

**Iowa Department of Natural Resources
Title V Operating Permit**

Name of Permitted Facility: NSK Corporation Clarinda
Facility Location: 1100 N First St & 1100A N First St
Clarinda, IA 51632

Air Quality Operating Permit Number: 12-TV-007

Expiration Date: 11/06/2017

Permit Renewal Application Deadline: 5/6/2017

EIQ Number: 92-3910

Facility File Number: 73-02-010

Responsible Official

Name: Mr. Leon Regehr

Title: Senior Engineering Manager

Mailing Address: 1100 N First St, Clarinda, IA 51632

Phone #: (712) 542-5121

Permit Contact Person for the Facility

Name: Mr. Leon Regehr

Title: Senior Engineering Manager

Mailing Address: 1100 N First St, Clarinda, IA 51632

Phone #: (712) 542-5121

This permit is issued in accordance with 567 Iowa Administrative Code Chapter 22, and is issued subject to the terms and conditions contained in this permit.

For the Director of the Department of Natural Resources



Catharine Fitzsimmons, Chief of Air Quality Bureau

11/7/2012
Date

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Abbreviations

acfm.....	actual cubic feet per minute
CFR	Code of Federal Regulation
CE.....	control equipment
CEM	continuous emission monitor
°F	degrees Fahrenheit
EIQ	emissions inventory questionnaire
EP	emission point
EU.....	emission unit
gr/dscf.....	grains per dry standard cubic foot
gr/100 cf	grains per one hundred cubic feet
IAC	Iowa Administrative Code
IDNR.....	Iowa Department of Natural Resources
MVAC.....	motor vehicle air conditioner
NAICS.....	North American Industry Classification System
NSPS	new source performance standard
ppmv.....	parts per million by volume
lb/hr	pounds per hour
lb/MMBtu.....	pounds per million British thermal units
SCC	Source Classification Codes
scfm	standard cubic feet per minute
SIC.....	Standard Industrial Classification
TPY	tons per year
USEPA	United States Environmental Protection Agency
swarf	also known as turnings, chips, or filings, are shavings and chippings of metal — the debris or waste resulting from metalworking operations including milling and grinding. It can usually be recycled, and this is the preferred method of disposal due to the environmental concerns regarding potential contamination with cutting fluid or tramp oil.

Pollutants

PM.....	particulate matter
PM ₁₀	particulate matter ten microns or less in diameter
SO ₂	sulfur dioxide
NO _x	nitrogen oxides
VOC	volatile organic compound
CO	carbon monoxide
HAP.....	hazardous air pollutant

I. Facility Description and Equipment List

Facility Name: NSK Corporation Clarinda
 Permit Number: 12-TV-007

Facility Description: Ball and Roller Bearing Mfg (SIC 3562 – NAICS 332991)

Equipment List – NSK Facility

Table 1 – DTR (Degreaser Tank Room)

Emission Point ID	Emission Unit ID	Emission Unit Description ⁽¹⁾	Iowa DNR Construction Permit
DTR	DTR-1	Tank CL-DT Degreaser System Solvent Tank (1,500 gal)	92-A-069-S3
	DTR-2	Tank CL-CT Degreaser System P914 Rust Preventative Tank (1,120 gal)	
	DTR-3	CL-BT Degreaser System Kerosene/BF Mix Tank (1,120 gal)	
	DTR-4	CL-NLT Degreaser System Tank (1,440 gal)	
	DTR-5	CL-Waste Degreaser System Waste Tank (1,440 gal)	

⁽¹⁾Tanks are permitted to store liquid organic materials other than the ones listed in the table.

Table 2 – HT Line (Furnaces)

Emission Point ID	Emission Unit ID	Emission Unit Description	Iowa DNR Construction Permit
MBF1-1	MBF1-NG	HT Line - Mesh Belt Furnace 1 (1.5 MMBtu/hr) w/ Quench Oil Bath Tank	06-A-311-S3
MBF1-2	MBF1-H RX-1		06-A-312-S3
MBF2-1	MBF2-NG	HT Line - Mesh Belt Furnace 2 (1.5 MMBtu/hr) w/ Quench Oil Bath Tank	06-A-313-S3
MBF2-2	MBF2-H RX-1		06-A-314-S3
MBF3-1	MBF3-NG MBF3-H RX-1	HT Line - Heat Treat Furnace (4.4 MMBtu/hr) w/ Quench Oil Bath Tank HT Line - RX Gas Generator	92-A-076-S5
BIQ1-1	BIQ-1	HT Line - Batch Integral Quench Furnace (2.0 MMBtu/hr) w/ Quench Oil Bath Tank	06-A-315-S3
BIQ1-2	BIQ-H RX-1		11-A-352-S1

Table 3 – Grind Machines

Emission Point ID	Emission Unit ID	Emission Unit Description (by area and/or control equipment)	Iowa DNR Construction Permit
G1-G2	G1-Grind	First Grind Process Machines – CE-TC G1	09-A-139-S1
		First Grind Process Machines OD (ISB Area) – CE-A2000 G1	
		First Grind Process Machines PG (ISB Area) – CE-A2000 G1	
	G2-Grind	Second Grind Process Machines – CE-TC G2	
		Second Grind Process Machines (ISB Area) – CE-A2000 G2	
		Second Grind Process Machines (ISB Area) – CE-A4000 G2	

Control Equipment – Mist Eliminators

Table 4 – Central Exhaust System

Emission Point ID	Emission Unit ID	Emission Unit Description (by area and/or control equipment)	Iowa DNR Construction Permit
SEF-1	SF	Superfinish Machines – CE-M&W Unit	09-A-140-S1
	US	Ultrasonic Wash Machines	
	KEF	First Jet Wash Machines – CE-M&W Unit Finish Jet Wash Machines – CE M&W Unit Magnus Washer	
	CEF	Degreaser – Air Blow Tank – CE-M&W Unit Degreaser – Centrifuge – CE-M&W Unit	
	RP	Rust Preventative Application – CE-M&W Unit	

Control Equipment – Mist Eliminators

Table 5 – Superfinish Machines

Emission Point ID	Emission Unit ID	Emission Unit Description (by area and/or control equipment)	Iowa DNR Construction Permit
SF	SF	Superfinish Machines – CE-TC SF	05-A-612-S3
ISBSF	ISBSF	Superfinish Machines – CE-A2000 SF	07-A-005-S2
		Superfinish Machines – CE-A4000 SF	

Control Equipment – Mist Eliminators

Table 6 – Jet Wash Machines

Emission Point ID	Emission Unit ID	Emission Unit Description (by area and/or control equipment)	Iowa DNR Construction Permit
ISBJW	ISBJW	First Jet Wash Machines – CE-ISBJW	07-A-006-S2
ISBFJ	ISBFJ	Finish Jet Wash Machines – CE-ISBFJ	07-A-007-S2

Control Equipment – Mist Eliminators

Emission Point ID	Emission Unit ID	Emission Unit Description	Iowa DNR Construction Permit
RP	RP	Rust Preventative Application	09-A-142-S1
NSK Generator (B)	NSK Generator (B)	NSK Backup Generator (Boiler Room 0.34 MMBtu/hr)	
NSK Generator (S)	NSK Generator (S)	NSK Generator (Switchgear Room 0.085 MMBtu/hr)	

Equipment List – AKS Facility

Table 7 – AKS Ball Bearing Production

Emission Point ID	Emission Unit ID	Emission Unit Description	Iowa DNR Construction Permit
BBPO	BBPO	Heading Machines – Smog Hog SG-2WH	09-A-141-S1
		Flashing Machines	
		Heat Treat Ovens w/Quench Oil – CE-A3000	
		Grind Machines	
		L1 – Rough Lapping Machines	
		Interprocess Washers	
		L2 – Final Lapping Machines	
		Visual Inspection Machines – Wash Application	
		Visual Inspection Machines – RP Application	
AKS Generator	AKS Generator	AKS Backup Generator (0.017 MMBtu/hr)	

Insignificant Activities Equipment List

Insignificant Emission Unit ID	Insignificant Emission Unit Description
RXG-2	Endothermic Gas Generator
GHT-3	Gas Fired Heat Treat, Post Wash
	Spindle Coolant Tank
	Methanol used in Laboratory
	NSK Boiler (2.41 MMBtu/hr)
	NSK Rooftop Heaters (37 @ 0.17 MMBtu/hr each)
	NSK Parts Washers
	AKS Boiler (0.6 MMBtu/hr)
	AKS Wastewater Evaporator
	AKS Rooftop Heaters (6.385 MMBtu/hr Total)

II. Plant-Wide Conditions

Facility Name: NSK Clarinda

Permit Number: 12-TV-007

Permit conditions are established in accord with 567 Iowa Administrative Code rule 22.108

Permit Duration

The term of this permit is: Five (5) years

Commencing on: 11/07/2012

Ending on: 11/06/2017

Amendments, modifications and reopenings of the permit shall be obtained in accordance with 567 Iowa Administrative Code rules 22.110 - 22.114. Permits may be suspended, terminated, or revoked as specified in 567 Iowa Administrative Code Rules 22.115.

Emission Limits

Unless specified otherwise in the Source Specific Conditions, the following limitations and supporting regulations apply to all emission points at this plant:

Opacity (visible emissions): 40% opacity

Authority for Requirement: 567 IAC 23.3(2)"d"

Sulfur Dioxide (SO₂): 500 parts per million by volume

Authority for Requirement: 567 IAC 23.3(3)"e"

Volatile Organic Compounds (VOC): 210 tons/year

The VOC emission rate from the equipment used to clean, process, and manufacture ball bearing assemblies at the NSK facility and from the equipment used to clean, process, and manufacture ball bearings at the NSK-AKS facility shall not exceed 210 tons in any rolling 12-month period. This limit does not apply to equipment used in maintenance activities, laboratories or to combustion equipment.

Authority for Requirement: Iowa DNR Construction Permits below

92-A-069-S3	92-A-076-S5	05-A-612-S3	06-A-311-S3	06-A-312-S3	06-A-313-S3
06-A-314-S3	06-A-315-S3	07-A-005-S2	07-A-006-S2	07-A-007-S2	09-A-139-S1
09-A-140-S1	09-A-141-S1	09-A-142-S1	11-A-352-S1		

Particulate Matter:

No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567 – Chapter 24. For sources constructed, modified or reconstructed after July 21, 1999, the emission of particulate matter from any process shall not exceed an emission standard of 0.1 grain per dry standard cubic foot of exhaust gas, except as provided in 567 – 21.2(455B), 23.1(455B), 23.4(455B) and 567 – Chapter 24.

For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from Table I, or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas or established from standards provided in 23.1(455B) and 23.4(455B).

Authority for Requirement: 567 IAC 23.3(2)"a"

Fugitive Dust: Attainment and Unclassified Areas - No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not limited to, the following procedures.

1. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
3. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizers or limestone.
4. Covering at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
5. Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.

Authority for Requirement: 567 IAC 23.3(2)"c"

III. Emission Point-Specific Conditions

Facility Name: NSK Clarinda
 Permit Number: 12-TV-007

Emission Point ID Number: DTR (Degreaser Tank Room)

Associated Equipment

Table 1 – DTR (Degreaser Tank Room)

Emission Point ID	Emission Unit ID	Emission Unit Description ⁽¹⁾	Raw Material / Fuel	Rated Capacity
DTR	DTR-1	Tank CL-DT Degreaser System Solvent Tank	Solvent	1,500 gal
	DTR-2	Tank CL-CT Degreaser System P914 Rust Preventative Tank	Rust Preventative	1,120 gal
	DTR-3	CL-BT Degreaser System Kerosene/BF Mix Tank	Kerosene	1,120 gal
	DTR-4	CL-NLT Degreaser System Tank	Degreaser Solvent	1,440 gal
	DTR-5	CL-Waste Degreaser System Waste Tank	Waste Solvent	1,440 gal

⁽¹⁾Tanks are permitted to store liquid organic materials other than the ones listed in the table.

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 210.0 tons/yr⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 92-A-069-S3

⁽¹⁾The VOC emission limit for all equipment at the NSK and NSK-AKS facilities that uses VOC containing material for the manufacturing, processing, and cleaning of ball bearings and ball bearing assemblies, excluding maintenance, laboratory and combustion sources.

Pollutant: Hazardous Air Pollutants (HAPs)

Emission Limit(s): Potential HAP emissions from this emission point are accounted for under other issued construction permits for this facility.

Authority for Requirement: Iowa DNR Construction Permit 92-A-069-S3

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits:

1. The VOC emission rate from the equipment used to clean, process, and manufacture ball bearing assemblies at the NSK facility and from the equipment used to clean, process, and manufacture ball

bearings at the NSK-AKS facility shall not exceed 210 tons in any rolling 12-month period. This limit does not apply to equipment used in maintenance activities, laboratories or to combustion equipment.

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

1. To show compliance with 210 tons per year VOC limit, the permittee shall maintain the following monthly records:

- a) The VOC emission rate from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies, excluding maintenance, laboratory and combustion equipment.

The VOC emission rate shall be determined by multiplying the amount of VOC containing materials used (gallons) by the VOC content of the material (lbs/gal) and dividing by 2000. For the purpose of calculating monthly emissions, the permittee may consider material added as makeup to be the same as material used. In addition, the permittee may take credit for any VOC in waste shipped off-site (e.g. used oil, G1/G2 swarf, waste carry-off in rags, and grind sludge) and VOC shipped off-site with the preservative oil applied to parts in assembly. If the permittee chooses to take credit for any VOC in waste shipped off-site or for any VOC retained in the preservative oil, the permittee shall retain records for each particular credited VOC-containing waste material. If taking credit, the permittee shall record the amount of waste and the amount of preservative oil carried off in parts that are shipped off-site. If taking credit, the permittee shall maintain a record that documents the VOC content of the waste and the preservative oil carried-off and the amount of VOC in the waste or in the preservative oil carried-off.

The credit may be subtracted from the VOC rolling total in the month in which the VOC containing waste material is shipped off-site and in the month in which the parts that contain the carried-off preservative oil are placed into storage.

- b) The VOC emission rate from all equipment at the NSK-AKS facility, 1100A North First Street that uses VOC containing material to clean, manufacture, or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.

The VOC emission rate shall be determined by multiplying the amount of VOC containing materials used (gallons) by the VOC content of the material (lbs/gal) and dividing by 2000. For the purpose of calculating monthly emissions, the permittee may consider material added as makeup to be the same as material used. In addition, the permittee may take credit for any VOC in waste shipped off-site (e.g. used oil, G1/G2 swarf, waste carry-off in rags, and grind sludge) and VOC shipped off-site with the preservative oil applied to parts in assembly. If the permittee chooses to take credit for any VOC in waste shipped off-site or for any VOC retained in the preservative oil, the permittee shall retain records for each particular credited VOC-containing waste material. If taking credit, the permittee shall record the amount of waste and the amount of preservative oil carried off in parts that are shipped off-site. If taking credit, the permittee shall maintain a record that documents the VOC content of the waste and the preservative oil carried-off and the amount of VOC in the waste and in the preservative oil carried-off.

The credit may be subtracted from the VOC rolling total in the month in which the VOC containing waste material is shipped off-site and in the month in which the parts that contain the carried-off preservative oil are placed into storage.

- c) The total VOC emission rate from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies

and from all equipment at the NSK-AKS facility, 1100A North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.

- d) The rolling 12-month total of the VOC emissions from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies and from all equipment at the NSK-AKS facility, 1100A North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.

The permittee shall maintain these monthly records by the 30th day following the end of the previous month.

