate risk value to compare to the EA Goals and controlled PTE is used as limit.

Emission Point	Description	TAC Emission Limits (lb/12 consecutive month period)			
		Chromium III (16065-83-1)	Copper (7440-50-8)	Nickel (7440-02-0)	Manganese (7439-96-5)
F-6	Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>
F-8	Shot peening	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>	<i>De Minimis</i>

- iv. The owner or operator shall operate and maintain the control device at all times an associated emission point is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards.¹³ (Regulations 5.00 and 5.21)

S2. Monitoring and Record Keeping (Regulation 2.17, section 5.2)

Records shall be readily retrievable and shall be maintained for five (5) years prior to disposal.

a. PM/PM₁₀

- i. For control devices (A-11, A-13, B-7, B-9, SB-5, GCN-6, E-7, E-9, F-7, and F-9): The owner or operator shall monthly perform a visual inspection of the structural and mechanical integrity of the dust collector for signs of damage, air leakage, corrosion, or other equipment defects, and repair and/or replace defective components as needed. The owner or operator shall maintain monthly records of the results.
- ii. The owner or operator shall keep a daily record of the hours of operation by each shot peening machine.
- iii. The owner or operator shall maintain daily records of any periods of time where the process was operating and the control device was not operating.
- iv. If there is any time that the control device is not in operation when the process is operating, then the owner or operator shall keep a record of the following for each event:
- 1) Date;
 - 2) Start time and stop time;
 - 3) Identification of the control device and process equipment;
 - 4) PM emissions for each hour during the event in lb/hr;
 - 5) Summary of the cause or reason for each event;
 - 6) Corrective action taken to minimize the extent or duration of the event; and

¹³ Control devices for this unit are required to be operated at all times in order to comply with the TAC emission limits established per Regulation 5.00 and 5.21.

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

- v. The owner or operator shall monthly calculate and record the monthly and 12 consecutive month PM₁₀ emissions for each process equipment using the following equations for controlled emissions or other methods approved in writing by the District. For uncontrolled emissions use the same methods and remove the control efficiencies:

For the Shot Peening (SP):

$$PM_{SP} = \left(\text{Shot Capacity} \frac{\text{lb}}{\text{hr}} \right) \left(\frac{27\text{lbPM}}{1000\text{lb}} \right) (0.10) \left(\frac{\text{OperatingHours}}{\text{Month}} \right) \left(1 - CE_{\frac{\text{Baghouse}}{\text{(cartridge)filter}}} \right) (1 - CE_{\text{Filter or HEPA Filter}})$$

$$PM_{10SP} = \left(\text{Shot Capacity} \frac{\text{lb}}{\text{hr}} \right) \left(\frac{13\text{lbPM}}{1000\text{lb}} \right) (0.10) \left(\frac{\text{OperatingHours}}{\text{Month}} \right) \left(1 - CE_{\frac{\text{Baghouse}}{\text{(cartridge)filter}}} \right) (1 - CE_{\text{Filter or Hepa Filter}})$$

Where,

Shot Capacity = Shot capacity based on nozzle size and air pressure (i.e. <http://www.marco.us/docs/library/technical/other/air-abrasive-consumption-chart---1091029.pdf?sfvrsn=6>)

CE_{Bagouse} = 0.95 for baghouses, unless stack testing indicated a different value.

CE_{Filter} = 0.90 for other filters, unless stack testing indicates a different value.

CE_{HEPA Filter} = 0.99 for HEPA filters, unless stack testing indicates a different value.

OperatingHours/Month = The sum of the daily operating hours for each piece of equipment

(27lbPM/1000 lb)(0.10) = AP-42, section 13.2.6 Abrasive Blasting using steel shot emission factor for PM

(13lbPM/1000 lb)(0.10) = AP-42, section 13.2.6 Abrasive Blasting using steel shot emission factor for PM₁₀

- vi. The owner or operator shall, monthly, calculate and record the plant-wide and 12 consecutive month PM₁₀ emissions to ensure ongoing compliance with the 100 tpy plant-wide limit.

