



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



**October 07, 2021**

**Federally-Enforceable District-Origin Operating Permit  
 (FEDOOP)  
 Statement of Basis**

<b>Source:</b> NHK Spring Precision of America, Inc. 10600 Freeport Drive Louisville, KY 40258	<b>Owner:</b> NHK Spring Precision of America, Inc. 10600 Freeport Drive Louisville, KY 40258
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Application Documents:	See Table I-9		
Draft Permit:	MMM DD, 20yy		
Permitting Engineer:	Randy Schoenbaechler	Permit Number:	O-1568-21-F
Plant ID: 1568	SIC: 3493	NAICS:	332613

**Introduction:**

This permit will be issued pursuant to District Regulation 2.17- Federally Enforceable District Origin Operating Permits. Its purpose is to limit the plant wide potential emission rates from this source to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements.

This is a scheduled renewal of the Federally Enforceable District Origin Operating Permit. Emission Point information including capacity, make, model, serial numbers and identifications have been updated. TAC limits based upon the revised environmental acceptability demonstration were updated.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), particulate matter less than 10 microns (PM<sub>10</sub>), particulate matter less than 2.5 microns (PM<sub>2.5</sub>), and sulfur dioxide (SO<sub>2</sub>). Jefferson County is classified as a nonattainment area for ozone (O<sub>3</sub>).

**Permit Application Type:**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Initial issuance | Permit Revision                                    | <input checked="" type="checkbox"/> Permit renewal |
|   | <input checked="" type="checkbox"/> Administrative |  |
|   | <input type="checkbox"/> Minor                     |  |
|   | <input type="checkbox"/> Significant               |  |

**Compliance Summary:**

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Compliance certification signed | <input type="checkbox"/> Compliance schedule included                 |
| <input type="checkbox"/> Source is out of compliance                | <input checked="" type="checkbox"/> Source is operating in compliance |

**I Source Information**

**1. Product Description:**

NHK Spring Precision manufactures steel valve springs and steel transmission springs from purchased steel wire that arrives at the plant in large bundles/spools.

**2. Process Description:**

Spring Manufacturing

**3. Site Determination:**

There are no other facilities that are contiguous or adjacent to this facility.

**4. Emission Unit Summary:**

Emission Unit	Equipment Description
U1	Grinders, Chamfering, Continuous Shot Peening Machine, and Shot Blaster
U2	Shot Peening Machines
U3	Anti-Corrosion Coating and Paint/Ink Marking Operation
U4	Parts Washer
UIA-1	Equipment Subject to STAR Only

**5. Fugitive Sources:**

The source identified no fugitive sources of emissions.

**6. Permit Revisions:**

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
O-1568-15-F	2/19/2015; 12/16/2015	1/19/2016	Initial	Initial FEDOOP issuance
O-1568-15-F(R1)	1/05/2019	2/27/2019	Sig.	Incorporating equipment from construction permits C-1568-1009-17-F, C-1568-1010-18-F, and removing GHGs from General Condition 10. Moved Parts Washer to Unit 4 from IA-1.
			Admin	Renaming several emission point IDs

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
O-1568-21-F	10/07/2021		Renewal	Scheduled renewal of permit
			Admin	Update of description and renaming of emission point IDs. Update of TAC limits per revised EAD.

**7. Construction Permit History Since Previous Operating Permit:**

Permit No.	Effective Date	Description
NA	NA	NA

**8. Application and Related Documents**

Document Number	Date	Description
OB164825	8/19/2020	Correspondence about Renewal Application
OB170805	8/28/2020	Request for Renewal Application
OB176082	10/29/2021	Renewal Application
OB176108	10/29/2020	Spreadsheet for PTE and EAD
OB176070	10/29/2020	Application Correspondence
OB176080	10/29/2020	Spreadsheet Request
OB176100	10/30/2020	Update to EAD
OB177915	11/20/2020	Application Note
OB178003	11/23/2020	Application Corrections
OB178015	11/23/2020	Application Information
OB217100	3/16/2021	Approved Plantwide District PTE
OB222547	5/25/2021	Draft Permit for Company Review

Document Number	Date	Description
OB226817	6/8/2021	Company Request for Copy of PTE
OB227422 OB236920 OB242644	6/11/2021 7/13/2021 7/30/2021	Review extensions and comments on daft permit
OB243839	8/5/2021	Insignificant Activities Information Request
OB258607	9/17/2021	Updated Insignificant Activities Form (AP-100P)
OB265029	10/6/2021	Updated Application forms

**9. Emission Summary**

Pollutant	Potential to Emit (PTE) (tpy) <sup>1</sup>	Pollutant that triggered Major Source Status (based on PTE)
CO	3.61	No
NO <sub>x</sub>	4.44	No
SO <sub>2</sub>	0.03	No
PM <sub>10</sub>	2041.57	Yes
VOC	37.22	No
Total HAPs	55.16	Yes
Single HAP > 1 tpy		
Chrome	19.84	Yes

**10. Applicable Requirements**

- 40 CFR 60                       SIP                                       40 CFR 63  
 40 CFR 61                       District Origin                       Other

**11. Referenced Federal Regulations:**

The source has no federal requirements.

<sup>1</sup> The PTE values given, and major source status triggers, are pre control without federally enforceable limits.

**12. Non-Applicable Regulations:**

None

**II Regulatory Analysis****1. Stratospheric Ozone Protection Requirements:**

Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. NHK Spring Precision does not manufacture, sell, or distribute any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

**2. Basis of Regulation Applicability****a. Applicable Regulations**

<b>Regulation</b>	<b>Title</b>	<b>Basis</b>
5.00	Definitions	This regulation defines terms used in the Strategic Toxic Air Reduction Program.
5.01	General Provisions	This regulation contains a statement of general duty and a savings clause relating to federal and SIP emission standards.
5.20	Methodology for Determining the Benchmark Ambient Concentration of a Toxic Air Contaminant	This regulation establishes the methodology for determining the benchmark ambient concentration of a toxic air contaminant.
5.21	Environmental Acceptability for Toxic Air Contaminants	This regulation establishes the criteria for determining the environmental acceptability of emissions of toxic air contaminants
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	This regulation establishes the procedures for determining the maximum concentration of a toxic air contaminant in the ambient air.
5.23	Categories of Toxic Air Contaminants	This regulation identifies the categories of toxic air contaminants to be addressed in these regulations.
6.18	Standards of Performance for Solvent Metal Cleaning Equipment	Applies to cold cleaners, open top vapor degreasers, and conveyORIZED degreasers that use volatile organic compounds (VOCs) to remove soluble impurities from metal surfaces.