- 2. In order to take credit for the VOC shipped off-site in waste and in the preservative oil carried off in parts, the permittee shall maintain the following records:
 - a) For the VOC-containing used oil material sent off-site from the NSK facility, the permittee shall maintain monthly records on the total amount of material sent off-site, the oil content, and the VOC content of the used oil.
 - b) For the VOC-containing grinding swarf material sent off-site from the NSK facility, the permittee shall maintain an annual record of the total amount of grinding swarf sent off-site and the VOC content of the swarf.
 - c) For the VOC-containing preservative oil that is carried off with the parts shipped off site, the permittee shall maintain monthly records on the amount (gallons) and identification of each preservative oil used, the VOC content of the preservative oil and the amount of VOC carried off in the preservative oil. The amount of VOC carried off in the preservative oil shall be calculated in the following way:

$$VOC_{co} = \sum_{i=1}^n (Vol_{p,i})(VOC_{p,i})(0.6)$$

Where:

VOC_{co} = Total mass of VOC carried off in the preservative oils applied during the month in assembly, pounds.

$Vol_{p,i}$ = Total volume of preservative oil, i, used during the month, gallons.

$VOC_{p,i}$ = VOC content of preservative oil, i, pounds per gallon.

0.6 = Percentage of preservative oil carried off with parts. This is based on tests conducted by NSK on the amount of preservative oil carried off with bearing assemblies.

- d) For the VOC-containing used oil material sent off-site from the NSK-AKS facility, the permittee shall maintain bimonthly (i.e. every other month) records on the total amount of material sent off-site, the oil content, and the VOC content of the recovered oil.
- 3. The permittee shall submit the following reports to the Iowa DNR - Air Quality Bureau:
 - a) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full six months after the issuance of IDNR permit 92-A-069-S3. This report is due 45 days after the completion of the six month period.
 - b) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full nine months

after the issuance of IDNR permit 92-A-069-S3. This report is due 45 days after the completion of the nine month period.

- c) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full twelve months after the issuance of IDNR permit 92-A-069-S3. This report is due 45 days after the completion of the twelve month period.
- d) After the first twelve months after the issuance of IDNR permit 92-A-069-S3, a report shall be submitted if the actual VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant exceeds 168 tons in any rolling 12-month period. The report shall be submitted no later than 45 days from the end of the month in which the emission rate exceeded 168 tons of VOC.
- e) A report that identifies all exceedances of the rolling 12-month emissions limitations for VOC from Section 10 of IDNR Permit 92-A-069-S3. The report shall be submitted no later than 45 days from the end of the month in which the exceedance occurred. The report shall include, at a minimum, what limit was exceeded, the amount of VOC emissions, the date the exceedance occurred, and the steps that have been or will be taken to correct the exceedance.
- f) A report that identifies all exceedances of the operating limits from Section 14 of IDNR Permit 92-A-069-S3. The report shall be submitted no later than 45 days from the end of the month in which the exceedance occurred. The report shall include, at a minimum, what operating limit was exceeded, the value of the exceedance, the date the exceedance occurred, and the steps that have been or will be taken to correct the exceedance.

The reports required by Section 3. a) to d) shall be submitted to the Construction Permits Supervisor, Iowa DNR, Air Quality Bureau. Other reports shall be submitted in accordance with Section 8 of IDNR permit 92-A-069-S3.

Authority for Requirement: Iowa DNR Construction Permit 92-A-069-S3

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height (ft, from the ground): 28.5

Stack Opening (inches, dia.): 16 x 16

Exhaust Flow Rate (scfm): 300

Exhaust Temperature (°F): 70

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 92-A-069-S3

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: See Table 2 - HT Line (Furnaces)

Associated Equipment

Table 2 – HT Line (Furnaces)

Emission Point ID	Emission Unit ID	Emission Unit Description	Raw Material / Fuel	Rated Capacity
MBF1-1 MBF1-2	MBF1-NG MBF1-H RX-1	HT Line - Mesh Belt Furnace 1 w/Quench Oil Bath Tank HT Line - RX Gas Generator	Natural Gas Quench Oil	1.5 MMBtu/hr 0.136 gal/hr
MBF2-1 MBF2-2	MBF2-NG MBF2-H RX-1	HT Line - Mesh Belt Furnace 2 w/Quench Oil Bath Tank HT Line - RX Gas Generator	Natural Gas Quench Oil	1.5 MMBtu/hr 0.129 gal/hr
MBF3-1	MBF3-NG MBF3-H RX-1	HT Line - Heat Treat Furnace w/Quench Oil Bath Tank HT Line - RX Gas Generator	Natural Gas Quench Oil	4.4 MMBtu/hr 0.129 gal/hr
BIQ1-1 BIQ1-2	BIQ1-NG BIQ1-H RX-1	HT Line - Batch Integral Quench Furnace w/Quench Oil Bath Tank HT Line - RX Gas Generator	Natural Gas Quench Oil	2.0 MMBtu/hr 0.129 gal/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Table 2a

Emission Point ID	Emission Unit ID	Opacity 567 IAC 23.3(2)"d	PM10 (lb/hr)	PM (gr/dscf) 567 IAC 23.3(2)"a"	PM (lb/hr)	SO ₂ (ppmv) 567 IAC 23.3(3)	VOC (ton/yr)	IDNR Construction Permit
MBF1-1	MBF1-NG	40% ⁽¹⁾		0.1		500	210.0 ⁽²⁾ 3.5 ⁽³⁾	06-A-311-S3
MBF1-2	MBF1-H RX-1	40% ⁽¹⁾		0.1		500	210.0 ⁽²⁾ 3.5 ⁽³⁾	06-A-312-S3
MBF2-1	MBF2-NG	40% ⁽¹⁾		0.1		500	210.0 ⁽²⁾ 3.5 ⁽³⁾	06-A-313-S3
MBF2-2	MBF2-H RX-1	40% ⁽¹⁾		0.1		500	210.0 ⁽²⁾ 3.5 ⁽³⁾	06-A-314-S3
MBF3-1	MBF3-NG MBF3-H RX-1	40% ⁽¹⁾	0.5	0.1	0.5	500 0.73 ⁽⁴⁾ ton/yr	210.0 ⁽²⁾ 3.5 ⁽³⁾	92-A-076-S5
BIQ1-1	BIQ1-NG	40% ⁽¹⁾		0.1		500	210.0 ⁽²⁾ 3.5 ⁽³⁾	06-A-315-S3
BIQ1-2	BIQ1-H RX-1	40% ⁽¹⁾		0.1		500	210.0 ⁽²⁾ 3.5 ⁽³⁾	11-A-352-S1

⁽¹⁾An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

⁽²⁾The VOC emission limit for all equipment at the NSK and NSK-AKS facilities that uses VOC containing material for the manufacturing, processing, and cleaning of ball bearings and ball bearing assemblies, excluding maintenance, laboratory and combustion sources.

⁽³⁾ VOC emission limit for the Quench Oil Tanks at NSK plant (EPs MBF1-1, MBF1-2, MBF2-1, MBF2-2, BIQ1-1, BIQ1-2, and MBF3-1).

⁽⁴⁾ The annual SO₂ limit is based on the assumption that 100% of the sulfur in the quench oil is oxidized. No additional demonstration is required to show compliance with this limit.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits:

1. The amount of quench oil used in the quench tanks (EPs MBF1-1, MBF1-2, MBF2-1, MBF2-2, MBF3-1, BIQ-1, and BIQ-2) shall not exceed 20,000 gallons in any rolling 12-month period.
2. The VOC content of the quench oil used at the NSK plant shall not exceed 0.35 pound per gallon.
3. The quench oil used at the NSK plant shall not contain any compounds identified as a Hazardous Air Pollutant (HAP) (as defined by 112(b) of the Clean Air Act).
4. The VOC emission rate from the equipment used to clean, process, and manufacture ball bearing assemblies at the NSK facility and from the equipment used to clean, process, and manufacture ball bearings at the NSK-AKS facility shall not exceed 210 tons in any rolling 12-month period. This limit does not apply to equipment used in maintenance activities, laboratories or to combustion equipment.

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

1. The permittee shall maintain records on the identification, the VOC content and the HAP content of the quench oil used at the NSK plant.
2. The permittee shall maintain the following monthly records:
 - a) The amount of quench oil used at the NSK plant (gallons); and
 - b) The rolling 12-month total of the amount of the quench oil used at the NSK plant (gallons).

The permittee shall maintain these monthly records by the 30th day following the end of the previous month.

3. To show compliance with 210 tons per year VOC limit, the permittee shall maintain the following monthly records:
 - a) The VOC emission rate from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies, excluding maintenance, laboratory and combustion equipment.

The VOC emission rate shall be determined by multiplying the amount of VOC containing materials used (gallons) by the VOC content of the material (lbs/gal) and dividing by 2000. For the purpose of calculating monthly emissions, the permittee may consider material added as makeup to be the same as material used. In addition, the permittee may take credit for any VOC in waste shipped off-site (e.g. used oil, G1/G2 swarf, waste carry-off in rags, and grind sludge) and VOC shipped off-site with the preservative oil applied to parts in assembly. If the permittee chooses to take credit for any VOC in waste shipped off-site or for any VOC retained in the preservative oil, the permittee shall retain records for each particular credited VOC-containing waste material. If taking credit, the permittee shall record the amount of waste and the amount of preservative oil carried off in parts that are shipped off-site. If taking credit, the permittee shall maintain a record that documents the VOC content of the waste and the preservative oil carried-off and the amount of VOC in the waste and the preservative oil carried-off.

The credit may be subtracted from the VOC rolling total in the month in which the VOC containing waste material is shipped off-site and in the month in which the parts that contain the carried-off preservative oil are placed into storage.

- b) The VOC emission rate from all equipment at the NSK-AKS facility, 1100A North First Street that uses VOC containing material to clean, manufacture, or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.

The VOC emission rate shall be determined by multiplying the amount of VOC containing materials used (gallons) by the VOC content of the material (lbs/gal) and dividing by 2000. For the purpose of calculating monthly emissions, the permittee may consider material added as makeup to be the same as material used. In addition, the permittee may take credit for any VOC in waste shipped off-site (e.g. used oil, G1/G2 swarf, waste carry-off in rags, and grind sludge) and VOC shipped off-site with the preservative oil applied to parts in assembly. If the permittee chooses to take credit for any VOC in waste shipped off-site or for any VOC retained in the preservative oil, the permittee shall retain records for each particular credited VOC-containing waste material. If taking credit, the permittee shall record the amount of waste and the amount of preservative oil carried off in parts that are shipped off-site. If taking credit, the permittee shall maintain a record that documents the VOC content of the waste and the preservative oil carried-off and the amount of VOC in the waste and in the preservative oil carried-off.

The credit may be subtracted from the VOC rolling total in the month in which the VOC containing waste material is shipped off-site and in the month in which the parts that contain the carried-off preservative oil are placed into storage.

- c) The total VOC emission rate from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies and from all equipment at the NSK-AKS facility, 1100A North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.
- d) The rolling 12-month total of the VOC emissions from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies and from all equipment at the NSK-AKS facility, 1100A North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.

The permittee shall maintain these monthly records by the 30th day following the end of the previous month.

- 4. In order to take credit for the VOC shipped off-site in waste and in the preservative oil carried off in parts, the permittee shall maintain the following records:
 - a) For the VOC-containing used oil material sent off-site from the NSK facility, the permittee shall maintain monthly records on the total amount of material sent off-site, the oil content, and the VOC content of the used oil.
 - b) For the VOC-containing grinding swarf material sent off-site from the NSK facility, the permittee shall maintain an annual record of the total amount of grinding swarf sent off-site and the VOC content of the swarf.
 - c) For the VOC-containing preservative oil that is carried off with the parts shipped off site, the permittee shall maintain monthly records on the amount (gallons) and identification of each

preservative oil used, the VOC content of the preservative oil and the amount of VOC carried-off in the preservative oil. The amount of VOC carried off in the preservative oil shall be calculated in the following way:

$$VOCco = \sum_{i=1}^n (Vol_{p,i})(VOC_{p,i})(0.6)$$

Where:

VOCco = Total mass of VOC carried off in the preservative oils applied during the month in assembly, pounds.

Vol_{p,i} = Total volume of preservative oil, i, used during the month, gallons.

VOC_{p,i} = VOC content of preservative oil, i, pounds per gallon.

0.6 = Percentage of preservative oil carried off with parts. This is based on tests conducted by NSK on the amount of preservative oil carried off with bearing assemblies.

- d) For the VOC-containing used oil material sent off-site from the NSK-AKS facility, the permittee shall maintain bimonthly (i.e. every other month) records on the total amount of material sent offsite, the oil content, and the VOC content of the recovered oil.
5. The permittee shall submit the following reports to the Iowa DNR - Air Quality Bureau:
- a) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full six months after the issuance of the permits under project 11-108 and dated November 3, 2011. This report is due 45 days after the completion of the six month period.
 - b) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full nine months after the issuance of the permits under project 11-108 and dated November 3, 2011. This report is due 45 days after the completion of the nine month period.
 - c) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full twelve months after the issuance of the permits under project 11-108 and dated November 3, 2011. This report is due 45 days after the completion of the twelve month period.
 - d) After the first twelve months after the issuance of the permits under project 11-108 and dated November 3, 2011, a report shall be submitted if the actual VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant exceeds 168 tons in any rolling 12-month period. The report shall be submitted no later than 45 days from the end of the month in which the emission rate exceeded 168 tons of VOC.
 - e) A report that identifies all exceedances of the rolling 12-month emissions limitations for VOC from Section 10 of the IDNR Permits listed in Table 2a above. The report shall be submitted no later than 45 days from the end of the month in which the exceedance occurred. The report shall include, at a minimum, what limit was exceeded, the amount of VOC emissions, the date the exceedance occurred, and the steps that have been or will be taken to correct the exceedance.

- f) A report that identifies all exceedances of the operating limits from Section 14 of the IDNR Permits listed in Table 2a above. The report shall be submitted no later than 45 days from the end of the month in which the exceedance occurred. The report shall include, at a minimum, what operating limit was exceeded, the value of the exceedance, the date the exceedance occurred, and the steps that have been or will be taken to correct the exceedance.

The reports required by Section 5. a) to d) shall be submitted to the Construction Permits Supervisor, Iowa DNR, Air Quality Bureau. Other reports shall be submitted in accordance with Section 8 the IDNR Permits listed in Table 2a above.

Authority for Requirement: Iowa DNR Construction Permits listed in Table 2a

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Table 2b

Emission Point ID	Emission Unit ID	Construction Permit	Height (ft)	Discharge Style	Opening Diameter (in)	Exhaust Temp (°F)	Exhaust flowrate (scfm)
MBF1-1	MBF1-NG MBF1-H RX-1	06-A-311-S3	38	Vertical Unobstructed	8	415	0
MBF1-2		06-A-312-S3	38	Vertical Unobstructed	8	335	0
MBF2-1	MBF2-NG MBF2-H RX-1	06-A-313-S3	38	Vertical Unobstructed	8	275	0
MBF2-2		06-A-314-S3	38	Vertical Obstructed	8	275	0
MBF3-1	MBF3-NG MBF3-H RX-1	92-A-076-S5	30	Vertical Unobstructed	24 x 24	329	2,600
BIQ1-1	BIQ1-NG BIQ1-H RX-1	06-A-315-S3	38	Vertical Unobstructed	8	280	0
BIQ1-2		11-A-352-S1	35	Vertical Unobstructed	14	120	0

Authority for Requirement: Iowa DNR Construction Permits listed in Table 2b above.