b. Opacity

- ii. The owner or operator shall conduct a monthly one-minute visible emissions survey, during normal operation, of each emission point. No more than four (4) emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.
- iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight (8) hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within twenty-four (24) hours of the initial observation.
- iv. The owner or operator shall maintain records, monthly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what, if any, corrective action was performed. If an emission point is not being operated during a given month, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

c. TAC

- i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to MSDS, analysis of emissions, and/or modeling results.
- ii. The owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions if a new TAC is introduced or the content of a TAC in a raw material increases above de minimis at the time of the change.
- iii. If there is any time that the control device is not in operation when the process is operating, then the owner or operator shall keep a record of the following for each event:

- 1) Date;
- 2) Start time and stop time;
- 3) Identification of the control device and process equipment;
- 4) Each TAC emission during the event in lb/hr and lb/12 consecutive month;
- 5) Summary of the cause or reason for each event;
- 6) Corrective action taken to minimize the extent or duration of the event; and
- 7) Measures implemented to prevent reoccurrence of the situation that resulted in the event.

S3. Reporting (Regulation 2.17, section 5.2)

The owner or operator shall submit annual compliance reports in accordance with General Condition 12.

a. PM/PM₁₀

- i. The owner or operator shall report the plant-wide 12-consecutive month PM₁₀ emission for each month in the report period.
- ii. The owner or operator shall report any deviations from the requirement of performing visual inspection of the structural and mechanical integrity of the control devices (A-11, A-13, B-7, B-9, SB-5, GCN-6, E-7, E-9, F-7, and F-9) and include the following information:
 - 1) Emission unit ID number and emission point ID number;
 - 2) The date, time, and the description of repair and/or replace defective components;
 - 3) A negative declaration if no deviations occur during the reporting period.
- iii. The owner or operator shall clearly identify all deviations from permit requirements in the annual report and include the following information regarding bypass events for control devices (A-11, A-13, B-7, B-9, SB-5, GCN-6, E-7, E-9, F-7, and F-9):
 - 1) Emission unit ID number and emission point ID number;
 - 2) Identification of all times any control device is not in operation;
 - 3) Calculated lb/hr PM emissions during the bypass event;
 - 4) Reason for excess emissions; and
 - 5) Description of corrective action taken to prevent future exceedances.
 - 6) A negative declaration if no deviations occur during the reporting period.

b. Opacity

- i. Emission Unit number and Emission Point number for each exceedance;
- ii. The beginning and ending date of the reporting period;
- iii. The number of surveys where visible emissions were observed;
- iv. The date, time, and results of each Method 9 that exceeded the opacity standard; and
- v. Description of any corrective action taken for each exceedance.

c. **TAC**

- i. The owner or operator shall report 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.
- ii. For any conditions outside the analysis, the owner or operator shall re-analyze to determine whether these 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)
- iii. The owner or operator shall submit the re-evaluated EA demonstration to the District within 6 months after a change of a raw material as described in S2.c.ii.
- iv. The owner or operator shall clearly identify all deviations from permit requirements in the annual report and include the following information:
 - 1) Emission unit ID number and emission point ID number;
 - 2) Identification of all times the baghouse is not in operation and exceeded the any lb/hr or lb/12 consecutive month TAC limit;
 - 3) Calculated lb/hr and lb/12 consecutive month for each TAC emission during the event;
 - 4) Reason for excess emissions; and
 - 5) Description of corrective action taken to prevent future exceedances.
 - 6) A negative declaration if no deviations occur during the reporting period.

Emission Unit U3**U3 Unit Description:** Anti-Corrosion Coating and Paint/Ink Marking Operation**U3 Applicable Regulations:**

Regulation	Title	Applicable Sections
2.17	Federally Enforceable District Origin Operating Permits	All
5.00	Definitions	All
5.01	General Provisions	All
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	All
5.21	Environmental Acceptability for Toxic Air Contaminants	All
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	All
5.23	Categories of Toxic Air Contaminants	All
7.08	Standards of Performance for New Process Operations	All
7.59	Standard of Performance for New Miscellaneous Metal Parts and Products Surface Coating Operations	All

U3 Equipment:

Emission Process ID	Description Make/Model	Applicable Regulation	Control Device (Control ID)	Stack ID
A-17	Inspection Machine, make Morita Co., capacity 7,200 piece/hr	STAR* 7.08 and 7.59	A-18	S-A-18
B-13	Inspection Machine, make Morita Co., capacity 7,200 piece/hr		B-14	S-B-14
E-13 ¹⁴	Inspection Machine, make VICS, capacity 7,200 piece/hr		E-14	S-E-14
AS-2	Inspection Machine, make Morita Co., capacity 7,200 piece/hr		N/A	N/A
F-13	Inspection Machine, make VICS, capacity 7,200 piece/hr		F-14	S-F-14
G-13	Inspection Machine, make VICS, capacity 7,200 piece/hr		G-14	S-G-14
H-13	Inspection Machine, make VICS, capacity 7,200 piece/hr		H-14	S-H-14