Regulation	Title	Basis
7.08	Standards of Performance for New Process Operations	This regulation establishes the requirements for PM emission from new processes that commences construction after September 1, 1976.
7.59	Standard of Performance for New Miscellaneous Metal Parts and Products Surface Coating Operations	This regulation applies to each affected facility commenced on or after May 20, 1981. Any affected facility that is ever subject to this regulation will always be subject to it unless the affected facility changes its process to one not covered by this regulation.

**b. Plantwide**

- i. NHK Spring Precision is potentially major for PM<sub>10</sub>, Total HAP and Single HAP. Regulation 2.17 – *Federally Enforceable District Origin Operating Permits* establishes requirements to limit the plant wide potential emission rates to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements. The source requested limits of the PM<sub>10</sub> less than 100 tons per year, Total HAP less than 25 tons per year, and Single HAP less than 10 tons per year, to be classified as a synthetic minor (FEDDOOP) source.
- ii. Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards.
- iii. NHK Spring Precision submitted a revised TAC Environmental Acceptability Demonstration to the District on October 29, 2020. Compliance with the STAR EA Goals was demonstrated in the source’s EA Demonstrations. Tier 3 SCREEN3 air modeling was performed for emission units that have non-de minimis TAC emissions. The District reviewed the EA Demonstrations submitted by the source. The following table demonstrates that the plantwide risk values presented in the source’s EA Demonstration comply with the STAR EA goals required in Regulation 5.21.

Plantwide Sum	Risk	EAG
Industrial Total R <sub>C</sub>	5.20	< 38
Non-Ind. Total R <sub>C</sub>	0.49	< 3.8
Industrial Total R <sub>NC</sub> (max)	0.15	< 3.0
Non-Ind. Total R <sub>NC</sub> (max)	0.02	< 1.0

Risk value determination								
EP	Ethylbenzene R <sub>C</sub> Indus	Ethylbenzene R <sub>C</sub> Res	Ethylbenzene R <sub>NC</sub> Indus	Ethylbenzene R <sub>NC</sub> Res	Ni R <sub>C</sub> Indus	Ni R <sub>C</sub> Res	Ni R <sub>NC</sub> Indus	Ni R <sub>NC</sub> Res
C-13	0.68	0.0601	0.0003	0.00002				
E-13	0.97	0.0858	0.0004	0.00003				
A-17	0.97	0.0858	0.0004	0.00003				
F-13	0.68	0.0601	0.0003	0.00002				
G-13	0.68	0.0601	0.0003	0.00002				
H-13	0.68	0.0601	0.0003	0.00002				
SB-1					0.54	0.08	0.15	0.02

- iv. Regulation 2.17, section 5.2, requires monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the district upon request.
- v. Regulation 2.17, section 7.2, requires stationary sources for which a FEDOOP is issued to submit an Annual Compliance Certification by April 15, of the following calendar year. In addition, as required by Regulation 2.17, section 5.2, the source shall submit regular reports to show compliance with the permit. Compliance reports and compliance certifications shall be signed by a responsible official and shall include a certification statement per Regulation 2.1. The compliance reports are due within 60 days of the end of the reporting period:

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

- c. **Emission Unit U1 – Grinders, Chamfering, Shot Peening and Shot Blaster**

### Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
A-4	Edge Grinder, Daisho Seiki Co, model GMV4-915, serial # 39S39002/H3303, capacity 7,200 pieces/hr	3/6/2006	STAR* & 7.08	OS-4	S-OS-4
C-17 (A-8)	Edge Grinder, Asahi Seiki, model AGI2N, capacity 3,600 pieces/hr	11/1/2006	STAR* & 7.08	OS-6	S-OS-6
C-18 (A-9)	Edge Grinder, Asahi Seiki, model AGI2N, capacity 3,600 pieces/hr	2/1/2008	STAR* & 7.08	OS-6	S-OS-6

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID</b>
B-4	Edge Grinder, Daisho Seiki Co, model GMV4-915, serial # H-3346-39005, capacity 7,200 pieces/hr	2/1/2007	STAR* & 7.08	OS-4	S-OS-4
B-5A	Chamfering Machine Custom, capacity 3,600 pieces/hr	2/1/2007	STAR* & 7.08	OS-6	S-OS-6
B-5B	Chamfering Machine Custom, capacity 3,600 pieces/hr	2/1/2007	STAR* & 7.08	OS-6	S-OS-6
D-4	Edge Grinder, Daisho Seiki Co, model GMV4-915, serial # H-3344-39003, capacity 1,500 pieces/hr	11/1/2006	STAR* & 7.08	OS-5	S-OS-5
D-5	Edge Grinder, Daisho Seiki Co, model GMV4-915, serial # H-3345-39004, capacity 1,500 pieces/hr	2/1/2007	STAR* & 7.08	OS-5	S-OS-5
D-6	Continuous Shot Peening Machine, Itoh Kikoh, model IMD 27, serial # AT111001, capacity 959 lb(shot)/hr	4/1/2006	STAR* & 7.08	OS-6	S-OS-6
SB-1	Shot Blaster (Dry Horning), Sinto Kogio, SJA11D, serial # 5605546001, capacity 959 lb(shot)/hr	3/1/2006	STAR* & 7.08	OS-8	S-OS-8
OS-1	Cooling Tower, Marley, model 496, capacity 12,000 gal/hr (insignificant activity)	2/1/2006	STAR* & 7.08	N/A	F
C-14	Edge Grinder, Asahi-Seiki, model AG12N, serial # 72407, capacity 3,600 pieces/hr	2012	STAR* & 7.08	OS-6	S-OS-6
C-15	Edge Grinder, Asahi-Seiki, model AG12N, serial # 72429, capacity 3,600 pieces/hr	2012	STAR* & 7.08	OS-6	S-OS-6
C-16	Edge Grinder, Asahi-Seiki, model AG12N, serial # 72254, capacity 3,600 pieces/hr	2012	STAR* & 7.08	OS-6	S-OS-6
A-5A	Chamfering machine, make Asahi Seiki, model AA, serial # 50882, capacity 3,600 piece/hr	2012	STAR* & 7.08	OS-6	S-OS-6
A-5B	Chamfering machine, make Asahi Seiki, model AA, serial # 50882, capacity 3,600 pieces/hr	2012	STAR* & 7.08	OS-6	S-OS-6
E-4	Gardner grinder, make Gardner, model 4V36T, serial # 640-1, capacity 6,000 pieces/hr	9/1/2013	STAR* & 7.08	OS-11	S-OS-11