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: G1-G2 - Grind Machines

Associated Equipment

Table 3 – Grind Machines

Emission Point ID	Emission Unit ID	Emission Unit Description (by area and/or control equipment)	Raw Material / Fuel	Rated Capacity
G1-G2	G1-Grind	First Grind Process Machines – CE-TC G1	Grind Coolant	0.519 gal/hr
		First Grind Process Machines OD (ISB Area) – CE-A2000 G1	Grind Coolant	
		First Grind Process Machines PG (ISB Area) – CE-A2000 G1	Grind Coolant	
	G2-Grind	Second Grind Process Machines – CE-TC G2	Grind Coolant	2.074 gal/hr
		Second Grind Process Machines (ISB Area) – CE-A2000 G2	Grind Coolant	
		Second Grind Process Machines (ISB Area) – CE-A4000 G2	Grind Coolant	

Emissions Control Equipment Description: Mist Eliminators

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40% ⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 09-A-139-S1
567 IAC 23.3(2)"d"

⁽¹⁾An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 09-A-139-S1
567 IAC 23.3(2)"a"

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 210.0 tons/yr ⁽²⁾, 36.0 tons/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 09-A-139-S1

⁽²⁾The VOC emission limit for all equipment at the NSK and NSK-AKS facilities that uses VOC containing material for the manufacturing, processing, and cleaning of ball bearings and ball bearing assemblies, excluding maintenance, laboratory and combustion sources.

⁽³⁾ VOC emission limit for the G1-G2 grind machines.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits:

1. The VOC content of the coolant used in the G1 and G2 grind machines shall not exceed 3.0 pounds per gallon.
2. The total Hazardous Air Pollutant (HAP) content of the coolant used in the G1 and G2 grind machines shall not exceed 0.0 pound per gallon (*HAP as defined by 112(b) of the Clean Air Act*).
3. The amount of coolant used in G1 and G2 grind machines shall not exceed 24,000 gallons in any rolling 12-month period.
4. The emission rate from the equipment used to clean, process, and manufacture ball bearing assemblies at the NSK facility and from the equipment used to clean, process, and manufacture ball bearings at the NSK-AKS facility shall not exceed 210 tons in any rolling 12-month period. This limit does not apply to equipment used in maintenance activities, laboratories or to combustion equipment.

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

1. The permittee shall maintain records on the identification, the VOC content and the HAP content of the coolants that are used in the G1 and G2 grind machines.
2. The permittee shall maintain the following monthly records:
 - a) the amount of coolant used in the G1 and G2 grind machines (gallons); and
 - b) the rolling 12-month total of the amount of coolant used in the G1 and G2 grind machines (gallons).

The permittee shall maintain these monthly records by the 30th day following the end of the previous month.

3. To show compliance with the 210 tons per year VOC limit, the permittee shall maintain the following monthly records:
 - a) The VOC emission rate from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies, excluding maintenance, laboratory and combustion equipment.

The VOC emission rate shall be determined by multiplying the amount of VOC containing materials used (gallons) by the VOC content of the material (lbs/gal) and dividing by 2000. For the purpose of calculating monthly emissions, the permittee may consider material added as makeup to be the same as material used. In addition, the permittee may take credit for any VOC in waste shipped off-site (e.g. used oil, G1/G2 swarf, waste carry-off in rags, and grind sludge) and VOC shipped off-site with the preservative oil applied to parts in assembly. If the permittee chooses to take credit for any VOC in waste shipped off-site or for any VOC retained in the preservative oil, the permittee shall retain records for each particular credited VOC-containing waste material. If taking credit, the permittee shall record the amount of waste and the amount of preservative oil carried off in parts that are shipped off-site. If taking credit, the permittee shall maintain a record that documents the VOC content of the waste and the preservative oil carried-off and the amount of VOC in the waste and in the preservative oil carried-off.

The credit may be subtracted from the VOC rolling total in the month in which the VOC containing waste material is shipped off-site and in the month in which the parts that contain the carried-off preservative oil are placed into storage.

- b) The VOC emission rate from all equipment at the NSK-AKS facility, 1100A North First Street that uses VOC containing material to clean, manufacture, or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.

The VOC emission rate shall be determined by multiplying the amount of VOC containing materials used (gallons) by the VOC content of the material (lbs/gal) and dividing by 2000. For the purpose of calculating monthly emissions, the permittee may consider material added as makeup to be the same as material used. In addition, the permittee may take credit for any VOC in waste shipped off-site (e.g. used oil, G1/G2 swarf, waste carry-off in rags, and grind sludge) and VOC shipped off-site with the preservative oil applied to parts in assembly. If the permittee chooses to take credit for any VOC in waste shipped off-site or for any VOC retained in the preservative oil, the permittee shall retain records for each particular credited VOC-containing waste material. If taking credit, the permittee shall record the amount of waste and the amount of preservative oil carried off in parts that are shipped off-site. If taking credit, the permittee shall maintain a record that documents the VOC content of the waste and the preservative oil carried-off and the amount of VOC in the waste and in the preservative oil carried-off.

The credit may be subtracted from the VOC rolling total in the month in which the VOC containing waste material is shipped off-site and in the month in which the parts that contain the carried-off preservative oil are placed into storage.

- c) The total VOC emission rate from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies and from all equipment at the NSK-AKS facility, 1100A North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.
- d) The rolling 12-month total of the VOC emissions from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies and from all equipment at the NSK-AKS facility, 1100A North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.

The permittee shall maintain these monthly records by the 30th day following the end of the previous month.

- 4. In order to take credit for the VOC shipped off-site in waste and in the preservative oil carried off in parts, the permittee shall maintain the following records:
 - a) For the VOC-containing used oil material sent off-site from the NSK facility, the permittee shall maintain monthly records on the total amount of material sent off-site, the oil content, and the VOC content of the used oil.
 - b) For the VOC-containing grinding swarf material sent off-site from the NSK facility, the permittee shall maintain an annual record of the total amount of grinding swarf sent off-site and the VOC content of the swarf.
 - c) For the VOC-containing preservative oil that is carried off with the parts shipped off site, the permittee shall maintain monthly records on the amount (gallons) and identification of each preservative oil used, the VOC content of the preservative oil and the amount of VOC carried off in the preservative oil. The amount of VOC carried off in the preservative oil shall be calculated in the follow way:

$$VOC_{co} = \sum_{i=1}^n (Vol_{p,i})(VOC_{p,i})(0.6)$$

Where:

VOC_{co} = Total mass of VOC carried off in the preservative oils applied during the month in assembly, pounds.

$Vol_{p,i}$ = Total volume of preservative oil, i, used during the month, gallons.

$VOC_{p,i}$ = VOC content of preservative oil, i, pounds per gallon.

0.6 = Percentage of preservative oil carried off with parts. This is based on tests conducted by NSK on the amount of preservative oil carried off with bearing assemblies.

- d) For the VOC-containing used oil material sent off-site from the NSK-AKS facility, the permittee shall maintain bimonthly (i.e. every other month) records on the total amount of material sent off-site, the oil content, and the VOC content of the recovered oil.
5. The permittee shall submit the following reports to the Iowa DNR - Air Quality Bureau:
 - a) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full six months after the issuance of IDNR Construction Permit 09-A-139-S1. This report is due 45 days after the completion of the six month period.
 - b) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full nine months after the issuance of IDNR Construction Permit 09-A-139-S1. This report is due 45 days after the completion of the nine month period.
 - c) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full twelve months after the issuance of IDNR Construction Permit 09-A-139-S1. This report is due 45 days after the completion of the twelve month period.
 - d) After the first twelve months after the issuance of IDNR Construction Permit 09-A-139-S1, a report shall be submitted if the actual VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant exceeds 168 tons in any rolling 12-month period. The report shall be submitted no later than 45 days from the end of the month in which the emission rate exceeded 168 tons of VOC.
 - e) A report that identifies any new equipment that has been installed in accordance with Section 11 of IDNR Construction Permit 09-A-139-S1. This report shall be submitted on January 31 of each year and shall cover the previous calendar year. The report shall include a revised equipment list of the equipment covered by this permit and shall evaluate how the installation of any new equipment will affect VOC emissions. Based on a review of this report, the DNR may require this permit to be modified. No report is required to be submitted if the equipment list does not change.
 - f) A report that identifies all exceedances of the rolling 12-month emissions limitations for VOC from Section 10 of IDNR Construction Permit 09-A-139-S1. The report shall be submitted no later than 45 days from the end of the month in which the exceedance occurred. The report shall include, at a minimum, what limit was exceeded, the amount of VOC emissions, the date the exceedance

occurred, and the steps that have been or will be taken to correct the exceedance.

- g) A report that identifies all exceedances of the operating limits from Section 14 of IDNR Construction Permit 09-A-139-S1. The report shall be submitted no later than 45 days from the end of the month in which the exceedance occurred. The report shall include, at a minimum, what operating limit was exceeded, the value of the exceedance, the date the exceedance occurred, and the steps that have been or will be taken to correct the exceedance.

The reports required by Section 5. a) to d) shall be submitted to the Construction Permits Supervisor, Iowa DNR, Air Quality Bureau. Other reports shall be submitted in accordance with Section 8 of IDNR Construction Permit 09-A-139-S1.

Authority for Requirement: Iowa DNR Construction Permit 09-A-139-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

- Stack Height, (ft, from the ground): *
- Stack Opening, (inches, dia.): *
- Exhaust Flow Rate (scfm): *
- Exhaust Temperature (°F): *
- Discharge Style: *

Authority for Requirement: Iowa DNR Construction Permit 09-A-139-S1

*G1 and G2 grinders exhaust inside the plant.

The permittee shall maintain an up-to-date list of all the equipment covered by this permit. The permittee is allowed to install replacement equipment or additional equipment that performs similar manufacturing operations as the equipment listed in this section provided that: 1.) the VOC emission limitations and all operating limits of the permit are complied with by the equipment, and 2.) the new equipment is not subject to any emission limitation or work practice requirement from IAC subrule 23.1(2), 23.1(3) or 23.1(4). Prior to the installation of new equipment that performs different manufacturing functions from the equipment listed in this section; the permittee shall submit an application to modify construction permit 09-A-139-S1.

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

- 1. Maintain and operate all equipment per manufacturer requirements.
- 2. The facility will be allowed 60 days from the date of permit issuance to submit the Plan.

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: SEF-1 – Central Exhaust System

Associated Equipment

Table 4 – M&W Unit Exhaust

Emission Point ID	Emission Unit ID	Emission Unit Description (by area and/or control equipment)	Raw Material / Fuel	Rated Capacity
SEF-1	SF	Superfinish Machines – CE-M&W Unit	Oil	1.455 gal/hr
	US	Ultrasonic Wash Machines	Wash Fluid	0.554 gal/hr
	KEF	First Jet Wash Machines– CE-M&W Unit Finish Jet Wash Machines – CE-M&W Unit Magnus Washer	Wash Fluid	4.059 gal/hr
	CEF	Degreaser – Air Blow Tank – CE-M&W Unit Degreaser – Centrifuge – CE-M&W Unit	Wash Fluid	
	RP	Rust Preventative Application – CE-M&W Unit	Oil	0.444 gal/hr

Emissions Control Equipment Description: Mist Eliminators

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40% ⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 09-A-140-S1
567 IAC 23.3(2)"d"

⁽¹⁾An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 09-A-140-S1
567 IAC 23.3(2)"a"

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 210.0 tons/yr ⁽²⁾, 119.0 tons/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 09-A-140-S1

⁽²⁾The VOC emission limit for all equipment at the NSK and NSK-AKS facilities that uses VOC containing material for the manufacturing, processing, and cleaning of ball bearings and ball bearing assemblies, excluding maintenance, laboratory and combustion sources.

⁽³⁾ VOC emission limit for the equipment that vents through the Central Exhaust System (EP SEF-1). VOC emissions from the Superfinish Machines (EU-SF-1 through EU-SF-42) are limited by the material usage limits in Construction Permit 05-A-612-S3 and are accounted for on that permit. VOC emissions from the Ultrasonic wash machines and the First Jet wash machines are limited by the material usage limits in Construction Permit 07-A-006-S2 and are accounted for on that permit.

Pollutant: Total Hazardous Air Pollutants (HAPs)

Emission Limit(s): 4.73 tons/yr ⁽⁴⁾

Authority for Requirement: Iowa DNR Construction Permit 09-A-140-S1

⁽⁴⁾ Total HAP emission limit for the equipment that vents through the Central Exhaust System (EP SEF-1).

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits:

1. The VOC content of the wash fluid/coolant used in the Ultrasonic wash machines, and the First Jet wash machines shall not exceed 0.85 pound per gallon.
2. The VOC content of the cleaning solvent used in the Finish Jet wash machines, the Magnus wash machine, and the Degreaser air blow tanks, centrifuge dryers, and centrifuge wash tanks (i.e. assembly area) shall not exceed 6.8 pounds per gallon.
3. The VOC content of the coolant used in the Superfinish machines shall not exceed 1.2 pounds per gallon.
4. The HAP ⁽¹⁾ content of the wash fluid/coolant used in the Ultrasonic wash machines, the First Jet wash machines shall not exceed 0.0 pounds per gallon.
5. The HAP ⁽¹⁾ content of the cleaning solvent used in the Finish Jet wash machines, the Magnus wash machine, and the Degreaser air blow tanks, centrifuge dryers, and centrifuge wash tanks (i.e. assembly area) shall not exceed 0.27 pound per gallon.
6. The HAP ⁽¹⁾ content of the coolant used in the Superfinish machines shall not exceed 0.0 pounds per gallon.
7. The amount of wash fluid/coolant used in the First Jet Wash machines for Integral Shaft Bearing Operations (EP ISBJW), the First Jet Wash machines (EP SEF-1), and the Ultrasonic Wash machines (EP SEF-1) shall not exceed 12,000 gallons in any rolling 12-month period.
8. The amount of cleaning solvent used in the Finish Jet wash machines, the Magnus wash machine, and the Degreaser air blow tanks, centrifuge dryers, and centrifuge wash tanks (i.e. assembly area) shall not exceed 35,000 gallons in any rolling 12-month period.
9. The total amount of coolant used in the Superfinish machines (EP SF, EP SEF-1) and the Integral Shaft Bearing Superfinish machines (EP ISBSF) shall not exceed 25,000 gallons in any rolling 12-month period.
10. The VOC emission rate from the equipment used to clean, process and manufacture ball bearing assemblies at the NSK facility and from the equipment used to clean, process, and manufacture ball bearings at the NSK-AKS facility shall not exceed 210 tons in any rolling 12-month period. This limit does not apply to equipment used in maintenance activities, laboratories or to combustion equipment.

⁽¹⁾ Hazardous Air Pollutant as defined by 112(b) of the Clean Air Act.

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

1. The permittee shall maintain records on the identification, the VOC content and the HAP content of the wash fluids, solvents and coolants that are used in the Superfinish machines, the Ultrasonic wash machines, the First Jet wash machines, the Finish Jet wash machines, the Magnus wash machine, the Degreaser Air Blow Tank, the Degreaser centrifuge dryers, and the Degreaser Centrifuge wash tanks (i.e. assembly area).
2. The permittee shall maintain the following monthly records:
 - a) The amount of wash fluid/coolant used in the First Jet Wash machines for Integral Shaft Bearing operations, the First Jet Wash machines, and the Ultrasonic Wash machines (gallons);
 - b) The rolling 12-month total of the amount of wash fluid/coolant used in the First Jet Wash machines for Integral Shaft Bearing operations, the First Jet Wash machines, and the Ultrasonic Wash

machines (gallons).

- c) The amount of solvent used in the Finish Jet wash machines, the Magnus wash machine, the Degreaser Air Blow Tank, the Degreaser centrifuge dryers, and the Degreaser Centrifuge wash tanks;
- d) The rolling 12-month total of the amount of solvent used in the Finish Jet wash machines, the Magnus wash machine, the Degreaser Air Blow Tank, the Degreaser centrifuge dryers, and the Degreaser Centrifuge wash tanks;
- e) The amount of coolant used in the Superfinish machines and the Integral Shaft Bearing Superfinish machines (gallons); and
- f) The rolling 12-month total of the amount of coolant used in the Superfinish machines and the Integral Shaft Bearing Superfinish machines (gallons).

The permittee shall maintain these monthly records by the 30th day following the end of the previous month.