¹⁴ The existing inspection machine for C-line (C-13) was moved to E-line and re-designated as E-13

Emission Process ID	Description Make/Model	Applicable Regulation	Control Device (Control ID)	Stack ID
D-8	Inspection Machine, make Morita Co., capacity 3,000 piece/hr		N/A	N/A
* STAR rules consist of Regulation 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23.				

U3 Control Devices:

There are panel filters in each stack

U3 Specific Conditions

S1. Standards (Regulation 2.17, section 5.2)

a. VOC

- i. The owner or operator shall not allow or cause VOC emissions, including all coatings, additives, catalysts, solvents, thinners, and cleaners from this plant to exceed 5 tons during any during any 12 consecutive month period. (Construction Permit 347-05-C) (Regulation 7.59, section 5.2)

Or

- ii. No coating shall be used with a VOC content, as applied, in excess of the following limits during a calendar month averaging period: (Regulation 7.59, section 3.1)

Coating	VOC lb/gal	VOC kg/l
Clear coatings	4.3	0.52
Air-dried coatings	3.5	0.42
Extreme performance coatings	3.5	0.42
All other coatings	3.0	0.36

b. PM/PM₁₀

- i. The owner or operator shall not allow the plant-wide PM₁₀ emissions to equal or exceed 100 tons per 12 consecutive month period. (Regulation 2.17, section 5.1)
- ii. The owner or operator shall not allow PM emissions to exceed 2.34 lb/hr for each piece of equipment based on actual operating hours in a calendar day¹⁵. (Regulation 7.08, section 3.1.2)

c. Opacity

The owner or operator shall not cause or permit the discharge of emissions equal to or in excess of 20% opacity. (Regulation 7.08, section 3.1.1)

¹⁵ A one-time PM compliance demonstration was performed and the lb/hr standards cannot be exceeded uncontrolled for any of these processes. Therefore, there are no monitoring, record keeping, or reporting requirements with respect to the PM lb/hr limits.

d. **TAC**

The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be de minimis.¹⁶ (Regulations 5.00 and 5.21) (See U1 Comment 1)

S2. **Monitoring and Record Keeping (Regulation 2.17, section 5.2)**

Records shall be readily retrievable and shall be maintained for five (5) years prior to disposal.

a. **VOC**

- i. The owner or operator shall, monthly, record the total amount used in gallons of each coating, solvent, cleaner, etc, when non-compliant coatings are used.
- ii. The owner or operator shall monthly calculate and record the monthly and consecutive 12-month total VOC emissions each calendar month to demonstrate compliance with the five (5) ton per 12 consecutive month period limit when non-compliant coatings are used.

Or

- iii. An owner or operator of an affected facility subject to this regulation shall maintain records that include, but not be limited to, the following: (Regulation 7.59, section 6.1)
 - 1) The regulation and section number applicable to the affected facility for which the records are being maintained,
 - 2) The application method and substrate type (metal, plastic, etc.),
 - 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 month.
 - 4) The VOC content as applied in each coating and solvent,
 - 5) The date, or usage record period, for each application of coating and solvent,
 - 6) The amount of surface preparation, clean-up, wash-up of solvent (including exempt compounds) used and the VOC content of each material used during the month.
- iv. The VOC content shall be calculated using a percent solids basis (excluding water and exempt solvents) for coatings using EPA Method 24. (Regulation 7.59, section 6.2)

¹⁶ There are TACs, toluene, xylene, and ethyl benzene, emitted from the inks used for the inspection machines. The uncontrolled potential emissions for toluene and xylene are de minimis. The uncontrolled potential ethyl benzene emissions can exceed its de minimis level. Using SCREEN3 modeling results, the individual and cumulative risk values for ethyl benzene comply with STAR EA goals. Since the EA Demo was based on uncontrolled PTE, TAC emission limits are not required for this emission unit.

b. **PM/PM₁₀**

- i. The owner or operator shall, monthly, record the total amount used in gallons of each coating.
- ii. The owner or operator shall monthly calculate and record the monthly and 12 consecutive month PM₁₀ emissions for each inspection machine using the following equations for controlled emissions or other methods approved in writing by the District. For uncontrolled emissions use the same method and remove the control efficiencies:

For the Inspection Machines:

$$PM_{inspection\ machine} = \left(\frac{Throughput}{month} \right) (Density)(0.05)(1 - CE_{Filter})$$

Where,

Throughput/month = Gallons of coating used each month in each inspection machine.