<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID</b>
E-5A	Chamfering machine, make Asahi Seiki, model AA, serial # 50883, capacity 3,600 pieces/hr	5/1/2014	STAR* & 7.08	OS-11	S-OS-11
E-5B	Chamfering machine, make Asahi Seiki, model AA, serial # 50883, capacity 3,600 pieces/hr	5/1/2014	STAR* & 7.08	OS-11	S-OS-11
F-4	Edge grinder, make Daisho Seiki, model GMV4-915, serial # H-3629-39006, capacity 7,200 pieces/hr	10/1/2014	STAR* & 7.08	OS-11	S-OS-11
G-4	Edge grinder, make Dorn, model DR660-2VE, serial # 889947BJ06,15, capacity 6,000 pieces/hr	8/1/2015	STAR* & 7.08	OS-12	S-OS-12
H-4	Edge grinder, make Dorn, model DR660-2VE, serial # 889948BJ06,15, capacity 6,000 pieces/hr	7/1/2015	STAR* & 7.08	OS-12	S-OS-12
H-5A	Chamfering machine, make Seiki, model WO110, serial # NSPA#1, capacity 1,800 pieces/hr	8/1/2016	STAR* & 7.08	OS-12	S-OS-12
I-4	Edge grinder, make Dorn, model DR660-2VE, serial # 889975BJ01,19, capacity 6,000 pieces/hr	5/1/2018	STAR* & 7.08	OS-12	S-OS-12
I-5A	Chamfering machine, make NHK, capacity 972 piece/hr	2/1/2018	STAR* & 7.08	OS-12	S-OS-12
F-5 (I-5B)	Chamfering machine, make NHK, capacity 6,600 pieces/hr	2018	STAR* & 7.08	OS-12	S-OS-12
SB-2	Shot Blaster (Dry Horning), Sinto Kogio, model SJA11D, serial # 15606529000, capacity 959 lb(shot)/hr	7/2016	STAR* & 7.08	OS-13	S-OS-13

### Control Devices

<b>Control ID</b>	<b>Description</b>	<b>Control Efficiency</b>
OS-4	Donaldson Torit, Cartridge Collector, model DFT4-48, serial # 2005792-1 with HEPA filter	95% + 99%
OS-5	Donaldson Torit, Cartridge Collector, model DFT4-48, serial # 2005792-1 with HEPA filter	95% + 99%
OS-6	Donaldson Torit, Cartridge Collector, model DFT4-48, serial # 2005792-1 with HEPA filter	95% + 99%
OS-8	Sinto Kogio, Cartridge Collector, model NCF-64U1R, serial # 05605546-D01	95%
OS-11	Cartridge Collector with HEPA filter, make Donaldson, model DFT4-48, serial # 4221524-1	95% + 99%

<b>Control ID</b>	<b>Description</b>	<b>Control Efficiency</b>
OS-12	Cartridge Collector with HEPA filter, make UAS, model SCR 48-4, serial # 60071185	95% + 99%
OS-13	Donaldson Torit Cartridge Collector model DFE 3-6, serial # 10829072-L1-1, installed 7/1/2016 with HEPA filter, make Donaldson Torit, model DFE 3-6, serial # 10829072-L1-1	95% + 99%

**i. Standards**

**(1) Opacity**

- (a) Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%.

**(2) PM/PM<sub>10</sub>**

- (a) For equipment subject to Regulation 7.08 for PM, the PM emission standards are calculated per section 3.1.2. The equation to calculate the hourly PM emission limit is  $E = 3.59 * P^{0.62}$ , where E is the allowable lb/hr PM emission limit and P is the process weight rate expressed in tons/hr.
- (b) For Emission Points A-4, B-4, D-4, D-5, B-5A, B-5B, SB-1, C-14, C-15, C-16, C-17, C-18, A-5A, A-5B, E-4, E-5A, E-5B, F-4, G-4, H-4, I-4, F-5, and SB-2: 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 per Regulation 1.05.

**(3) TAC**

- (a) See Plantwide section above.
- (b) For SB-1 since the controlled PTE for a TAC was determined to be greater than *de minimis*, in the EA demonstrations submitted by the company and was modeled to calculate risk for comparison to the EA Goals the modeled emission rate was used as the basis of permit limits. All other emission points in this unit were determined to be *de minimis* controlled, therefore, *de minimis* was used as the basis of the permit limits.