- 3. To show compliance with the 210 tons per year VOC limit, the permittee shall maintain the following monthly records:
 - a) The VOC emission rate from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies, excluding maintenance, laboratory and combustion equipment.

The VOC emission rate shall be determined by multiplying the amount of VOC containing materials used (gallons) by the VOC content of the material (lbs/gal) and dividing by 2000. For the purpose of calculating monthly emissions, the permittee may consider material added as makeup to be the same as material used. In addition, the permittee may take credit for any VOC in waste shipped off-site (e.g. used oil, G1/G2 swarf, waste carry-off in rags, and grind sludge) and VOC shipped off-site with the preservative oil applied to parts in assembly. If the permittee chooses to take credit for any VOC in waste shipped off-site or for any VOC retained in the preservative oil, the permittee shall retain records for each particular credited VOC-containing waste material. If taking credit, the permittee shall record the amount of waste and the amount of preservative oil carried off in parts that are shipped off-site. If taking credit, the permittee shall maintain a record that documents the VOC content of the waste and the preservative oil carried-off and the amount of VOC in the waste and in the preservative oil carried-off.

The credit may be subtracted from the VOC rolling total in the month in which the VOC containing waste material is shipped off-site and in the month in which the parts that contain the carried-off preservative oil are placed into storage.

- b) The VOC emission rate from all equipment at the NSK-AKS facility, 1100A North First Street that uses VOC containing material to clean, manufacture, or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.

The VOC emission rate shall be determined by multiplying the amount of VOC containing materials used (gallons) by the VOC content of the material (lbs/gal) and dividing by 2000. For the purpose of calculating monthly emissions, the permittee may consider material added as makeup to be the same as material used. In addition, the permittee may take credit for any VOC in waste shipped off-site (e.g. used oil, G1/G2 swarf, waste carry-off in rags, and grind sludge) and VOC shipped off-site with the preservative oil applied to parts in assembly. If the permittee chooses to take credit for any VOC in waste shipped off-site or for any VOC retained in the preservative oil,

the permittee shall retain records for each particular credited VOC-containing waste material. If taking credit, the permittee shall record the amount of waste and the amount of preservative oil carried off in parts that are shipped off-site. If taking credit, the permittee shall maintain a record that documents the VOC content of the waste and the preservative oil carried-off and the amount of VOC in the waste and in the preservative oil carried-off.

The credit may be subtracted from the VOC rolling total in the month in which the VOC containing waste material is shipped off-site and in the month in which the parts that contain the carried-off preservative oil are placed into storage.

- c) The total VOC emission rate from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies and from all equipment at the NSK-AKS facility, 1100A North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.
- d) The rolling 12-month total of the VOC emissions from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies and from all equipment at the NSK-AKS facility, 1100A North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.

The permittee shall maintain these monthly records by the 30th day following the end of the previous month.

- 4. In order to take credit for the VOC shipped off-site in waste and in the preservative oil carried off in parts, the permittee shall maintain the following records:
 - a) For the VOC-containing used oil material sent off-site from the NSK facility, the permittee shall maintain monthly records on the total amount of material sent off-site, the oil content, and the VOC content of the used oil.
 - b) For the VOC-containing grinding swarf material sent off-site from the NSK facility, the permittee shall maintain an annual record of the total amount of grinding swarf sent off-site and the VOC content of the swarf.
 - c) For the VOC-containing preservative oil that is carried off with the parts shipped off site, the permittee shall maintain monthly records on the amount (gallons) and identification of each preservative oil used, the VOC content of the preservative oil and the amount of VOC carried off in the preservative oil. The amount of VOC carried off in the preservative oil shall be calculated in the follow way:

$$VOC_{co} = \sum_{i=1}^n (Vol_{p,i})(VOC_{p,i})(0.6)$$

Where:

VOC_{co} = Total mass of VOC carried off in the preservative oils applied during the month in assembly, pounds.

$Vol_{p,i}$ = Total volume of preservative oil, i, used during the month, gallons.

$VOC_{p,i}$ = VOC content of preservative oil, i, pounds per gallon.

0.6 = Percentage of preservative oil carried off with parts. This is based on tests conducted by NSK on the amount of preservative oil carried off with bearing assemblies.

- d) For the VOC-containing used oil material sent off-site from the NSK-AKS facility, the permittee shall maintain bimonthly (i.e. every other month) records on the total amount of material sent off-site, the oil content, and the VOC content of the recovered oil.

5. The permittee shall submit the following reports to the Iowa DNR - Air Quality Bureau:
 - a) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full six months after the issuance of IDNR Construction Permit 09-A-140-S1. This report is due 45 days after the completion of the six month period.
 - b) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full nine months after the issuance of IDNR Construction Permit 09-A-140-S1. This report is due 45 days after the completion of the nine month period.
 - c) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full twelve months after the issuance of IDNR Construction Permit 09-A-140-S1. This report is due 45 days after the completion of the twelve month period.
 - d) After the first twelve months after the issuance of IDNR Construction Permit 09-A-140-S1, a report shall be submitted if the actual VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant exceeds 168 tons in any rolling 12-month period. The report shall be submitted no later than 45 days from the end of the month in which the emission rate exceeded 168 tons of VOC.
 - e) A report that identifies any new equipment that has been installed in accordance with Section 10 of IDNR Construction Permit 09-A-140-S1. This report shall be submitted on January 31 of each year and shall cover the previous calendar year. The report shall include a revised equipment list of the equipment covered by this permit and shall evaluate how the installation of any new equipment will affect VOC emissions. Based on a review of this report, the DNR may require this permit to be modified. No report is required to be submitted if the equipment list does not change.
 - f) A report that identifies all exceedances of the rolling 12-month emissions limitations for VOC from Section 10 of IDNR Construction Permit 09-A-140-S1. The report shall be submitted no later than 45 days from the end of the month in which the exceedance occurred. The report shall include, at a minimum, what limit was exceeded, the amount of VOC emissions, the date the exceedance occurred, and the steps that have been or will be taken to correct the exceedance.
 - g) A report that identifies all exceedances of the operating limits from Section 14 of IDNR Construction Permit 09-A-140-S1. The report shall be submitted no later than 45 days from the end of the month in which the exceedance occurred. The report shall include, at a minimum, what operating limit was exceeded, the value of the exceedance, the date the exceedance occurred, and the steps that have been or will be taken to correct the exceedance.

The reports required by Section 5. a) to e) shall be submitted to the Construction Permits Supervisor, Iowa DNR, Air Quality Bureau. Other reports shall be submitted in accordance with Section 8 of IDNR Construction Permit 09-A-140-S1.

Authority for Requirement: Iowa DNR Construction Permit 09-A-140-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

- Stack Height, (ft, from the ground): 25
- Stack Opening, (inches, dia.): 54
- Exhaust Flow Rate (scfm): 30,000
- Exhaust Temperature (°F): 70
- Discharge Style: Vertical Unobstructed
- Authority for Requirement: Iowa DNR Construction Permit 09-A-140-S1

The permittee shall maintain an up-to-date list of all the equipment covered by this permit. The permittee is allowed to install replacement equipment or additional equipment that performs similar manufacturing operations as the equipment listed in this section provided that: 1.) the VOC emission limitations and all operating limits of the permit are complied with by the equipment, and 2.) the new equipment is not subject to any emission limitation or work practice requirement from IAC subrule 23.1(2), 23.1(3) or 23.1(4). Prior to the installation of new equipment that performs different manufacturing functions from the equipment listed in this section; the permittee shall submit an application to modify construction permit 09-A-140-S1.

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

- 1. Maintain and operate all equipment per manufacturer requirements.
- 2. The facility will be allowed 60 days from the date of permit issuance to submit the Plan.

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: SF, ISBSF - Superfinish Machines

Associated Equipment

Table 5 – Superfinish Machines

Emission Point ID	Emission Unit ID	Emission Unit Description (by area and/or control equipment)	Raw Material / Fuel	Rated Capacity
SF	SF	Superfinish Machines – CE-TC SF	Oil	0.727 gal/hr
ISBSF	ISBSF	Superfinish Machines – CE-A2000 ISB	Oil	0.340 gal/hr
		Superfinish Machines – CE-A4000 ISB		0.415 gal/hr

Control Equipment – Mist Eliminators

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40% (1)

Authority for Requirement: Iowa DNR Construction Permits 05-A-612-S3 and 07-A-005-S2
567 IAC 23.3(2)"d"

⁽¹⁾An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permits 05-A-612-S3 and 07-A-005-S2
567 IAC 23.3(2)"a"

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 210.0 ⁽²⁾, 15.0 ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permits 05-A-612-S3 and 07-A-005-S2

⁽²⁾The VOC emission limit for all equipment at the NSK and NSK-AKS facilities that uses VOC containing material for the manufacturing, processing, and cleaning of ball bearings and ball bearing assemblies, excluding maintenance, laboratory and combustion sources.

⁽³⁾ VOC emission limit for the Superfinish Machines (EP SF, EP SEF-1) and the Integral Shaft Bearing Superfinish Machines (EP ISBSF).

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits:

1. The VOC content of the coolant used in the Superfinish machines shall not exceed 1.2 pounds per gallon.
2. The coolant used in the Superfinish machines shall not contain any compounds identified as a Hazardous Air Pollutant (*HAP as defined by 112(b) of the Clean Air Act*).
3. The total amount of coolant used in the Superfinish machines (EP SF, EP SEF-1) and the Integral Shaft Bearing Superfinish machines (EP ISBSF) shall not exceed 25,000 gallons in any rolling 12-month

period.

4. The VOC emission rate from the equipment used to clean, process, and manufacture ball bearing assemblies at the NSK facility and from the equipment used to clean, process, and manufacture ball bearings at the NSK-AKS facility shall not exceed 210 tons in any rolling 12-month period. This limit does not apply to equipment used in maintenance activities, laboratories or to combustion equipment.

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

1. The permittee shall maintain records on the identification, the VOC content and the HAP content of the coolant used in the Superfinish machines.
2. The permittee shall maintain the following monthly records:
 - a. the amount of coolant used in the Superfinish machines and the Integral Shaft Bearing Superfinish machines (gallons); and
 - b. the rolling 12-month total of the amount of coolant used in the Superfinish machines and the Integral Shaft Bearing Superfinish machines (gallons).

The permittee shall maintain these monthly records by the 30th day following the end of the previous month.

3. To show compliance with 210 tons per year VOC limit, the permittee shall maintain the following monthly records:
 - a. The VOC emission rate from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies, excluding maintenance, laboratory and combustion equipment.

The VOC emission rate shall be determined by multiplying the amount of VOC containing materials used (gallons) by the VOC content of the material (lbs/gal) and dividing by 2000. For the purpose of calculating monthly emissions, the permittee may consider material added as makeup to be the same as material used. In addition, the permittee may take credit for any VOC in waste shipped off-site (e.g. used oil, G1/G2 swarf, waste carry-off in rags, and grind sludge) and VOC shipped off-site with the preservative oil applied to parts in assembly. If the permittee chooses to take credit for any VOC in waste shipped off-site or for any VOC retained in the preservative oil, the permittee shall retain records for each particular credited VOC-containing waste material. If taking credit, the permittee shall record the amount of waste and the amount of preservative oil carried off in parts that are shipped off-site. If taking credit, the permittee shall maintain a record that documents the VOC content of the waste and the preservative oil carried-off and the amount of VOC in the waste and in the preservative oil carried-off.

The credit may be subtracted from the VOC rolling total in the month in which the VOC containing waste material is shipped off-site and in the month in which the parts that contain the carried-off preservative oil are placed into storage.

- b. The VOC emission rate from all equipment at the NSK-AKS facility, 1100A North First Street that uses VOC containing material to clean, manufacture, or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.

The VOC emission rate shall be determined by multiplying the amount of VOC containing materials used (gallons) by the VOC content of the material (lbs/gal) and dividing by 2000. For the purpose of calculating monthly emissions, the permittee may consider material added as makeup to

be the same as material used. In addition, the permittee may take credit for any VOC in waste shipped off-site (e.g. used oil, G1/G2 swarf, waste carry-off in rags, and grind sludge) and VOC shipped off-site with the preservative oil applied to parts in assembly. If the permittee chooses to take credit for any VOC in waste shipped off-site or for any VOC retained in the preservative oil, the permittee shall retain records for each particular credited VOC-containing waste material. If taking credit, the permittee shall record the amount of waste and the amount of preservative oil carried off in parts that are shipped off-site. If taking credit, the permittee shall maintain a record that documents the VOC content of the waste and the preservative oil carried-off and the amount of VOC in the waste and in the preservative oil carried-off.

The credit may be subtracted from the VOC rolling total in the month in which the VOC containing waste material is shipped off-site and in the month in which the parts that contain the carried-off preservative oil are placed into storage.

- c. The total VOC emission rate from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies and from all equipment at the NSK-AKS facility, 1100A North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.
- d. The rolling 12-month total of the VOC emissions from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies and from all equipment at the NSK-AKS facility, 1100A North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.

The permittee shall maintain these monthly records by the 30th day following the end of the previous month.

- 4. In order to take credit for the VOC shipped off-site in waste and in the preservative oil carried off in parts, the permittee shall maintain the following records:
 - a. For the VOC-containing used oil material sent off-site from the NSK facility, the permittee shall maintain monthly records on the total amount of material sent off-site, the oil content, and the VOC content of the used oil.
 - b. For the VOC-containing grinding swarf material sent off-site from the NSK facility, the permittee shall maintain an annual record of the total amount of grinding swarf sent off-site and the VOC content of the swarf.
 - c. For the VOC-containing preservative oil that is carried off with the parts shipped off site, the permittee shall maintain monthly records on the amount (gallons) and identification of each preservative oil used, the VOC content of the preservative oil and the amount of VOC carried off in the preservative oil. The amount of VOC carried off in the preservative oil shall be calculated in the follow way:

$$VOC_{co} = \sum_{i=1}^n (Vol_{p,i})(VOC_{p,i})(0.6)$$

Where:

VOC_{co} = Total mass of VOC carried off in the preservative oils applied during the month in assembly, pounds.

$Vol_{p,i}$ = Total volume of preservative oil, i, used during the month, gallons.

$VOC_{p,i}$ = VOC content of preservative oil, i, pounds per gallon.

0.6 = Percentage of preservative oil carried off with parts. This is based on tests conducted by NSK on the amount of preservative oil carried off with bearing assemblies.

- d. For the VOC-containing used oil material sent off-site from the NSK-AKS facility, the permittee shall maintain bimonthly (i.e. every other month) records on the total amount of material sent off-site, the oil content, and the VOC content of the recovered oil.
5. The permittee shall submit the following reports to the Iowa DNR - Air Quality Bureau:
- a. A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full six months after the issuance of IDNR Construction Permits 05-A-612-S3 and 07-A-005-S2. This report is due 45 days after the completion of the six month period.
 - b. A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full nine months after the issuance of IDNR Construction Permits 05-A-612-S3 and 07-A-005-S2. This report is due 45 days after the completion of the nine month period.
 - c. A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full twelve months after the issuance of IDNR Construction Permits 05-A-612-S3 and 07-A-005-S2. This report is due 45 days after the completion of the twelve month period.
 - d. After the first twelve months after the issuance of IDNR Construction Permits 05-A-612-S3 and 07-A-005-S2, a report shall be submitted if the actual VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant exceeds 168 tons in any rolling 12-month period. The report shall be submitted no later than 45 days from the end of the month in which the emission rate exceeded 168 tons of VOC.
 - e. A report that identifies any new equipment that has been installed in accordance with Section 11 of IDNR Construction Permits 05-A-612-S3 and 07-A-005-S2. This report shall be submitted on January 31 of each year and shall cover the previous calendar year. The report shall include a revised equipment list of the equipment covered by this permit and shall evaluate how the installation of any new equipment will affect VOC emissions. Based on a review of this report, the DNR may require this permit to be modified. No report is required to be submitted if the equipment list does not change.
 - f. A report that identifies all exceedances of the rolling 12-month emissions limitations for VOC from Section 10 of IDNR Construction Permits 05-A-612-S3 and 07-A-005-S2. The report shall be submitted no later than 45 days from the end of the month in which the exceedance occurred. The report shall include, at a minimum, what limit was exceeded, the amount of VOC emissions, the date the exceedance occurred, and the steps that have been or will be taken to correct the exceedance.
 - g. A report that identifies all exceedances of the operating limits from Section 14 of IDNR Construction Permits 05-A-612-S3 and 07-A-005-S2. The report shall be submitted no later than 45 days from the end of the month in which the exceedance occurred. The report shall include, at a minimum, what operating limit was exceeded, the value of the exceedance, the date the exceedance occurred, and the

steps that have been or will be taken to correct the exceedance.