Density = Density of the coating in lb/gallon.

EF (0.05) = Emission factor for the inspection machines representing percent solids of PM contained in the coating.

CE_{Filter} = 0.90 for other filters, unless stack testing indicates a different value.

- iii. The owner or operator shall, monthly, calculate and record the plant-wide and 12 consecutive month PM₁₀ emissions to ensure ongoing compliance with the 100 tpy plant-wide limit.

c. **Opacity**

There are no monitoring or record keeping requirements for this pollutant for this equipment¹⁷.

d. **TAC**

- i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to MSDS, analysis of emissions, and/or modeling results.
- ii. The owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions if a new TAC is introduced or the content of a TAC in a raw material increases above *de minimis*.

¹⁷ The District has determined that no periodic visible emissions surveys are required for this equipment.

S3. Reporting (Regulation 2.17, section 5.2)

The owner or operator shall submit annual compliance reports in accordance with General Condition 12.

a. VOC

- i. The emission unit ID numbers and emission process ID numbers;
- ii. The total plant-wide 12 consecutive month VOC emissions from the coating operation for each month in the reporting period when non-compliant coatings are used;
- iii. A description of corrective actions taken for each exceedance.

Or

- iv. The emission unit ID numbers and emission process ID numbers;
- v. Identification of all periods when compliant coating were used and VOC emissions from the coating operations that exceeded the lb/gal as applied limit for any rolling 12-month period in the prior 12 consecutive months;
- vi. A description of corrective actions taken for each exceedance.

b. PM/PM₁₀

The owner or operator shall report the plant-wide 12-consecutive month PM₁₀ emission for each month in the report period.

c. Opacity

There are no reporting requirements for this pollutant for this emission unit.

d. TAC

- i. The owner or operator shall report 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.
- ii. For any conditions outside the analysis, the owner or operator shall re-analyze to determine whether these 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)
- iii. The owner or operator shall submit the re-evaluated EA demonstration to the District within 6 months after a change of a raw material as described in S2.d.ii.

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 the 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.

Off-Permit Documents

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

Alternative Operating Scenario

The company requested no alternate operating scenario in its FEDOOP Application.

Insignificant Activities

Equipment	Quantity	PTE (tpy)	Basis for Exemption
Parts Washer (IA-1)	1	0.002 VOC	Regulation 1.02, Appendix A, section 1.38.1.1
GCN-1 through GCN- 4 (direct fired Furnaces)(IA-2)	4	0.003 NOx; 0.00003 PM ₁₀	Regulation 1.02, Appendix A, section 1.38.1.1

- 1) Insignificant activities identified in District Regulation 1.02 Appendix A may be subject to size or production rate disclosure requirements.
- 2) Insignificant activities identified in District Regulation 1.02 Appendix A shall comply with generally applicable requirements.
- 3) Activities identified in regulation 1.02, Appendix A, may not require a permit and may be insignificant with regard to application disclosure requirements but may still have generally applicable requirements that continue to apply to the source and must be included in the permit.
- 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) In lieu of recording annual throughputs and calculating actual annual emissions, the owner or operator may elect to report the pollutant Potential To Emit (PTE) quantity listed in the Insignificant Activities table, as the annual emission for each piece of equipment, since the emissions from the source's Insignificant Activities are very minor in comparison to the plant wide emissions.
- 6) The owner or operator shall annually submit an updated list of Insignificant Activities, including an identification of the additions and removals of Insignificant Activities that occurred during the preceding year, with the compliance certification due April 15th.

Emission Unit IA-1

IA-1 Unit Description: Parts Washer with no secondary reservoir

IA-1 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
2.17	Federally Enforceable District Origin Operating Permits	All
6.18	Standards of Performance for Solvent Metal Cleaning Equipment	1, 2, 3, 4.1, 4.2

IA-1 Equipment:

Emission Process	Description	Applicable Regulation	Control ID
IA-1	Heritage, Crystal Clean Parts Washer	6.18	N/A

IA-1 Control Devices:

There are no control devices associated with Emission Unit IA-1.