**d. Emission Unit U2 – Shot Peening Equipment**

**Equipment**

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID<sup>2</sup></b>
A-10	Shot Peening Machine, Sinto Kogio, model SNB-50W with Internal Cartridge Collector, capacity 959 lb(shot)/hr	3/1/2006	STAR* & 7.08	A-11	S-A-11
A-12	Shot Peening Machine, Sinto Kogio, model SNB-30 with Internal Cartridge Collector, capacity 959 lb(shot)/hr	3/1/2006	STAR* & 7.08	A-13	S-A-13
B-6	Shot Peening Machine, Sinto-Kogio, model SNB-50W with Internal Cartridge Collector, capacity 959 lb(shot)/hr	2/1/2007	STAR* & 7.08	B-7	S-B-7
B-8	Shot Peening Machine, Sinto-Kogio, model SNB-30 with Internal Cartridge Collector, capacity 959 lb(shot)/hr	2/1/2007	STAR* & 7.08	B-9	S-B-9
SB-3	Shot Peening Machine, Sinto-Kogio, model IMR-200 with Internal Cartridge Collector, capacity 959 lb(shot)/hr	2/1/2008	STAR* & 7.08	SB-5	S-SB-5
GCN-Preshot-1	Pre-shot Peening Machine, Sinto Kogio, model SNB-30Y with Internal Cartridge Collector, capacity 959 lb(shot)/hr	3/1/2006	STAR* & 7.08	GCN-Preshot-DC1	S-GCN-Preshot-DC1
GCN-Preshot-2	Pre-shot Peening Machine, Sinto Kogio, model SNB-30Y with Internal Cartridge Collector, capacity 959 lb(shot)/hr	2/1/2018	STAR* & 7.08	GCN-Preshot-DC2	S-GCN-Preshot-DC2
E-6	Shot peening machine, make Sinto Kogio, model SNB 30W, capacity 3,000 piece/batch, capacity 959 lb(shot)/hr	10/1/2013	STAR* & 7.08	E-7	S-E-7
E-8	Shot peening machine, make Sinto Kogio, model SNB 50W, capacity 3,000 piece/batch, capacity 959 lb(shot)/hr	10/1/2013	STAR* & 7.08	E-9	S-E-9
F-6	Shot peening machine, make Sinto Kogio, model SNB 30W, capacity 3,000 piece/batch, capacity 959 lb(shot)/hr	4/1/2015	STAR* & 7.08	F-7	S-F-7

<sup>2</sup> These release points exhaust inside the building.

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID<sup>2</sup></b>
F-8	Shot peening machine, make Sinto Kogio, model SNB 50W, capacity 3,000 piece/batch, capacity 959 lb(shot)/hr	4/1/2015	STAR* & 7.08	F-9	S-F-9

### Control Devices

<b>Control ID</b>	<b>Description</b>	<b>Control Efficiency</b>
A-11	Donaldson Torit, Internal Cartridge Collector with HEPA filter, model DFO3-3	95% + 99%
A-13	Donaldson Torit, Internal Cartridge Collector with HEPA filter, model DFO3-3	95% + 99%
B-7	Donaldson Torit, Internal Cartridge Collector with HEPA filter, model DFO3-3	95% + 99%
B-9	Donaldson Torit, Internal Cartridge Collector with HEPA filter, model DFO3-3	95% + 99%
SB-5	Donaldson Torit, Internal Cartridge Collector with HEPA filter, model DFO3-3	95% + 99%
GCN-Preshot-DC1	Donaldson Torit, Internal Cartridge Collector with HEPA filter, model DFO3-3	95% + 99%
GCN-Preshot-DC2	Donaldson Torit, Internal Cartridge Collector with HEPA filter, model DFO3-3	95% + 99%
E-7	Donaldson Torit, Internal Baghouse with HEPA filter, model DFO3-3	95% + 99%
E-9	Donaldson Torit, Internal Baghouse with HEPA filter, model DFO3-3	95% + 99%
F-7	Donaldson Torit, Internal Baghouse with HEPA filter, model DFO3-3	95% + 99%
F-9	Donaldson Torit, Internal Baghouse with HEPA filter, model DFO3-3	95% + 99%

#### i. Standards

##### (1) Opacity

- (a) Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%.

##### (2) PM/PM<sub>10</sub>

- (a) For equipment subject to Regulation 7.08 for PM, the PM emission standards are calculated per section 3.1.2. The equation to calculate the hourly PM emission limit is  $E = 3.59 * P^{0.62}$ , where E is the allowable lb/hr PM emission limit and P is the process weight rate expressed in tons/hr.
- (b) For Emission Points B-6, B-8, SB-3, A-10, A-12, E-6, E-8, F-6, GCN-Preshot-2, and F-8: 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 per Regulation 1.05.

**(3) TAC**

- (a) See Plantwide section above.
- (b) All emission points in this unit were determined to be *de minimis* controlled, therefore, *de minimis* was used as the basis of the permit limits.

**e. Emission Unit U3 – Anti-Corrosion Coating and Paint/Ink Marking Operation**

**Equipment**

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID</b>
A-17	Inspection Machine, make Morita Co., capacity 6,000 piece/hr	10/1/2006	STAR*, 7.08 & 7.59	A-18	S-A-18
E-13	Inspection machine, make NHK custom, model VICS, capacity 6,000 piece/hr	7/1/2013	STAR*, 7.08 & 7.59	E-14	S-E-14
AS-2	Loss Motion Assembly - Paint Dauber, make Morita Co., capacity 1,800 piece/hr	2/1/2008	STAR* & 7.59	N/A	N/A
F-13	Inspection machine, make NHK custom, model VICS, capacity 4,200 piece/hr	8/1/2014	STAR*, 7.08 & 7.59	F-14	S-F-14
G-13	Inspection machine, make NHK custom, model VICS, capacity 4,200 piece/hr	9/1/2015	STAR*, 7.08 & 7.59	G-14	S-G-14
H-13	Inspection machine, make NHK custom, model VICS, capacity 4,200 piece/hr	8/1/2016	STAR*, 7.08 & 7.59	H-13CD	S-H-13CD
H-14	Inspection machine, Mishima Space Pad, model Space Shot Cam, capacity 300 piece/hr	8/2016	STAR* & 7.59	N/A	N/A
C-13 <sup>3</sup>	Inspection machine, make NHK custom, model VICS, capacity 4,200 piece/hr	1/2017	STAR*, 7.08 & 7.59	C-13CD	S-C-13CD

<sup>3</sup> C-13 was labeled as I-13 and filter C-13CD was I-14 in construction permit C-1568-1009-17-F.