The reports required by Section 5. a) to e) shall be submitted to the Construction Permits Supervisor, Iowa DNR, Air Quality Bureau. Other reports shall be submitted in accordance with Section 8 of IDNR Construction Permits 05-A-612-S3 and 07-A-005-S2.

Authority for Requirement: Iowa DNR Construction Permits 05-A-612-S3 and 07-A-005-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): *

Stack Opening, (inches, dia.): *

Exhaust Flow Rate (scfm): *

Exhaust Temperature (°F): *

Discharge Style: *

Authority for Requirement: DNR Construction Permits 05-A-612-S3 and 07-A-005-S2

*The Superfinish machines exhaust inside the plant.

The permittee shall maintain an up-to-date list of all the equipment covered by this permit. The permittee is allowed to install replacement equipment or additional equipment that performs similar manufacturing operations as the equipment listed in this section provided that: 1.) the VOC emission limitations and all operating limits of the permit are complied with by the equipment, and 2.) the new equipment is not subject to any emission limitation or work practice requirement from IAC subrule 23.1(2), 23.1(3) or 23.1(4). Prior to the installation of new equipment that performs different manufacturing functions from the equipment listed in this section; the permittee shall submit an application to modify construction permits 05-A-612-S3 and 07-A-005-S2.

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

- 1. Maintain and operate all equipment per manufacturer requirements.
- 2. The facility will be allowed 60 days from the date of permit issuance to submit the Plan.

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: ISBJW, ISBFJ - Jet Wash Machines

Associated Equipment

Table 6 – Jet Wash Machines

Emission Point ID	Emission Unit ID	Emission Unit Description (by area and/or control equipment)	Raw Material / Fuel	Rated Capacity
ISBJW	ISBJW	First Jet Wash Machines – CE-ISBJW	Wash Fluid	0.299 gal/hr
ISBFJ	ISBFJ	Finish Jet Wash Machines – CE-ISBFJ	Wash Fluid	1.071 gal/hr

Control Equipment – Mist Eliminators

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Table 6a

Emission Point ID	Emission Unit ID	Opacity 567 IAC 23.3(2)"d"	PM (gr/dscf) 567 IAC 23.3(2)"a"	VOC (ton/yr)	HAP (ton/yr)	IDNR Construction Permit
ISBJW	ISBJW	40% ⁽¹⁾	0.1	210.0 ⁽²⁾ 5.1 ⁽³⁾		07-A-006-S2
ISBFJ	ISBFJ	40% ⁽¹⁾	0.1	210.0 ⁽²⁾ 30.6 ⁽⁴⁾	1.22 ⁽⁵⁾	07-A-007-S2

⁽¹⁾An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

⁽²⁾The VOC emission limit for all equipment at the NSK and NSK-AKS facilities that uses VOC containing material for the manufacturing, processing, and cleaning of ball bearings and ball bearing assemblies, excluding maintenance, laboratory and combustion sources.

⁽³⁾ VOC emission limit for the First Jet Wash machines for Integral Shaft Bearing operations (EP ISBJW), the First Jet Wash machines (EP SEF-1) and the Ultrasonic Wash machines (EP SEF-1).

⁽⁴⁾ VOC emission limit for the Integral Shaft Bearing Finish Jet Wash Machines (EP ISBFJ).

⁽⁵⁾ Total HAP emission limit for the Integral Shaft Bearing Finish Jet Wash Machines (EP ISBFJ).

Authority for Requirement: Iowa DNR Construction Permits listed in Table 6a

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits:

This Section is for six (6) Jet Wash machines used in the production of ball bearing assemblies (ISBJW). Emissions from the ISB Jet Wash machines will be exhausted into the plant. Operating limits for these emissions units shall be:

1. The VOC content of the wash fluid/coolant used in the First Jet Wash machines for Integral Shaft Bearing Operations shall not exceed 0.85 pound per gallon.
2. The HAP⁽¹⁾ content of the wash fluid/coolant used in the First Jet Wash machines for Integral Shaft Bearing Operations shall not exceed 0.0 pound per gallon.
3. The amount of wash fluid/coolant used in the First Jet Wash machines for Integral Shaft Bearing

Operations (EP ISBJW), the First Jet Wash machines (EP SEF-1), and the Ultrasonic Wash machines (EP SEF-1) shall not exceed 12,000 gallons in any rolling 12-month period.

4. The VOC emission rate from the equipment used to clean, process, and manufacture ball bearing assemblies at the NSK facility and from the equipment used to clean, process, and manufacture ball bearings at the NSK-AKS facility shall not exceed 210 tons in any rolling 12-month period. This limit does not apply to equipment used in maintenance activities, laboratories or to combustion equipment.

This Section is for six (6) Finish Jet Wash machines used in the production of ball bearing assemblies (ISBFJ). Emissions from the Finish Jet Wash machines will be exhausted into the plant. Operating limits for this emissions unit shall be:

1. The VOC content of the wash fluid/coolant used in these emissions units shall not exceed 6.8 pounds per gallon.
2. The total HAP ⁽¹⁾ content of the wash fluid/coolant used in these emissions units shall not exceed 0.27 pound per gallon.
3. The amount of wash fluid/coolant used in these emissions units shall not exceed 9,000 gallons in any rolling 12-month period.
4. The VOC emission rate from the equipment used to clean, process, and manufacture ball bearing assemblies at the NSK facility and from the equipment used to clean, process, and manufacture ball bearings at the NSK-AKS facility shall not exceed 210 tons in any rolling 12-month period. This limit does not apply to equipment used in maintenance activities, laboratories or to combustion equipment.

⁽¹⁾ Hazardous Air Pollutant as defined by 112(b) of the Clean Air Act.

The permittee shall maintain these monthly records by the 30th day following the end of the previous month.

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

For all Jet Wash Machines (ISBJW and ISBFJ)

1. The permittee shall maintain records on the identification, the VOC content and the HAP content of the wash fluid/coolant used in the First Jet Wash machines for Integral Shaft Bearing operations and the Integral Shaft Bearing Finish Jet Wash machines.
2. The permittee shall maintain the following monthly records:
 - a. the amount of wash fluid/coolant used in the First Jet Wash machines for Integral Shaft Bearing operations, the First Jet Wash machines, the Ultrasonic Wash machines and the Integral Shaft Bearing Finish Jet Wash machines (gallons) and;
 - b. the rolling 12-month total of the amount of wash fluid/coolant used in the First Jet Wash machines for Integral Shaft Bearing operations, the First Jet Wash machines, the Ultrasonic Wash machines and the Integral Shaft Bearing Finish Jet Wash machines (gallons).

The permittee shall maintain these monthly records by the 30th day following the end of the previous month.

3. To show compliance with 210 tons per year VOC limit, the permittee shall maintain the following monthly records:
 - a. The VOC emission rate from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies, excluding maintenance, laboratory and combustion equipment.

The VOC emission rate shall be determined by multiplying the amount of VOC containing materials used (gallons) by the VOC content of the material (lbs/gal) and dividing by 2000. For the purpose of calculating monthly emissions, the permittee may consider material added as makeup to be the same as material used. In addition, the permittee may take credit for any VOC in waste shipped off-site (e.g. used oil, G1/G2 swarf, waste carry-off in rags, and grind sludge) and VOC shipped off-site with the preservative oil applied to parts in assembly. If the permittee chooses to take credit for any VOC in waste shipped off-site or for any VOC retained in the preservative oil, the permittee shall retain records for each particular credited VOC-containing waste material. If taking credit, the permittee shall record the amount of waste and the amount of preservative oil carried off in parts that are shipped off-site. If taking credit, the permittee shall maintain a record that documents the VOC content of the waste and the preservative oil carried-off and the amount of VOC in the waste and in the preservative oil carried-off.

The credit may be subtracted from the VOC rolling total in the month in which the VOC containing waste material is shipped off-site and in the month in which the parts that contain the carried-off preservative oil are placed into storage.

- b. The VOC emission rate from all equipment at the NSK-AKS facility, 1100A North First Street that uses VOC containing material to clean, manufacture, or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.

The VOC emission rate shall be determined by multiplying the amount of VOC containing materials used (gallons) by the VOC content of the material (lbs/gal) and dividing by 2000. For the purpose of calculating monthly emissions, the permittee may consider material added as makeup to be the same as material used. In addition, the permittee may take credit for any VOC in waste shipped off-site (e.g. used oil, G1/G2 swarf, waste carry-off in rags, and grind sludge) and VOC shipped off-site with the preservative oil applied to parts in assembly. If the permittee chooses to take credit for any VOC in waste shipped off-site or for any VOC retained in the preservative oil, the permittee shall retain records for each particular credited VOC-containing waste material. If taking credit, the permittee shall record the amount of waste and the amount of preservative oil carried off in parts that are shipped off-site. If taking credit, the permittee shall maintain a record that documents the VOC content of the waste and the preservative oil carried-off and the amount of VOC in the waste and in the preservative oil carried-off.

The credit may be subtracted from the VOC rolling total in the month in which the VOC containing waste material is shipped off-site and in the month in which the parts that contain the carried-off preservative oil are placed into storage.

- c. The total VOC emission rate from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies and from all equipment at the NSK-AKS facility, 1100A North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.
- d. The rolling 12-month total of the VOC emissions from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies and from all equipment at the NSK-AKS facility, 1100A North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.

The permittee shall maintain these monthly records by the 30th day following the end of the previous month.

4. In order to take credit for the VOC shipped off-site in waste and in the preservative oil carried off in parts, the permittee shall maintain the following records:
 - a) For the VOC-containing used oil material sent off-site from the NSK facility, the permittee shall maintain monthly records on the total amount of material sent off-site, the oil content, and the VOC content of the used oil.
 - b) For the VOC-containing grinding swarf material sent off-site from the NSK facility, the permittee shall maintain an annual record of the total amount of grinding swarf sent off-site and the VOC content of the swarf.
 - c) For the VOC-containing preservative oil that is carried off with the parts shipped off site, the permittee shall maintain monthly records on the amount (gallons) and identification of each preservative oil used, the VOC content of the preservative oil and the amount of VOC carried off in the preservative oil. The amount of VOC carried off in the preservative oil shall be calculated in the following way:

$$VOC_{co} = \sum_{i=1}^n (Vol_{p,i})(VOC_{p,i})(0.6)$$

Where:

VOC_{co} = Total mass of VOC carried off in the preservative oils applied during the month in assembly, pounds.

$Vol_{p,i}$ = Total volume of preservative oil, i, used during the month, gallons.

$VOC_{p,i}$ = VOC content of preservative oil, i, pounds per gallon.

0.6 = Percentage of preservative oil carried off with parts. This is based on tests conducted by NSK on the amount of preservative oil carried off with bearing assemblies.

- d) For the VOC-containing used oil material sent off-site from the NSK-AKS facility, the permittee shall maintain bimonthly (i.e. every other month) records on the total amount of material sent off-site, the oil content, and the VOC content of the recovered oil.
5. The permittee shall submit the following reports to the Iowa DNR - Air Quality Bureau:
 - a) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full six months after the issuance of IDNR Construction Permits 07-A-006-S2 and 07-A-007-S2. This report is due 45 days after the completion of the six month period.
 - b) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full nine months after the issuance of IDNR Construction Permits 07-A-006-S2 and 07-A-007-S2. This report is due 45 days after the completion of the nine month period.
 - c) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full twelve months after the issuance of IDNR Construction Permits 07-A-006-S2 and 07-A-007-S2. This report is due 45 days after the completion of the twelve month period.
 - d) After the first twelve months after the issuance of IDNR Construction Permits 07-A-006-S2 and 07-A-007-S2, a report shall be submitted if the actual VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment

used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant exceeds 168 tons in any rolling 12-month period. The report shall be submitted no later than 45 days from the end of the month in which the emission rate exceeded 168 tons of VOC.

- e) A report that identifies any new equipment that has been installed in accordance with Section 11 of IDNR Construction Permits 07-A-006-S2 and 07-A-007-S2. This report shall be submitted on January 31 of each year and shall cover the previous calendar year. The report shall include a revised equipment list of the equipment covered by this permit and shall evaluate how the installation of any new equipment will affect VOC emissions. Based on a review of this report, the DNR may require this permit to be modified. No report is required to be submitted if the equipment list does not change.
- f) A report that identifies all exceedances of the rolling 12-month emissions limitations for VOC from Section 10 of IDNR Construction Permits 07-A-006-S2 and 07-A-007-S2. The report shall be submitted no later than 45 days from the end of the month in which the exceedance occurred. The report shall include, at a minimum, what limit was exceeded, the amount of VOC emissions, the date the exceedance occurred, and the steps that have been or will be taken to correct the exceedance.
- g) A report that identifies all exceedances of the operating limits from Section 14 of IDNR Construction Permits 07-A-006-S2 and 07-A-007-S2. The report shall be submitted no later than 45 days from the end of the month in which the exceedance occurred. The report shall include, at a minimum, what operating limit was exceeded, the value of the exceedance, the date the exceedance occurred, and the steps that have been or will be taken to correct the exceedance.

The reports required by Section 5. a) to e) shall be submitted to the Construction Permits Supervisor, Iowa DNR, Air Quality Bureau. Other reports shall be submitted in accordance with Section 8 of IDNR Construction Permits 07-A-006-S2 and 07-A-007-S2.

Authority for Requirement: Iowa DNR Construction Permits 07-A-006-S2 and 07-A-007-S2

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): *

Stack Opening, (inches, dia.): *

Exhaust Flow Rate (scfm): *

Exhaust Temperature (°F): *

Discharge Style: *

Authority for Requirement: Iowa DNR Construction Permits 07-A-006-S2 and 07-A-007-S2

*The ISBO Jet Wash and Finish Jet Wash machines exhaust inside the plant.

The permittee shall maintain an up-to-date list of all the equipment covered by this permit. The permittee is allowed to install replacement equipment or additional equipment that performs similar manufacturing operations as the equipment listed in this section provided that: 1.) the VOC emission limitations and all operating limits of the permit are complied with by the equipment, and 2.) the new equipment is not subject to any emission limitation or work practice requirement from IAC subrule 23.1(2), 23.1(3) or 23.1(4). Prior to the installation of new equipment that performs different manufacturing functions from the equipment listed in this section; the permittee shall submit an application to modify construction permits 07-A-006-S2 and 07-A-007-S2.

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

- 1. Maintain and operate all equipment per manufacturer requirements.
- 2. The facility will be allowed 60 days from the date of permit issuance to submit the Plan.

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: RP - Rust Preventative Application

Associated Equipment

Associated Emission Unit ID Number: RP
Emissions Control Equipment ID Number: none

Emission Unit vented through this Emission Point: RP
Emission Unit Description: Rust Preventative Application
Raw Material/Fuel: Various Rust Preventatives
Rated Capacity: 2.495 gallons/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40% ⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 09-A-142-S1
567 IAC 23.3(2)"d"

⁽¹⁾An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 09-A-142-S1
567 IAC 23.3(2)"a"

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 210.0 tons/yr ⁽²⁾, 36.6 tons/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 09-A-142-S1

⁽²⁾The VOC emission limit for all equipment at the NSK and NSK-AKS facilities that uses VOC containing material for the manufacturing, processing, and cleaning of ball bearings and ball bearing assemblies, excluding maintenance, laboratory and combustion sources.