IA-1 Specific Conditions**S1. Standards (Regulation 2.17, section 5.2)****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 Specific Condition S1.a.ii. shall be installed on or near the cold cleaner. (Regulation 6.18, section 4.1.3)
 - 4) If used, the solvent spray shall be a fluid stream, not a fine, atomized, or shower type spray, at a pressure that does not cause excessive splashing. Flushing of parts using a flexible hose or other flushing device shall be performed only within the freeboard area of the cold cleaner. Solvent flow shall be directed downward to avoid turbulence at the air-solvent interface and to prevent solvent from splashing outside of the cold cleaner. (Regulation 6.18, section 4.1.4)
 - 5) Work area fans shall be located and positioned so that they do not blow across the opening of the cold cleaner. (Regulation 6.18, section 4.1.6)
 - 6) The solvent-containing portion of the cold cleaner shall be free of all liquid leaks. Auxiliary cold cleaner equipment such as pumps, water separators, steam traps, or distillation units shall not have any visible liquid leaks, visible tears, or cracks. (Regulation 6.18, section 4.1.8)
- ii. The owner or operator shall observe at all times the following operating requirements: (Regulation 6.18, section 4.2)

- 1) Waste solvent shall neither be disposed of nor transferred to another party in a manner such that more than 20% by weight of the waste solvent can evaporate. Waste solvent shall be stored only in a covered container. A covered container may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container. (Regulation 6.18, section 4.2.1)
 - 2) The solvent level in the cold cleaner shall not exceed the fill line. (Regulation 6.18, section 4.2.2)
 - 3) The cold cleaner cover shall be closed whenever a part is not being handled in the cold cleaner. (Regulation 6.18, section 4.2.3)
 - 4) Parts to be cleaned shall be racked or placed into the cold cleaner in a manner that will minimize drag-out losses. (Regulation 6.18, section 4.2.4)
 - 5) Cleaned parts shall be drained for at least 15 seconds or until dripping ceases, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while the part is draining. During the draining, tipping, or rotating, the parts shall be positioned so that the solvent drains directly back to the cold cleaner. (Regulation 6.18, section 4.2.5)
 - 6) A spill during solvent transfer shall be cleaned immediately, and the wipe rags or other sorbent material shall be immediately stored in a covered container for disposal or recycling, unless enclosed storage of these items is not allowed by fire protection authorities. (Regulation 6.18, section 4.2.6)
 - 7) Sponges, fabric, wood, leather, paper products, and other absorbent material shall not be cleaned in a cold cleaner. (Regulation 6.18, section 4.2.7)
- iii. The owner or operator shall not operate a cold cleaner using a solvent with a vapor pressure that exceeds 1.0 mm Hg (0.019 psi) measured at 20°C (68°F). (Regulation 6.18, section 4.3.2)

S2. **Monitoring and Record Keeping (Regulation 2.17, section 5.2)**

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

- 2) The date of the purchase,
- 3) The type of the solvent, and
- 4) The vapor pressure of the solvent measured in mm Hg at 20°C (68°F).

- ii. All records required in Specific Condition S2.a.i. shall be retained for 5 years and made available to the District upon request. (Regulation 6.18, section 4.4.3)

S3. Reporting (Regulation 2.17, section 5.2)

a. VOC

There are no routine compliance reporting requirements for Regulation 6.18.

Emission Unit IA-2

IA-2 Unit Description: Equipment Subject to STAR only

IA-2 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
2.17	Federally Enforceable District Origin Operating Permits	All
5.00	Definitions	All
5.01	General Provisions	All
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	All
5.21	Environmental Acceptability for Toxic Air Contaminants	All
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	All

IA-2 Equipment:

Emission Process	Description	Applicable Regulation	Control ID	Stack ID
TNK-1	TNK-1, 1000 gallon Ammonia Tank, make Mississippi Tank Co.	STAR*	N/A	S-TNK
GCN-1 and GCN-2	GCN-1 and GCN- 2 (direct fired Furnaces)		OS-2	S-OS-2
GCN-3 and GCN-4	GCN-3 and GCN- 4 (direct fired Furnaces)		OS-3	S-OS-3
* STAR rules consist of Regulation 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23.				