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
H-15 <sup>4</sup>	Inspection machine, Mishima Space Pad, capacity 300 piece/hr	7/1/2017	STAR* & 7.59	N/A	F
H-16	Inspection machine, NHK custom, capacity 650 piece/hr	12/1/2017	STAR* & 7.59	N/A	F
H-18	Inspection machine, NHK custom, capacity 300 piece/hr	7/1/2017	STAR* & 7.59	N/A	F
H-19	Inspection machine, NHK custom, capacity 650 piece/hr	12/2018	STAR* & 7.59	N/A	F

### Control Devices

Control ID	Description	Control Efficiency <sup>5</sup>
A-18	filter	N/A
E-14	filter	N/A
F-14	filter	N/A
G-14	filter	N/A
H-13CD	filter	N/A
C-13CD	filter	N/A

#### i. Standards

##### (1) Opacity

- (a) Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%.

##### (2) PM/PM<sub>10</sub>

- (a) For equipment subject to Regulation 7.08 for PM, the PM emission standards are calculated per section 3.1.2. The equation to calculate the hourly PM emission limit is  $E = 3.59 * P^{0.62}$ , where E is the allowable lb/hr PM emission limit and P is the process weight rate expressed in tons/hr.

##### (3) TAC

<sup>4</sup> Equipment AS-2, H-14, H-15, H-16, H-18, and H-19 is not subject to Regulation 7.08, as the coating is not sprayed on to parts, it is daubed on.

<sup>5</sup> The HEPA filter efficiencies associated with the Inspection Machines are not claimed by the company in emission calculations and are therefore, not considered to be applicable by the District and no monitoring or record keeping of performance indicators is required.

- (a) See Plantwide section above.
- (b) The non-de minimis emission points C-13, A-17, E-13, F-13, G-13, and H-13 were modeled for Ethylbenzene at uncontrolled potential to emit for applicable TACs and is environmentally acceptable according to the STAR Demonstration. All other emission points were determined to be less than *de minimis* without controls.

**(4) VOC**

- (a) Regulation 7.59, section 3.1 specifies VOC content limits for all coatings used in the inspection machines when compliant coatings are used and limits VOC emissions to less than 5 tons per year when non-compliant coatings are used.

**ii. Monitoring and Recordkeeping**

**(1) VOC**

- (a) Per Regulation 7.59, the owner or operator shall observe specific monitoring and record keeping requirements.

**f. Emission Unit U4 – Parts Washer**

**Equipment**

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID</b>
PW-1	Heritage, Crystal Clean Parts Washer no secondary reservoir	Pre-2008	STAR; 6.18	N/A	N/A

**Control Devices:** There are no control devices associated with Emission Unit 4.

**i. Standards**

**(1) TAC**

- (a) See Plantwide section above.<sup>6</sup>

**(2) VOC**

- (a) Per Regulation 6.18, the owner or operator shall observe specific operating requirements, and shall not operate a cold cleaner using a solvent with a

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<sup>6</sup> The current solvent does not contain any TACs, therefore, no specific TAC emission limits are required for this emission unit.

vapor pressure that exceeds 1.0 mm Hg (0.019 psi) measured at 20°C (68°F).

**ii. Monitoring and Recordkeeping**

**(1) VOC**

- (a) Per Regulation 6.18, the owner or operator shall observe specific monitoring and record keeping requirements.

**III Other Requirements**

**1. Temporary Sources:**

The source did not request to operate any temporary facilities.

**2. Short Term Activities:**

The source did not report any short term activities.

**3. Emissions Trading:**

The source is not subject to emission trading.

**4. Alternative Operating Scenarios:**

The source did not request any alternative operating scenarios.

**5. Compliance History:**

Date	Regulation Violated	Settlement
11/05/2007	Reg. 2.03, section 5, Failure to Comply with District Permit	Agreement with fine

**6. Calculation Methodology or Other Approved Method:**

Emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc) or hours of operation of the equipment by the appropriate emission factor and 1 minus any control device’s efficiency. The following emission factors and calculation methodology shall be used unless other methods or emission factors are approved in writing by the District.

**For the Grinders:**

$$PM = PM_{10} = (Springs)EF(1 - CE_{Baghouse})(1 - CE_{HEPA Filter})(0.05)$$

Where,



Process	Source	Line	EF	EF units
Grinding	Spring	A, B, F, G, H, and I	4.18E-03	lb/spring
Grinding	Wheel	A, B, F, G, H, and I	5.46E-04	lb/spring
Grinding	Spring	C	4.18E-03	lb/spring
Grinding	Wheel	C	1.28E-03	lb/spring
Grinding	Spring	D	3.52E-02	lb/spring
Grinding	Wheel	D	5.46E-04	lb/spring
Grinding	Spring	E	3.53E-03	lb/spring
Grinding	Wheel	E	5.46E-04	lb/spring

CEBagouse = 0.95 for baghouses, unless stack testing indicates a different value.

CEHEPA Filter = 0.99 for other filters, unless stack testing indicates a different value.

0.05 = Conversion of pounds to tons

$$HAP = (Springs)EF_{(Spring\ Only)}(1 - CE_{Baghouse})(1 - CE_{HEPA\ Filter})(0.05)(\%HAP)$$

Where,

Emission Point	EF(Spring only) (lb/spring)	Cr(3)	Cu	Ni	Mn
E-4	0.0035	1.05%	0.10%	0.40%	1%
F-4	0.0042	1.05%	0.10%	0.40%	1%
G-4	0.0042	1.05%	0.10%	0.40%	1%
H-4	0.0042	1.05%	0.10%	0.40%	1%
I-4	0.0042	1.05%	0.10%	0.40%	1%
A-4	0.0042	1.05%	0.10%	0.40%	1%
C-17	0.0042	1.05%	0.10%	0.40%	1%
C-18	0.0042	1.05%	0.10%	0.40%	1%
B-4	0.0042	1.05%	0.10%	0.40%	1%
D-4	0.0352	1.05%	0.10%	0.40%	1%
D-5	0.0352	1.05%	0.10%	0.40%	1%
C-14	0.0042	1.05%	0.10%	0.40%	1%
C-15	0.0042	1.05%	0.10%	0.40%	1%
C-16	0.0042	1.05%	0.10%	0.40%	1%