⁽³⁾VOC emission limits for rust preventative application at the NSK facility, heat treat and assembly.

Pollutant: Total Hazardous Air Pollutants (HAP)

Emission Limit(s): 0.30 tons/yr ⁽⁴⁾

Authority for Requirement: Iowa DNR Construction Permit 09-A-142-S1

⁽⁴⁾Total HAP emission limits for rust preventative application at the NSK facility, heat treat and assembly.

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits:

- 1. The preservative oils used at the NSK facility, heat treat and assembly, shall not exceed the following usage and VOC content limits:

Material ⁽¹⁾	Usage limit – rolling 12 month period	VOC content limit – lbs/gal
Yumax P 307 NBF or equivalent	8,030 gallons	5.31
Yuma P 307 BF or equivalent	5,060 gallons	4.2
Yuma S-300 or equivalent	660 gallons	7.2
Yuma P-605 or equivalent	440 gallons	1.0
Castrol Rustillo or equivalent	220 gallons	6.3
Velocite 6 or equivalent	2,200 gallons	0.75
Yuma P-914 or equivalent	440 gallons	2.6
Rust Veto Heavy or equivalent	440 gallons	0.05

⁽¹⁾ An equivalent preservative oil shall be a preservative oil that performs the same function as the preservative oil that it replaces. Prior to using an equivalent preservative oil, the permittee shall submit a written notification to the Iowa DNR, Air Quality Bureau on the identification of the new preservative oil and the VOC content. The construction permit is not required to be modified unless the new preservative oil has a higher VOC content than what is allowed by the permit. Prior to using a new VOC-containing preservative oil in heat treat or assembly that is applied in a new manner or in a new machine, the permittee shall apply to modify this permit.

- 2. The total HAP content of Yumax P-307 BF or its equivalent shall not exceed 0.12 lb/gallon. The other preservative oils used in assembly shall not contain any HAPs (*Hazardous Air Pollutant as defined by 112(b) of the Clean Air Act*).
- 3. The VOC emission rate from the equipment used to clean, process, and manufacture ball bearing assemblies at the NSK facility and from the equipment used to clean, process and manufacture ball bearings at the NSK-AKS facility shall not exceed 210 tons in any rolling 12-month period. This limit does not apply to equipment used in maintenance activities, laboratories or to combustion equipment.

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

- 1. The permittee shall maintain records on the identification, the VOC content and the HAP content of the preservative oils that are used at the NSK facility, heat treat and assembly.
- 2. The permittee shall maintain the following monthly records:
 - a. The amount of each preservative oil used; and
 - b. The rolling 12-month total of the amount of each preservative oil used.

The permittee shall maintain these monthly records by the 30th day following the end of the previous month.

- 3. To show compliance with the 210 tons per year VOC limit, the permittee shall maintain the following monthly records:
 - a. The VOC emission rate from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies, excluding maintenance, laboratory and combustion equipment.

The VOC emission rate shall be determined by multiplying the amount of VOC containing materials used (gallons) by the VOC content of the material (lbs/gal) and dividing by 2000. For the purpose of calculating monthly emissions, the permittee may consider material added as makeup to be the same as material used. In addition, the permittee may take credit for any VOC in waste shipped off-site (e.g. used oil, G1/G2 swarf, waste carry-off in rags, and grind sludge) and VOC shipped off-site with the preservative oil applied to parts in assembly. If the permittee chooses to take credit for any VOC in waste shipped off-site or for any VOC retained in the preservative oil, the permittee shall retain records for each particular credited VOC-containing waste material. If taking credit, the permittee shall record the amount of waste and the amount of preservative oil carried off in parts that are shipped off-site. If taking credit, the permittee shall maintain a record that documents the VOC content of the waste and the preservative oil carried-off and the amount of VOC in the waste and in the preservative oil carried-off.

The credit may be subtracted from the VOC rolling total in the month in which the VOC containing waste material is shipped off-site and in the month in which the parts that contain the carried-off preservative oil are placed into storage.

- b. The VOC emission rate from all equipment at the NSK-AKS facility, 1100A North First Street that uses VOC containing material to clean, manufacture, or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.

The VOC emission rate shall be determined by multiplying the amount of VOC containing materials used (gallons) by the VOC content of the material (lbs/gal) and dividing by 2000. For the purpose of calculating monthly emissions, the permittee may consider material added as makeup to be the same as material used. In addition, the permittee may take credit for any VOC in waste shipped off-site (e.g. used oil, G1/G2 swarf, waste carry-off in rags, and grind sludge) and VOC shipped off-site with the preservative oil applied to parts in assembly. If the permittee chooses to take credit for any VOC in waste shipped off-site or for any VOC retained in the preservative oil, the permittee shall retain records for each particular credited VOC-containing waste material. If taking credit, the permittee shall record the amount of waste and the amount of preservative oil carried off in parts that are shipped off-site. If taking credit, the permittee shall maintain a record that documents the VOC content of the waste and the preservative oil carried-off and the amount of VOC in the waste and in the preservative oil carried-off.

The credit may be subtracted from the VOC rolling total in the month in which the VOC containing waste material is shipped off-site and in the month in which the parts that contain the carried-off preservative oil are placed into storage.

- c. The total VOC emission rate from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies and from all equipment at the NSK-AKS facility, 1100A North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.
- d. The rolling 12-month total of the VOC emissions from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies and from all equipment at the NSK-AKS facility, 1100A North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.

The permittee shall maintain these monthly records by the 30th day following the end of the previous month.

4. In order to take credit for the VOC shipped off-site in waste and in the preservative oil carried off in parts, the permittee shall maintain the following records:
 - a) For the VOC-containing used oil material sent off-site from the NSK facility, the permittee shall maintain monthly records on the total amount of material sent off-site, the oil content, and the VOC content of the used oil.
 - b) For the VOC-containing grinding swarf material sent off-site from the NSK facility, the permittee shall maintain an annual record of the total amount of grinding swarf sent off-site and the VOC content of the swarf.
 - c) For the VOC-containing preservative oil that is carried off with the parts shipped off site, the permittee shall maintain monthly records on the amount (gallons) and identification of each preservative oil used, the VOC content of the preservative oil and the amount of VOC carried off in the preservative oil. The amount of VOC carried off in the preservative oil shall be calculated in the following way:

$$VOC_{co} = \sum_{i=1}^n (Vol_{p,i})(VOC_{p,i})(0.6)$$

Where:

VOC_{co} = Total mass of VOC carried off in the preservative oils applied during the month in assembly, pounds.

$Vol_{p,i}$ = Total volume of preservative oil, i, used during the month, gallons.

$VOC_{p,i}$ = VOC content of preservative oil, i, pounds per gallon.

0.6 = Percentage of preservative oil carried off with parts. This is based on tests conducted by NSK on the amount of preservative oil carried off with bearing assemblies.

- d) For the VOC-containing used oil material sent off-site from the NSK-AKS facility, the permittee shall maintain bimonthly (i.e. every other month) records on the total amount of material sent off-site, the oil content, and the VOC content of the recovered oil.
5. The permittee shall submit the following reports to the Iowa DNR - Air Quality Bureau:
 - a) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full six months after the issuance of IDNR Construction Permit 09-A-142-S1. This report is due 45 days after the completion of the six month period.
 - b) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full nine months after the issuance of IDNR Construction Permit 09-A-142-S1. This report is due 45 days after the completion of the nine month period.
 - c) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full twelve months after the issuance of IDNR Construction Permit 09-A-142-S1. This report is due 45 days after the completion of the twelve month period.
 - d) After the first twelve months after the issuance of IDNR Construction Permit 09-A-142-S1, a report shall be submitted if the actual VOC emissions from the equipment used to clean, manufacture and

otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant exceeds 168 tons in any rolling 12-month period. The report shall be submitted no later than 45 days from the end of the month in which the emission rate exceeded 168 tons of VOC.

- e) A report that identifies all exceedances of the rolling 12-month emissions limitations for VOC from Section 10 of IDNR Construction Permit 09-A-142-S1. The report shall be submitted no later than 45 days from the end of the month in which the exceedance occurred. The report shall include, at a minimum, what limit was exceeded, the amount of VOC emissions, the date the exceedance occurred, and the steps that have been or will be taken to correct the exceedance.
- f) A report that identifies all exceedances of the operating limits from Section 14 of IDNR Construction Permit 09-A-142-S1. The report shall be submitted no later than 45 days from the end of the month in which the exceedance occurred. The report shall include, at a minimum, what operating limit was exceeded, the value of the exceedance, the date the exceedance occurred, and the steps that have been or will be taken to correct the exceedance.

The reports required by Section 5. a) to d) shall be submitted to the Construction Permits Supervisor, Iowa DNR, Air Quality Bureau. Other reports shall be submitted in accordance with Section 8 of IDNR Construction Permit 09-A-142-S1.

Authority for Requirement: Iowa DNR Construction Permit 09-A-142-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): *

Stack Opening, (inches, dia.): *

Exhaust Flow Rate (scfm): *

Exhaust Temperature (°F): *

Discharge Style: *

Authority for Requirement: Iowa DNR Construction Permit 09-A-142-S1

*Equipment vents inside.

The permittee shall maintain an up-to-date list of all the equipment covered by this permit. The permittee is allowed to install replacement equipment or additional equipment that performs similar manufacturing operations as the equipment listed in this section provided that: 1.) the VOC emission limitations and all operating limits of the permit are complied with by the equipment, and 2.) the new equipment is not subject to any emission limitation or work practice requirement from IAC subrule 23.1(2), 23.1(3) or 23.1(4). Prior to the installation of new equipment that performs different manufacturing functions from the equipment listed in this section; the permittee shall submit an application to modify construction permit 09-A-142-S1.

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: NSK Backup Generators

Associated Equipment

Emission Point ID	Emission Unit ID	Emission Unit Description	Raw Material / Fuel	Rated Capacity
NSK Generator (B)	NSK Generator (B)	NSK Backup Generator (Boiler Room)	Natural Gas	0.34 MMBtu/hr
NSK Generator (S)	NSK Generator (S)	NSK Backup Generator (Switchgear Room)	Natural Gas	0.085 MMBtu/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40%

Authority for Requirement: 567 IAC 23.3(2)"d

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: 567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)

Emission Limit(s): 500 ppmv

Authority for Requirement: 567 IAC 23.3(3)

NESHAP

40 CFR Part 63 Subpart ZZZZ: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

This facility has equipment of the source category affected by the following federal regulation: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE NESHAP) [40 CFR Part 63 Subpart ZZZZ].

Authority for Requirement: 40 CFR Part 63 Subpart ZZZZ

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: BBPO - AKS Ball Bearing Production

Associated Equipment

Table 7 – AKS Ball Bearing Production

Emission Point ID	Emission Unit ID	Emission Unit Description	Raw Material / Fuel	Rated Capacity
BBPO	BBPO	Heading Machines – CE Smog Hog SG-2WH	No fluid used in process	NA
		Flashing Machines	Additive to Kill Bacteria	0.128 gal/hr
		Heat Treat Ovens w/Quench Oil – CE-A3000	Quench Oil	0.116 gal/hr
		Grind Machines	Cutting Oil	0.535 gal/hr
		L1 – Rough Lapping Machines	Cutting Oil	0.433 gal/hr
		Interprocess Washers	Wash Fluid	1.141 gal/hr
		L2 – Final Lapping Machines	Cutting Oil	1.076 gal/hr
		Visual Inspection Machines – Wash Application	Wash Fluid	0.126 gal/hr
		Visual Inspection Machines – RP Application	Rust Preventative	0.114 gal/hr
		Pack Flow Coater Machines	Coatings	0.062 gal/hr

Control Equipment – Mist Eliminators

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity

Emission Limit(s): 40% ⁽¹⁾

Authority for Requirement: Iowa DNR Construction Permit 09-A-141-S1
567 IAC 23.3(2)"d"

⁽¹⁾ An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter (PM)

Emission Limit(s): 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 09-A-141-S1
567 IAC 23.3(2)"a"

Pollutant: Volatile Organic Compounds (VOC)

Emission Limit(s): 210.0 tons/yr ⁽²⁾, 50.0 tons/yr ⁽³⁾

Authority for Requirement: Iowa DNR Construction Permit 09-A-141-S1

⁽²⁾ The VOC emission limit for all equipment at the NSK and NSK-AKS facilities that uses VOC containing material for the manufacturing, processing, and cleaning of ball bearings and ball bearing assemblies, excluding maintenance, laboratory and combustion sources.

⁽³⁾ VOC emission limit for the ball bearing processing equipment at NSK-AKS.

Pollutant: Total Hazardous Air Pollutants (HAP)

Emission Limit(s): 0.20 tons/yr ⁽⁴⁾

Authority for Requirement: Iowa DNR Construction Permit 09-A-141-S1

⁽⁴⁾ Total HAP emission limit for the ball bearing processing equipment at NSK-AKS

Operational Limits & Requirements

The owner/operator of this equipment shall comply with the operational limits and requirements listed below.

Operating Limits:

1. The VOC emission rate from the equipment used to clean, process, and manufacture ball bearings at the NSK-AKS plant shall not exceed 50 tons in any rolling 12-month period. This limit does not apply to equipment used in maintenance activities, laboratories or to combustion equipment.
2. The VOC emission rate from the equipment used to clean, process, and manufacture ball bearing assemblies at the NSK facility and from the equipment used to clean, process, and manufacture ball bearings at the NSK-AKS facility shall not exceed 210 tons in any rolling 12-month period. This limit does not apply to equipment used in maintenance activities, laboratories or to combustion equipment.

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

1. The permittee shall maintain records on the identification, the VOC content and the HAP content of the oils, solvents, wash fluids and coolants used to manufacture ball bearings at the NSK-AKS plant.
 - a) The permittee shall maintain a monthly record of total HAP emissions from the ball bearing production operation at the NSK-AKS plant. Records shall show the rolling 12-month total of emissions.

The permittee shall maintain these monthly records by the 30th day following the end of the previous month.

2. To show compliance with 50 tons per year VOC limit, the permittee shall maintain the following monthly records:
 - a) The VOC emission rate from all equipment at the NSK-AKS facility, 1100A North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearings. The equipment shall include, but not be limited to: flow coaters, quench oil tanks, grinding machines, rough lapping machines, final lapping machines, process tanks, cold forming machines, interprocess washers and inspection machines.

The VOC emission rate shall be determined by multiplying the amount of VOC containing materials used (gallons) by the VOC content of the material (lbs/gal) and dividing by 2000. For the purpose of calculating monthly emissions, the permittee may consider material added as makeup to be the same as material used. In addition, the permittee may take credit for any VOC in waste shipped off-site (e.g. used oil, G1/G2 swarf, waste carry-off in rags, and grind sludge) and VOC shipped off-site with the preservative oil applied to parts in assembly. If the permittee chooses to take credit for any VOC in waste shipped off-site or for any VOC retained in the preservative oil, the permittee shall retain records for each particular credited VOC. If taking credit, the permittee shall record the amount of waste and the amount of preservative oil carried off in parts that are

shipped off-site. If taking credit, the permittee shall maintain a record that documents the VOC content of the waste and the preservative oil carried-off and the amount of VOC in the waste and in the preservative oil carried-off.

The credit may be subtracted from the VOC rolling total in the month in which the VOC containing waste material is shipped off-site and in the month in which the parts that contain the carried-off preservative oil are placed into storage.

- b) The rolling 12-month total of the VOC emissions from all equipment at the NSK-AKS facility, 1100A North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.