IA-2 Control Devices:

GCN Machines controlled by wet scrubbers

IA-2 Specific Conditions

S1. Standards (Regulation 2.17, section 5.2)

a. TAC

The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be *de minimis*.¹⁸ (Regulations 5.00 and 5.21) (See U1 Comment 1)

b. PM₁₀

The owner or operator shall not allow the plant-wide PM₁₀ emissions to equal or exceed 100 tons per 12 consecutive month period. (Regulation 2.17, section 5.1)

S2. Monitoring and Record Keeping (Regulation 2.17, section 5.2)

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. TAC

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

ii. The owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions if a new TAC is introduced or the content of a TAC in a raw material increases above *de minimis*.

b. PM₁₀

iv. The owner or operator shall, monthly, record the total amount used in mmcf of natural gas combusted.

v. The owner or operator shall monthly calculate and record the monthly and 12 consecutive month PM₁₀ emissions for GCN furnaces combined using the following equations for uncontrolled emissions or other methods approved in writing by the District:

For the GCN-Furnaces (natural gas combustion):

$$PM_{GCN\ Furnaces} = \left(\frac{\text{Throughput}}{\text{month}} \right) (7.6)$$

Where,

¹⁸ The ammonia storage tank is *de minimis* based on MSDS TAC percent. The GCN machines are insignificant activities as defined in Regulation 1.02 therefore *de minimis* by definition.

Throughput/month = million cubic feet of natural gas used (can be obtained from Gas/Electric Bill) each month in GCN Furnaces combined.

EF (7.6) = Emission factor for the natural gas combustion from AP-42 for PM₁₀ in lb/mmcf

S3. Reporting (Regulation 2.17, section 5.2)

a. TAC

- i. The owner or operator shall report 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.
- ii. For any conditions outside the analysis, the owner or operator shall re-analyze to determine whether these 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)
- iii. The owner or operator shall submit the re-evaluated EA demonstration to the District within 6 months after a change of a raw material as described in S2.a.ii.

b. PM₁₀

The owner or operator shall report the plant-wide 12-consecutive month PM₁₀ emission for each month in the report period.

Attachment A - General Testing Requirements

If testing is not required by the regulation but stack test results are used for emission calculations, plant-wide the owner or operator shall retest the control devices within ten (10) years since the most recent District accepted performance test or within 180 days after the effective date of the permit if no previous test has been performed. 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 10 years. Devices of adequately similar design and filter media may be represented by a common performance test contingent upon review and approval by the District of the testing protocol. In lieu of the control efficiency testing, unless required by a Federal Regulation, the owner or operator may use the District pre-approved control efficiency or submit a signature guarantee from the control device manufacture stating the control device efficiency.

The owner or operator shall construct all equipment in such a manner that the following testing requirements can be performed.

- i. The owner or operator shall perform an EPA Reference Method (or equivalent methods that approved by the District) performance test. 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 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 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. The owner or operator shall submit written compliance test plans (protocol) for the control efficiency and capture efficiency. They shall include the EPA test methods that will be used for compliance testing, the process operating parameters that will be monitored during the performance test, and the control device performance indicators (e.g. pressure drop, minimum combustion chamber temperature) that will be monitored during the performance test. The compliance 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 is a Protocol Checklist for Performance Test for the information to be submitted in the protocol.
- iv. The owner or operator shall be responsible for obtaining and analyzing audit samples when the EPA Reference Method is used to analyze samples to demonstrate compliance with the source's emission regulation. The audit samples shall be available for verification by the District during the onsite testing.

- v. 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.
- vi. 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.
- vii. The owner or operator shall provide written notification to the District of the actual date of initial startup (only required for new equipment). The written notification shall be postmarked within 15 days after the effective date of the permit.

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
 - If audit samples are required for this test method, audit sample provider and number of audit samples to be used
- 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.

FEDOOP Fee Comment

As stated in Regulation 2.08, section 12, as of May 15, 2013, the District has adopted a new fee structure. As a result, NHK Spring Precision will be required to pay initial issuance fees as well as annual fees.

The initial issuance and STAR De Minimis fee for a FEDOOP is \$2,847.50 in accordance with the *Schedule of Fees* table in Regulation 2.08. This fee shall be paid to the District prior to the issuance of the permit.

Fee Type	Amount
Permit Actions: Significant Permit Revision (includes initial issuance)	\$2,542.40
STAR Program: De Minimis Determination Only (Per TAC)	\$305.10