**For the Chamfering Machines:**

$$PM = PM_{10} = (Springs)EF(1 - CE_{Baghouse})(1 - CE_{HEPA\ Filter})(0.05)$$

Where,

Process	Source	Line	EF	EF units
Chamfering	Spring	A, B, C, F, G, H, and I	9.03E-04	lb/spring
Chamfering	Spring	E	8.27E-04	lb/spring

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

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

0.05 = Conversion of pounds to tons

$$HAP = (\%HAP)(PM)$$

Where,

HAP	Cr(3)	Cu	Ni	Mn
% of PM	1.05%	0.10%	0.40%	1%

**For Cooling Tower:**

$$PM = PM_{10} = \left(Flow Rate \frac{Gal}{hr}\right) \left(TDS \frac{lbPM}{gal}\right) (Total Liquid Drift\%)(0.05)$$

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

0.05 = Conversion of pounds to tons

**For the Shot Peening and Blasting:**

$$PM = \left(Shot Throughput \frac{lb}{hr}\right) \left(\frac{27lbPM}{1000lb}\right) (0.10)(Operating hours) \left(1 - CE_{\frac{Baghouse}{(cartridge) filter}}\right) (1 - CE_{Filter/HEPA})(0.05)$$

$$PM_{10} = \left(Shot Throughput \frac{lb}{hr}\right) \left(\frac{13lbPM}{1000lb}\right) (0.10)(Operating hours) \left(1 - CE_{\frac{Baghouse}{(cartridge) filter}}\right) (1 - CE_{Filter/Hepa})(0.05)$$

Where, Shot Throughput = Shot throughput calculated by AP-42

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

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

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

- OperatingHours = 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<sub>10</sub>
- 0.05 = Conversion of pounds to tons

$$HAP = (\%HAP)(PM)$$

Where,

HAP	Cr(3)	Cu	Ni	Mn
% of PM	1.05%	0.10%	0.40%	1%

**For the Inspection Machines with sprayed paint:**

$$PM = \left( \frac{\text{Throughput}}{\text{month}} \right) (PM \text{ Content})(0.05)(1 - CE_{Filter})$$

- Where, Throughput = Gallons of coating used in each inspection machine.
- PM Content = PM Density of the coating in lb/gallon.
- CE<sub>Filter</sub> = 0.90 for other filters, unless stack testing indicates a different value.
- 0.05 = Conversion of pounds to tons

**For the Inspection Machines and Loss Motion Assembly Paint Dauber:**

$$HAP = (\text{Throughput})(HAP \text{ Content})(0.05)$$

- Where, Throughput = Gallons of coating used in each inspection machine.
- HAP Content = HAP Density of the coating in lb/gallon, or %HAP \* Density of coating in lb/gallon.
- 0.05 = Conversion of pounds to tons

$$VOC = (\text{Throughput})(VOC \text{ Content})(0.05)$$

- Where, Throughput = Gallons of coating used in each inspection machine.
- VOC Content = VOC Density of the coating in lb/gallon, or %VOC \* Density of coating in lb/gallon.

0.05 = Conversion of pounds to tons

**For the Parts Washer:**

$$VOC = (Throughput)(VOC Content)(0.05)$$

Where, Throughput = Gallons of cleaner used in the parts washer.

VOC Content = VOC Density of the cleaner in lb/gallon, or  
% VOC \* Density of cleaner in lb/gallon.

0.05 = Conversion of pounds to tons

**For the Hot Setting Machine:**

$$VOC = (Throughput)(VOC Content)(10\% loss)(0.05)$$

Where, Throughput = Gallons of quenching fluid used.

VOC Content = VOC Density of the fluid in lb/gallon, or  
% VOC \* Density of fluid in lb/gallon.

0.05 = Conversion of pounds to tons

The PTE values given in Insignificant Activities Table may be used instead.

**For the Stress Relief Ovens:**

$$VOC = (Throughput)(VOC Content)(50\% loss)(0.05)$$

Where, Throughput = Gallons of oil coating.

VOC Content = VOC Density of the oil in lb/gallon, or  
% VOC \* Density of oil in lb/gallon.

0.05 = Conversion of pounds to tons

The PTE values given in Insignificant Activities Table may be used instead.

**For the Spring Cleaning:**

$$VOC = (Throughput)(VOC Content)(50\% loss)(0.05)$$

Where, Throughput = Gallons of cleaner used.

VOC Content = VOC Density of the cleaner in lb/gallon, or  
% VOC \* Density of cleaner in lb/gallon.

0.05 = Conversion of pounds to tons

The PTE values given in Insignificant Activities Table may be used instead.

**For Natural Gas Combustion:**

$$PM = PM_{10} = (mmcf)EF(0.05)$$

Where, mmcf = millions of cubic feet of natural gas  
 EF = 0.52 lb/mmcf  
 0.05 = Conversion of pounds to tons

$$HAP = (mmcf)EF(0.05)$$

Where, mmcf = millions of cubic feet of natural gas  
 0.05 = Conversion of pounds to tons

HAP	EF (lb/mmcf)	HAP	EF (lb/mmcf)
2-Methylnaphthalene	2.40E-05	Formaldehyde	7.50E-02
3-Methylchloranthrene	1.80E-06	Hexane	1.80E+00
DMBA	1.60E-05	Indeno(1,2,3-cd)pyrene	1.80E-06
Acenaphthene	1.80E-06	Naphthalene	6.10E-04
Acenaphthylene	1.80E-06	Phenanathrene	1.70E-05
Anthracene	2.40E-06	Pyrene	5.00E-06
Benz(a)anthracene	1.80E-06	Toluene	3.40E-03
Benzene	2.10E-03	Arsenic	2.00E-04
Benzo(a)pyrene	1.20E-06	Beryllium	1.20E-05
Benzo(b)fluoranthene	1.80E-06	Cadmium	1.10E-03
Benzo(g,h,i)perylene	1.20E-06	Chromium	1.40E-03
Benzo(k)fluoranthene	1.80E-06	Cobalt	8.40E-05
Chrysene	1.80E-06	Lead	5.00E-04
Dibenzo(a,h)anthracene	1.20E-06	Manganese	3.80E-04
Dichlorobenzene	1.20E-03	Mercury	2.60E-04
Fluoranthene	3.00E-06	Nickel	2.10E-03
Fluorene	2.80E-06	Selenium	2.40E-05
		Total HAP	1.8856