The permittee shall maintain these monthly records by the 30th day following the end of the previous month.

- 3. To show compliance with the 210 tons per year VOC limit, the permittee shall maintain the following monthly records:

- a) The VOC emission rate from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies, excluding maintenance, laboratory and combustion equipment.

The VOC emission rate shall be determined by multiplying the amount of VOC containing materials used (gallons) by the VOC content of the material (lbs/gal) and dividing by 2000. For the purpose of calculating monthly emissions, the permittee may consider material added as makeup to be the same as material used. In addition, the permittee may take credit for any VOC in waste shipped off-site (e.g. used oil, G1/G2 swarf, waste carry-off in rags, and grind sludge) and VOC shipped off-site with the preservative oil applied to parts in assembly. If the permittee chooses to take credit for any VOC in waste shipped off-site or for any VOC retained in the preservative oil, the permittee shall retain records for each particular credited VOC-containing waste material. If taking credit, the permittee shall record the amount of waste and the amount of preservative oil carried off in parts that are shipped off-site. If taking credit, the permittee shall maintain a record that documents the VOC content of the waste and the preservative oil carried-off and the amount of VOC in the waste and in the preservative oil carried off.

The credit may be subtracted from the VOC rolling total in the month in which the VOC containing waste material is shipped off-site and in the month in which the parts that contain the carried-off preservative oil are placed into storage.

- b) The VOC emission rate from all equipment at the NSK-AKS facility, 1100A North First Street that uses VOC containing material to clean, manufacture, or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.

The VOC emission rate shall be determined by multiplying the amount of VOC containing materials used (gallons) by the VOC content of the material (lbs/gal) and dividing by 2000. For the purpose of calculating monthly emissions, the permittee may consider material added as makeup to be the same as material used. In addition, the permittee may take credit for any VOC in waste shipped off-site (e.g. used oil, G1/G2 swarf, waste carry-off in rags, and grind sludge) and VOC shipped off-site with the preservative oil applied to parts in assembly. If the permittee chooses to take credit for any VOC in waste shipped off-site or for any VOC retained in the preservative oil, the permittee shall retain records for each particular credited VOC-containing waste material. If taking credit, the permittee shall record the amount of waste and the amount of preservative oil carried off in parts that are shipped off-site. If taking credit, the permittee shall maintain a record

that documents the VOC content of the waste and the preservative oil carried-off and the amount of VOC in the waste and in the preservative oil carried-off.

The credit may be subtracted from the VOC rolling total in the month in which the VOC containing waste material is shipped off-site and in the month in which the parts that contain the carried-off preservative oil are placed into storage.

- c) The total VOC emission rate from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies and from all equipment at the NSK-AKS facility, 1100A North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.
- d) The rolling 12-month total of the VOC emissions from all equipment at the NSK facility, 1100 North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearing assemblies and from all equipment at the NSK-AKS facility, 1100A North First Street, that uses VOC containing material to clean, manufacture or otherwise process ball bearings, excluding maintenance, laboratory and combustion equipment.

The permittee shall maintain these monthly records by the 30th day following the end of the previous month.

- 4. In order to take credit for the VOC shipped off-site in waste and in the preservative oil carried off in parts, the permittee shall maintain the following records:
 - a) For the VOC-containing used oil material sent off-site from the NSK facility, the permittee shall maintain monthly records on the total amount of material sent off-site, the oil content, and the VOC content of the used oil.
 - b) For the VOC-containing grinding swarf material sent off-site from the NSK facility, the permittee shall maintain an annual record of the total amount of grinding swarf sent off-site and the VOC content of the swarf.
 - c) For the VOC-containing preservative oil that is carried off with the parts shipped off site, the permittee shall maintain monthly records on the amount (gallons) and identification of each preservative oil used, the VOC content of the preservative oil and the amount of VOC carried off in the preservative oil. The amount of VOC carried off in the preservative oil shall be calculated in the follow way:

$$VOC_{co} = \sum_{i=1}^n (Vol_{p,i})(VOC_{p,i})(0.6)$$

Where:

VOC_{co} = Total mass of VOC carried off in the preservative oils applied during the month in assembly, pounds.

$Vol_{p,i}$ = Total volume of preservative oil, i, used during the month, gallons.

$VOC_{p,i}$ = VOC content of preservative oil, i, pounds per gallon.

0.6 = Percentage of preservative oil carried off with parts. This is based on tests conducted by NSK on the amount of preservative oil carried off with bearing assemblies.

- d) For the VOC-containing used oil material sent off-site from the NSK-AKS facility, the permittee shall maintain bimonthly (i.e. every other month) records on the total amount of material sent off-site, the oil content, and the VOC content of the recovered oil.

5. The permittee shall submit the following reports to the Iowa DNR - Air Quality Bureau:
- a) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full six months after the issuance of IDNR Construction Permit 09-A-141-S1. This report is due 45 days after the completion of the six month period.
 - b) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full nine months after the issuance of IDNR Construction Permit 09-A-141-S1. This report is due 45 days after the completion of the nine month period.
 - c) A report showing the monthly VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant for the first full twelve months after the issuance of IDNR Construction Permit 09-A-141-S1. This report is due 45 days after the completion of the twelve month period.
 - d) After the first twelve months after the issuance of IDNR Construction Permit 09-A-141-S1, a report shall be submitted if the actual VOC emissions from the equipment used to clean, manufacture and otherwise process ball bearing assemblies at the NSK plant and from the equipment used to clean, manufacture and otherwise process ball bearings at the NSK-AKS plant exceeds 168 tons in any rolling 12-month period. The report shall be submitted no later than 45 days from the end of the month in which the emission rate exceeded 168 tons of VOC.
 - e) A report that identifies any new equipment that has been installed in accordance with Section 11 of IDNR Construction Permit 09-A-141-S1. This report shall be submitted on January 31 of each year and shall cover the previous calendar year. The report shall include a revised equipment list of the equipment covered by this permit and shall evaluate how the installation of any new equipment will affect VOC emissions. Based on a review of this report, the DNR may require this permit to be modified. No report is required to be submitted if the equipment list does not change.
 - f) A report that identifies all exceedances of the rolling 12-month emissions limitations for VOC from Section 10 of IDNR Construction Permit 09-A-141-S1. The report shall be submitted no later than 45 days from the end of the month in which the exceedance occurred. The report shall include, at a minimum, what limit was exceeded, the amount of VOC emissions, the date the exceedance occurred, and the steps that have been or will be taken to correct the exceedance.
 - g) A report that identifies all exceedances of the operating limits from Section 14 of IDNR Construction Permit 09-A-141-S1. The report shall be submitted no later than 45 days from the end of the month in which the exceedance occurred. The report shall include, at a minimum, what operating limit was exceeded, the value of the exceedance, the date the exceedance occurred, and the steps that have been or will be taken to correct the exceedance.

The reports required by Section 5. a) to e) shall be submitted to the Construction Permits Supervisor, Iowa DNR, Air Quality Bureau. Other reports shall be submitted in accordance with Section 8 of IDNR Construction Permit 09-A-141-S1.

Authority for Requirement: Iowa DNR Construction Permit 09-A-141-S1

Emission Point Characteristics

The emission point shall conform to the specifications listed below.

Stack Height, (ft, from the ground): *

Stack Opening, (inches, dia.): *

Exhaust Flow Rate scfm): *

Exhaust Temperature (°F): *

Discharge Style: *

Authority for Requirement: Iowa DNR Construction Permit 09-A-141-S1

*Equipment vents inside the plant

The permittee shall maintain an up-to-date list of all the equipment covered by this permit. The permittee is allowed to install replacement equipment or additional equipment that performs similar manufacturing operations as the equipment listed in this section provided that: 1.) the VOC emission limitations and all operating limits of the permit are complied with by the equipment, and 2.) the new equipment is not subject to any emission limitation or work practice requirement from IAC subrule 23.1(2), 23.1(3) or 23.1(4). Prior to the installation of new equipment that performs different manufacturing functions from the equipment listed in this section; the permittee shall submit an application to modify construction permit 09-A-141-S1.

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

- 1. Maintain and operate all equipment per manufacturer requirements
- 2. The facility will be allowed 60 days from the date of permit issuance to submit the Plan.

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

Emission Point ID Number: AKS Generator

Associated Equipment

Associated Emission Unit ID Number: AKS Generator
Emissions Control Equipment ID Number: none

Emission Unit vented through this Emission Point: AKS Generator
Emission Unit Description: AKS Backup Generator
Raw Material/Fuel: Natural Gas
Rated Capacity: 0.017 MMBtu/hr

Applicable Requirements

Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)

The emissions from this emission point shall not exceed the levels specified below.

Pollutant: Opacity
Emission Limit(s): 40%
Authority for Requirement: 567 IAC 23.3(2)"d

Pollutant: Particulate Matter (PM)
Emission Limit(s): 0.1 gr/dscf
Authority for Requirement: 567 IAC 23.3(2)"a"

Pollutant: Sulfur Dioxide (SO₂)
Emission Limit(s): 500 ppmv
Authority for Requirement: 567 IAC 23.3(3)

NESHAP

40 CFR Part 63 Subpart ZZZZ: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

This facility has equipment of the source category affected by the following federal regulation: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE NESHAP) [40 CFR Part 63 Subpart ZZZZ].

Authority for Requirement: 40 CFR Part 63 Subpart ZZZZ

Monitoring Requirements

The owner/operator of this equipment shall comply with the monitoring requirements listed below.

Agency Approved Operation & Maintenance Plan Required? Yes No

Facility Maintained Operation & Maintenance Plan Required? Yes No

Compliance Assurance Monitoring (CAM) Plan Required? Yes No

Authority for Requirement: 567 IAC 22.108(3)

IV. General Conditions

This permit is issued under the authority of the Iowa Code subsection 455B.133(8) and in accordance with 567 Iowa Administrative Code chapter 22.

G1. Duty to Comply

1. The permittee must comply with all conditions of the Title V permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. 567 IAC 22.108(9)"a"
2. Any compliance schedule shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based. 567 IAC 22.105 (2)"h"(3)
3. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be enforceable by the administrator and are incorporated into this permit. 567 IAC 22.108 (1)"b"
4. Unless specified as either "state enforceable only" or "local program enforceable only", all terms and conditions in the permit, including provisions to limit a source's potential to emit, are enforceable by the administrator and citizens under the Act. 567 IAC 22.108 (14)
5. It shall not be a defense for a permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. 567 IAC 22.108 (9)"b"
6. For applicable requirements with which the permittee is in compliance, the permittee shall continue to comply with such requirements. For applicable requirements that will become effective during the permit term, the permittee shall meet such requirements on a timely basis. 567 IAC 22.108(15)"c"

G2. Permit Expiration

1. Except as provided in rule 567—22.104(455B), permit expiration terminates a source's right to operate unless a timely and complete application for renewal has been submitted in accordance with rule 567—22.105(455B). 567 IAC 22.116(2)
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall submit on forms or electronic format specified by the Department to the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, 7900 Hickman Rd, Suite #1, Windsor Heights, Iowa 50324, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to EPA Region VII, Attention: Chief of Air Permits, 11201 Renner Blvd., Lenexa, KS 66219. Additional copies to local programs or EPA are not required for application materials submitted through the electronic format specified by the Department. The application must include all emission points, emission units, air pollution control equipment, and monitoring devices at the facility. All emissions generating activities, including fugitive emissions, must be included. The definition of a complete application is as indicated in 567 IAC 22.105(2). 567 IAC 22.105

G3. Certification Requirement for Title V Related Documents

Any application, report, compliance certification or other document submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. All certifications shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. 567 IAC 22.107 (4)

G4. Annual Compliance Certification

By March 31 of each year, the permittee shall submit compliance certifications for the previous calendar year. The certifications shall include descriptions of means to monitor the compliance

status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the identification of each term or condition of the permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with all applicable department rules. For sources determined not to be in compliance at the time of compliance certification, a compliance schedule shall be submitted which provides for periodic progress reports, dates for achieving activities, milestones, and an explanation of why any dates were missed and preventive or corrective measures. The compliance certification shall be submitted to the administrator, director, and the appropriate DNR Field office. 567 IAC 22.108 (15)"e"

G5. Semi-Annual Monitoring Report

By March 31 and September 30 of each year, the permittee shall submit a report of any monitoring required under this permit for the 6 month periods of July 1 to December 31 and January 1 to June 30, respectively. All instances of deviations from permit requirements must be clearly identified in these reports, and the report must be signed by a responsible official, consistent with 567 IAC 22.107(4). The semi-annual monitoring report shall be submitted to the director and the appropriate DNR Field office. 567 IAC 22.108 (5)

G6. Annual Fee

1. The permittee is required under subrule 567 IAC 22.106 to pay an annual fee based on the total tons of actual emissions of each regulated air pollutant. Beginning July 1, 1996, Title V operating permit fees will be paid on July 1 of each year. The fee shall be based on emissions for the previous calendar year.

2. The fee amount shall be calculated based on the first 4,000 tons of each regulated air pollutant emitted each year. The fee to be charged per ton of pollutant will be available from the department by June 1 of each year. The Responsible Official will be advised of any change in the annual fee per ton of pollutant.

3. The following forms shall be submitted annually by March 31 documenting actual emissions for the previous calendar year.

- a. Form 1.0 "Facility Identification";
- b. Form 4.0 "Emissions unit-actual operations and emissions" for each emission unit;
- c. Form 5.0 "Title V annual emissions summary/fee"; and
- d. Part 3 "Application certification."

4. The fee shall be submitted annually by July 1. The fee shall be submitted with the following forms:

- a. Form 1.0 "Facility Identification";
- b. Form 5.0 "Title V annual emissions summary/fee";
- c. Part 3 "Application certification."

5. If there are any changes to the emission calculation form, the department shall make revised forms available to the public by January 1. If revised forms are not available by January 1, forms from the previous year may be used and the year of emissions documented changed. The department shall calculate the total statewide Title V emissions for the prior calendar year and make this information available to the public no later than April 30 of each year.

6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.

7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.

8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

G7. Inspection of Premises, Records, Equipment, Methods and Discharges

Upon presentation of proper credentials and any other documents as may be required by law, the permittee shall allow the director or the director's authorized representative to:

1. Enter upon the permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
4. Sample or monitor, at reasonable times, substances or parameters for the purpose of ensuring compliance with the permit or other applicable requirements. 567 IAC 22.108 (15)"b"

G8. Duty to Provide Information

The permittee shall furnish to the director, within a reasonable time, any information that the director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the director copies of records required to be kept by the permit, or for information claimed to be confidential, the permittee shall furnish such records directly to the administrator of EPA along with a claim of confidentiality. 567 IAC 22.108 (9)"e"

G9. General Maintenance and Repair Duties

The owner or operator of any air emission source or control equipment shall:

1. Maintain and operate the equipment or control equipment at all times in a manner consistent with good practice for minimizing emissions.
2. Remedy any cause of excess emissions in an expeditious manner.
3. Minimize the amount and duration of any excess emission to the maximum extent possible during periods of such emissions. These measures may include but not be limited to the use of clean fuels, production cutbacks, or the use of alternate process units or, in the case of utilities, purchase of electrical power until repairs are completed.
4. Schedule, at a minimum, routine maintenance of equipment or control equipment during periods of process shutdowns to the maximum extent possible. 567 IAC 24.2(1)

G10. Recordkeeping Requirements for Compliance Monitoring

1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:
 - a. The date, place and time of sampling or measurements
 - b. The date the analyses were performed.
 - c. The company or entity that performed the analyses.
 - d. The analytical techniques or methods used.
 - e. The results of such analyses; and
 - f. The operating conditions as existing at the time of sampling or measurement.
 - g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)
2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample, measurement report or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.