**For GCN furnace in addition to Natural Gas combustion:**

Batch Processing Time: 8 hours Max Batches per yr: 1095  
 Process Gas per Batch: 530 cubic feet per hour hrs/yr: 8760  
 Uncontrolled Ammonia EF: 0.0000283 lb/ft<sup>3</sup> process gas (based on 350 ppm in process gas stream)

Ammonia Control Efficiency: 90% (provided by pilot burner)

NOx EF: 0.0000162 lb/ft<sup>3</sup> process gas (based on 200 ppm in process gas stream)

At Maximum Capacity:

Uncontrolled Ammonia Emissions:	131.39124 lb/yr/GCN	0.066 tpy/GNC
Controlled Ammonia Emissions:	13.14 lb/yr/GCN	0.007 tpy/GNC
NOx Emissions:	75.2 lb/yr/GCN	0.038 tpy/GNC

The PTE values given in Insignificant Activities Table may be used instead.

### 7. Insignificant Activities

Equipment	Qty.	PTE (ton/yr)	Regulation Basis
Stress Relief Ovens	10	2.13 VOC total	Regulation 1.02
Pressurized 1000 gallon Ammonia Tank, make Mississippi Tank Co.	1	0	Regulation 1.02
GCN furnace	6	0.32 NOx; 0.01 VOC total	Regulation 1.02
Hot Setting Machine	6	0.6 VOC total	Regulation 1.02
Spring Cleaning	1	0.14 VOC total	Regulation 1.02
Indirect-fired natural gas Space Heaters	7	0.14 NOx; 0.02 VOC total	Regulation 1.02, Appendix A

- 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.
- 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.
- The Insignificant Activities Table is correct as of the date the permit was proposed for review by U.S. EPA, Region 4.
- Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.
- 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) Basis of Regulation Applicability for IA units

### Equipment Removed

Emission Point	Description
B-10	Hoscoat Loading
B-11	Hoscoat
B-12	Hot Setting Machine
B-13	Inspection Machine, make Morita Co., capacity 7,200 piece/hr, installed 2/1/2007, previously controlled by filter B-14

### Equipment not Regulated

ID	Description	Manufacturer	Model Number	Install Date
A-1	Unwinder	Wafios	AHL 43 0-M	Feb-06
A-14	Hoscoat Loading	NGK Kiln Tech Corp.	H7GS-77585	Mar-06
A-15	Hoscoat	NGK Kiln Tech Corp.	H7GS-77585	Mar-06
A-2	Coiling Machine	Wafios	FUL 63	Feb-06
A-6	Free Height Check			
A-7	Free Height Check			
AS-1	Loss Motion Assembly			Nov-06
AS-3	Seat Assembly			Aug-06
AS-4	Seat Assembly			
AS-5	Seat Assembly			
B-1	Unwinder	Wafios	AHL 43 0-M	Feb-07
B-2	Coiling Machine	Wafios	FUL 63	Feb-07
Bob-1	Bob Gear - 1	NHK	Custom	Sep-17
Bob-2	Bob Gear - 2	NHK	Custom	Sep-17
Bob-3	Bob Gear - 3	NHK	Custom	Sep-17
C-10	Hoscoat Loading			Oct-07
C1-1	Unwinder	Wafios	AHL 43 0-M	Oct-07
C-11	Hoscoat			Oct-07
C1-2	Coiling Machine	Wafios	FUL 45	Oct-07
C1-8	C1 Stress Relief Furnace	Gasden Ro	TC-100Z	Feb-06

<b>ID</b>	<b>Description</b>	<b>Manufacturer</b>	<b>Model Number</b>	<b>Install Date</b>
C2-1	Unwinder			
C2-8	C2 Stress Relief Furnace	Gasden Ro	TC-100Z	
C2-10	Arc Cut Wire Machine (short)			
C2-2	Coiling Machine	Wafios	FUL 45	
C2-4	Arc Forming Machine			
C2-5	Arc Forming Machine			
C2-6	Arc Forming Machine			
C2-7	Arc Forming Machine			
C2-9	Arc Cut Wire Machine (long)			
D-1	Unwinder	Wafios	AHL 430	Feb-06
D-2	Coiling Machine	Wafios	FUL 93	Feb-06
D-7	Hot Setting Furnace	NGK	H7G5-77587	Nov-06
D-8	Inspection Machine	Morita Co.	CST-03	Nov-06
E-1	Unwinder	Wafios	AHL 430	Nov-13
E-10	Hoscoat Loading	Custom	Custom	Jul-13
E-11	Hoscoat	NGK Kiln Tech Corp.	H7GS-77585	Jul-13
E-2	Coiling Machine	Wafios	FUL 56	Nov-13
F-1	Unwinder	Wafios	AHL 430	May-15
F-10	Hoscoat Loading	Custom	Custom	
F-11	Hoscoat	NGK Kiln Tech Corp.	H7GS-77585	
F-2	Coiling Machine	Wafios	FUL 56	May-15
G-1	Unwinder	Wafios	AHL 430	Jun-15
G-10	Hoscoat Loading	Custom	Custom	
G-11	Hoscoat	NGK Kiln Tech Corp.	H7GS-77585	
G-2	Coiling Machine	Wafios	FUL 86	Jun-15
H-1	Unwinder	Wafios	AHL 430	Jun-15
H-10	Hoscoat Loading	Custom	Custom	
H-11	Hoscoat	NGK Kiln Tech Corp.	H7GS-77585	
H-17	Inspection Machine (Torsion 2) - No Paint	NHK	Custom	Dec-17
H-2	Coiling Machine	Wafios	FUL 56	Jun-15
H-20	Inspection Machine (Torsion 4) -No Paint	NHK	Custom	Dec-18
H-21	Stress Relief/Drying Tunnel	Gasden	TC-100Z	Jun-16
H-22	H-line Rust Inhibitor Applicator	NHK	Custom	Jun-16
H-23	Arc Spring Setting	NHK	Custom	Jul-17
H-24	Damper Spring Setting	NHK	Custom	Jun-18
I-1	Unwinder	Wafios	AHP4LM	Mar-18
I-2	Coiling Machine	Wafios	FUL 56	Mar-18
MSC-1	Cleaning Cart 1 - acetone	NA	NA	Jul-17
MSC-2	Cleaning Cart 2 - acetone	NA	NA	Jul-17
MSC-3	Man. Rust Inhibitor Applicator - 1	NA	NA	Jul-17
MSC-4	Man. Rust Inhibitor Applicator - 2	NA	NA	Jul-17



<b>ID</b>	<b>Description</b>	<b>Manufacturer</b>	<b>Model Number</b>	<b>Install Date</b>
COMP-1	Compressor	Atlas Copco	GA200	
COMP-2	Compressor	Atlas Copco	GA37	
COMP-3	Compressor	Atlas Copco	GA37	
COMP-4	Air Dryer	Atlas Copco	CD520	
Maint-1	Surface Grinder	Jet	JPSG-1224A	
Maint-2	Mill	Jet		
Maint-3	Vertical Bandsaw	Jet	VBS-1610	
Maint-4	Lathe	Jet	GH-1660-ZX	
Maint-5	Drill Press	Jet	JDP-20VS-3	
Maint-6	Shear			
Maint-7	Pan Brake	Jet	BP-1248N	
Maint-8	Horizontal Bandsaw	Jet	MBS1014W-3	
Maint-9	Welder	Miller	XMT350VS	
Maint-10	Plasma Cutter	Hypertherm	Powermax1250	
Maint-11	Pipe Machine	Ridgid Tool Co.	1822-1	
Maint-12	Hydraulic Press	Jet	HP-35A	
TNK-2	Nitrogen Tank			
A-16	Hot Setting Machine Make.,	Morita Co	CSS3	2006
C-12	Hot Setting Machine			2007
E-12	Hot Setting Machine			2013
F-12	Hot Setting Machine			2014
G-12	Hot Setting Machine			2015
H-12	Hot Setting Machine			2016
A-3	Stress Relief Furnace, serial 8016	Gasden Ro	TC-100Z	2006
B-3	Stress Relief Furnace, serial 8130	Gasden Ro	TC-100Z	2007
C1-3	Stress Relief Furnace, serial 8465	Gasden Ro	TC-60Z	2007
D-3	Stress Relief Furnace, serial 8592	Gasden Ro	TC-120Z	2006
C2-3	Stress Relief Furnace, serial 8135-1	Gasden Ro	TC-100Z	
E-3	Stress Relief Furnace, serial 8725	Gasden Ro	TC-60Z	2013
F-3	Stress Relief Furnace, serial 8869	Gasden Ro	TC-60Z	2015
G-3	Stress Relief Furnace, serial 9173	Gasden Ro	TC-100Z	2015
H-3	Stress Relief Furnace, serial 8963	Gasden Ro	TC-60Z	2015
I-3	Stress Relief Furnace, serial 9371	Gasden Ro	TC-100Z	2018
	Maint-14			
	Lab-1 through Lab-18			
	TA-1 through TA-5			

a. **Emission Unit UIA-1 Equipment Subject to STAR only**

**Equipment**

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulations</b>	<b>Control ID</b>	<b>Release ID</b>
TNK-1	TNK-1, 1000 gallon Ammonia Tank, make Mississippi Tank Co.	2/2006	STAR*	N/A	S-TNK
GCN-1	Gas carbonizing nitriding furnace, Oh Strong/ Oriental Engineering Co. Ltd, UNP-110280, serial U-05034	2/2006	STAR*	OS-2	S-OS-2
GCN-2	Gas carbonizing nitriding furnace, Oh Strong/ Oriental Engineering Co. Ltd, UNP-110280, serial U-06024	2/2007	STAR*	OS-2	S-OS-2
GCN-3	Gas carbonizing nitriding furnace, Oh Strong/ Oriental Engineering Co. Ltd, UNP-110280, serial U-007030	2/2008	STAR*	OS-3	S-OS-3
GCN-4	Gas carbonizing nitriding furnace, Oh Strong/ Oriental Engineering Co. Ltd, UNP-110280, serial U-13016	11/13/2013	STAR*	OS-3	S-OS-3
GCN-5	Gas carbonizing nitriding furnace, Oh Strong/ Oriental Engineering Co. Ltd, UNP-110280, serial U-17033	2018	STAR*	OS-14	S-OS-14
GCN-6	Gas carbonizing nitriding furnace, Oh Strong/ Oriental Engineering Co. Ltd, UNP-110280	2018	STAR*	OS-14	S-OS-14

**Control Devices**

<b>Control ID</b>	<b>Description</b>	<b>Control Efficiency</b>	<b>Performance Indicator</b>
OS-2	Afterburner and Wet scrubber	90% of NH3	N/A
OS-3	Afterburner and Wet scrubber	90% of NH3	N/A
OS-14	Afterburner and Wet scrubber	90% of NH3	N/A

**i. Standards**

**(1) PM<sub>10</sub>**

(a) See Plantwide section above.

**(2) TAC**

(a) See Plantwide section above.

- (b) The ammonia storage tank is *de minimis* based on the tank being pressurized and does not normally have any emissions. The GCN machines and the Hot setting machines are insignificant activities as defined in Regulation 1.02 therefore *de minimis* by definition. Additionally, combustion of natural gas is *de minimis* for TACs, by definition, per District Regulation 5.21 section 2.7.