3. For any source which in its application identified reasonably anticipated alternative operating scenarios, the permittee shall:
 - a. Comply with all terms and conditions of this permit specific to each alternative scenario.
 - b. Maintain a log at the permitted facility of the scenario under which it is operating.
 - c. Consider the permit shield, if provided in this permit, to extend to all terms and conditions under each operating scenario. 567 IAC 22.108(4), 567 IAC 22.108(12)

G11. Evidence used in establishing that a violation has or is occurring.

Notwithstanding any other provisions of these rules, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any provisions herein.

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at a source:
 - a. A monitoring method approved for the source and incorporated in an operating permit pursuant to 567 Chapter 22;
 - b. Compliance test methods specified in 567 Chapter 25; or
 - c. Testing or monitoring methods approved for the source in a construction permit issued pursuant to 567 Chapter 22.
2. The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
 - a. Any monitoring or testing methods provided in these rules; or
 - b. Other testing, monitoring, or information gathering methods that produce information comparable to that produced by any method in subrule 21.5(1) or this subrule. 567 IAC 21.5(1)-567 IAC 21.5(2)

G12. Prevention of Accidental Release: Risk Management Plan Notification and Compliance Certification

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Act, the permittee shall notify the department of this requirement. The plan shall be filed with all appropriate authorities by the deadline specified by EPA. A certification that this risk management plan is being properly implemented shall be included in the annual compliance certification of this permit. 567 IAC 22.108(6)

G13. Hazardous Release

The permittee must report any situation involving the actual, imminent, or probable release of a hazardous substance into the atmosphere which, because of the quantity, strength and toxicity of the substance, creates an immediate or potential danger to the public health, safety or to the environment. A verbal report shall be made to the department at (515) 281-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in 567 IAC 131.2(2). 567 IAC Chapter 131-State Only

G14. Excess Emissions and Excess Emissions Reporting Requirements

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures.

Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. In the case of an electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

2. Excess Emissions Reporting

a. Oral Reporting of Excess Emissions. An incident of excess emission (other than an incident of excess emission during a period of startup, shutdown, or cleaning) shall be reported to the appropriate field office of the department within eight hours of, or at the start of the first working day following the onset of the incident. The reporting exemption for an incident of excess emission during startup, shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in 567-subrule 25.1(6). An oral report of excess emission is not required for a source with operational continuous monitoring equipment (as specified in 567-subrule 25.1(1)) if the incident of excess emission continues for less than 30 minutes and does not exceed the applicable emission standard by more than 10 percent or the applicable visible emission standard by more than 10 percent opacity. The oral report may be made in person or by telephone and shall include as a minimum the following:

- i. The identity of the equipment or source operation from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and expected duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps being taken to remedy the excess emission.
- vi. The steps being taken to limit the excess emission in the interim period.

b. Written Reporting of Excess Emissions. A written report of an incident of excess emission shall be submitted as a follow-up to all required oral reports to the department within seven days of the onset of the upset condition, and shall include as a minimum the following:

- i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.
- vi. The steps that were taken to limit the excess emission.
- vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. 567 IAC 24.1(1)-567 IAC 24.1(4)

3. Emergency Defense for Excess Emissions. For the purposes of this permit, an “emergency” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include non-compliance, to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation or operator error. An emergency constitutes an affirmative defense to an action brought for non-compliance with technology based limitations if it can be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that:

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. The facility at the time was being properly operated;
- c. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements of the permit; and
- d. The permittee submitted notice of the emergency to the director by certified mail within two working days of the time when the emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. 567 IAC 22.108(16)

G15. Permit Deviation Reporting Requirements

A deviation is any failure to meet a term, condition or applicable requirement in the permit. Reporting requirements for deviations that result in a hazardous release or excess emissions have been indicated above (see G13 and G14). Unless more frequent deviation reporting is specified in the permit, any other deviation shall be documented in the semi-annual monitoring report and the annual compliance certification (see G4 and G5). 567 IAC 22.108(5)"b"

G16. Notification Requirements for Sources That Become Subject to NSPS and NESHAP Regulations

During the term of this permit, the permittee must notify the department of any source that becomes subject to a standard or other requirement under 567-subrule 23.1(2) (standards of performance of new stationary sources) or section 111 of the Act; or 567-subrule 23.1(3) (emissions standards for hazardous air pollutants), 567-subrule 23.1(4) (emission standards for hazardous air pollutants for source categories) or section 112 of the Act. This notification shall be submitted in writing to the department pursuant to the notification requirements in 40 CFR Section 60.7, 40 CFR Section 61.07, and/or 40 CFR Section 63.9. 567 IAC 23.1(2), 567 IAC 23.1(3), 567 IAC 23.1(4)

G17. Requirements for Making Changes to Emission Sources That Do Not Require Title V Permit Modification

1. Off Permit Changes to a Source. Pursuant to section 502(b)(10) of the CAAA, the permittee may make changes to this installation/facility without revising this permit if:

- a. The changes are not major modifications under any provision of any program required by section 110 of the Act, modifications under section 111 of the act, modifications under section 112 of the act, or major modifications as defined in 567 IAC Chapter 22.
- b. The changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions);
- c. The changes are not modifications under any provisions of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or as total emissions);
- d. The changes are not subject to any requirement under Title IV of the Act.

- e. The changes comply with all applicable requirements.
 - f. For such a change, the permitted source provides to the department and the administrator by certified mail, at least 30 days in advance of the proposed change, a written notification, including the following, which must be attached to the permit by the source, the department and the administrator:
 - i. A brief description of the change within the permitted facility,
 - ii. The date on which the change will occur,
 - iii. Any change in emission as a result of that change,
 - iv. The pollutants emitted subject to the emissions trade
 - v. If the emissions trading provisions of the state implementation plan are invoked, then Title V permit requirements with which the source shall comply; a description of how the emissions increases and decreases will comply with the terms and conditions of the Title V permit.
 - vi. A description of the trading of emissions increases and decreases for the purpose of complying with a federally enforceable emissions cap as specified in and in compliance with the Title V permit; and
 - vii. Any permit term or condition no longer applicable as a result of the change.
- 567 IAC 22.110(1)
2. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements. 567 IAC 22.110(2)
 3. Notwithstanding any other part of this rule, the director may, upon review of a notice, require a stationary source to apply for a Title V permit if the change does not meet the requirements of subrule 22.110(1). 567 IAC 22.110(3)
 4. The permit shield provided in subrule 22.108(18) shall not apply to any change made pursuant to this rule. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the state implementation plan authorizing the emissions trade. 567 IAC 22.110(4)
 5. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes, for changes that are provided for in this permit. 567 IAC 22.108(11)

G18. Duty to Modify a Title V Permit

1. Administrative Amendment.

- a. An administrative permit amendment is a permit revision that is required to do any of the following:
 - i. Correct typographical errors
 - ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;
 - iii. Require more frequent monitoring or reporting by the permittee; or
 - iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.

b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.

c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.

2. Minor Permit Modification.

a. Minor permit modification procedures may be used only for those permit modifications that do any of the following:

i. Do not violate any applicable requirements

ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit.

iii. Do not require or change a case by case determination of an emission limitation or other standard, or increment analysis.

iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act.;

v. Are not modifications under any provision of Title I of the Act; and

vi. Are not required to be processed as significant modification.

b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:

i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs.

ii. The permittee's suggested draft permit

iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of a minor permit modification procedures and a request that such procedures be used; and

iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).

c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a" to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions during this time period, existing permit term terms and conditions it seeks to modify may subject the facility to enforcement action.

3. Significant Permit Modification. Significant Title V modification procedures shall be used for applications requesting Title V permit modifications that do not qualify as minor Title V modifications or as administrative amendments. These include but are not limited to all significant changes in monitoring permit terms, every relaxation of reporting or recordkeeping permit terms, and any change in the method of measuring compliance with existing requirements. Significant

Title V modifications shall meet all requirements of 567 IAC Chapter 22, including those for applications, public participation, review by affected states, and review by the administrator, and those requirements that apply to Title V issuance and renewal. 567 IAC 22.111-567 IAC 22.113 The permittee shall submit an application for a significant permit modification not later than three months after commencing operation of the changed source unless the existing Title V permit would prohibit such construction or change in operation, in which event the operation of the changed source may not commence until the department revises the permit. 567 IAC 22.105(1)"a"(4)

G19. Duty to Obtain Construction Permits

Unless exempted under 567 IAC 22.1(2), the permittee must not construct, install, reconstruct, or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, conditional permit, or permit pursuant to 567 IAC 22.8, or permits required pursuant to 567 IAC 22.4 and 567 IAC 22.5. Such permits shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source. 567 IAC 22.1(1)

G20. Asbestos

The permittee shall comply with 567 IAC 23.1(3)"a", and 567 IAC 23.2(3)"g" when activities involve asbestos mills, surfacing of roadways, manufacturing operations, fabricating, insulating, waste disposal, spraying applications, demolition and renovation operations, training fires and controlled burning of a demolished building. 567 IAC 23.1(3)"a", and 567 IAC 23.2

G21. Open Burning

The permittee is prohibited from conducting open burning, except as may be allowed by 567 IAC 23.2. 567 IAC 23.2 except 23.2(3)"j"; 567 IAC 23.2(3)"j" - State Only

G22. Acid Rain (Title IV) Emissions Allowances

The permittee shall not exceed any allowances that it holds under Title IV of the Act or the regulations promulgated there under. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners and operators of the unit or the designated representative of the owners and operators is prohibited. Exceedences of applicable emission rates are prohibited. "Held" in this context refers to both those allowances assigned to the owners and operators by USEPA, and those allowances supplementally acquired by the owners and operators. The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. 567 IAC 22.108(7)

G23. Stratospheric Ozone and Climate Protection (Title VI) Requirements

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:

- a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.
- b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.
- c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.
- d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.

2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:

- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.

- b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.
 - c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.
 - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)
 - e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.
 - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.
3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
 4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant,
 5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. 40 CFR part 82

G24. Permit Reopenings

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. 567 IAC 22.108(9)"c"
2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.
 - a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;
 - b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to May 15, 2001.
 - c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. 567 IAC 22.108(17)"a", 567 IAC 22.108(17)"b"
3. A permit shall be reopened and revised under any of the following circumstances:
 - a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to July 21, 1992, provided

- that the reopening may be stayed pending judicial review of that determination;
- b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;
 - c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.
 - d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.
 - e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. 567 IAC 22.114(1)
4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. 567 IAC 22.114(2)

G25. Permit Shield

1. The director may expressly include in a Title V permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:
- a. Such applicable requirements are included and are specifically identified in the permit; or
 - b. The director, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.
2. A Title V permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.
3. A permit shield shall not alter or affect the following:
- a. The provisions of Section 303 of the Act (emergency orders), including the authority of the administrator under that section;
 - b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
 - c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act;
 - d. The ability of the department or the administrator to obtain information from the facility pursuant to Section 114 of the Act. 567 IAC 22.108 (18)

G26. Severability

The provisions of this permit are severable and if any provision or application of any provision is found to be invalid by this department or a court of law, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected by such finding. 567 IAC 22.108 (8)

G27. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege. 567 IAC 22.108 (9)"d"

G28. Transferability

This permit is not transferable from one source to another. If title to the facility or any part of it is transferred, an administrative amendment to the permit must be sought to determine transferability of the permit. 567 IAC 22.111 (1)"d"

G29. Disclaimer

No review has been undertaken on the engineering aspects of the equipment or control equipment other than the potential of that equipment for reducing air contaminant emissions. 567 IAC 22.3(3)"c"

G30. Notification and Reporting Requirements for Stack Tests or Monitor Certification

The permittee shall notify the department's stack test contact in writing not less than 30 days before a required test or performance evaluation of a continuous emission monitor is performed to determine compliance with applicable requirements of 567 – Chapter 23 or a permit condition. For the department to consider test results a valid demonstration of compliance with applicable rules or a permit condition, such notice shall be given. Such notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. Unless specifically waived by the department's stack test contact, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. The department may accept a testing protocol in lieu of a pretest meeting. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test contact in the form of a comprehensive report within six weeks of the completion of the testing. Compliance tests conducted pursuant to this permit shall be conducted with the source operating in a normal manner at its maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which the source shall be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the department that the source has been physically altered so that capacity cannot be exceeded, or the department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether such source is in compliance.

Stack test notifications, reports and correspondence shall be sent to:

Stack Test Review Coordinator
Iowa DNR, Air Quality Bureau
7900 Hickman Road, Suite #1
Windsor Heights, IA 50324
(515) 242-6001

Within Polk and Linn Counties, stack test notifications, reports and correspondence shall also be directed to the supervisor of the respective county air pollution program.

567 IAC 25.1(7)"a", 567 IAC 25.1(9)

G31. Prevention of Air Pollution Emergency Episodes

The permittee shall comply with the provisions of 567 IAC Chapter 26 in the prevention of excessive build-up of air contaminants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these contaminants on the health of persons. 567 IAC 26.1(1)

G32. Contacts List

The current address and phone number for reports and notifications to the EPA administrator is:

Chief of Air Permits
 EPA Region 7
 Air Permits and Compliance Branch
 11201 Renner Blvd.
 Lenexa, KS 66219
 (913) 551-7020

The current address and phone number for reports and notifications to the department or the Director is:

Chief, Air Quality Bureau
 Iowa Department of Natural Resources
 7900 Hickman Road, Suite #
 Windsor Heights, IA 50324
 (515) 242-5100

Reports or notifications to the DNR Field Offices or local programs shall be directed to the supervisor at the appropriate field office or local program. Current addresses and phone numbers are:

Field Office 1 909 West Main – Suite 4 Manchester, IA 52057 (563) 927-2640	Field Office 2 2300-15th St., SW Mason City, IA 50401 (641) 424-4073
Field Office 3 1900 N. Grand Ave. Spencer, IA 51301 (712) 262-4177	Field Office 4 1401 Sunnyside Lane Atlantic, IA 50022 (712) 243-1934
Field Office 5 401 SW 7th Street, Suite I Des Moines, IA 50309 (515) 725-0268	Field Office 6 1023 West Madison Street Washington, IA 52353-1623 (319) 653-2135
Polk County Public Works Dept. Air Quality Division 5885 NE 14th St. Des Moines, IA 50313 (515) 286-3351	Linn County Public Health Dept. Air Quality Branch 501 13th St., NW Cedar Rapids, IA 52405 (319) 892-6000

V. Appendix A: 40 CFR Part 63 NESHAP (ZZZZ)

Subpart ZZZZ – National Emission Standards for Hazardous Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)

§ 63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

This facility has equipment of the source category affected by the following federal regulation: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE NESHAP) [40 CFR Part 63 Subpart ZZZZ].

Authority for Requirement: 40 CFR Part 63 Subpart ZZZZ

Web Address:

http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=a62fcdc4dd92f953222257137522d30c&tpl=/ecfrbrowse/Title40/40cfr63e_main_02.tpl

V. Appendix B: Facility Maintained Operation & Maintenance Plans

EP	EU	DESCRIPTION	PERMIT	CONTROL
G1-G2	G1 Grind G2 Grind	First Grind Process Machines Second Grind Process Machines	09-A-139-S1	CE-TC, CE-A2000
SEF-1	SF US KEF CEF RP	Superfinish Machines Ultrasonic Washers First Jet Wash, Finish Jet Wash, Magnus Wash Degreasing Air Blow / Degreasing Centrifuge Rust Preventative	09-A-140-S1	CE-M&W Unit
SF	SF	Superfinish Machines	05-A-612-S3	CE-TC
ISBSF	ISBSF	Superfinish Machines Superfinish Machines	07-A-005-S2	A2000 A4000
ISBJW	ISBJW	First Jet Wash	07-A-006-S2	CE-ISBJW
ISBFJ	ISBFJ	Finish Jet Wash	07-A-007-S2	CE-ISBFJ
BBPO	BBPO	Heading Machines Flashing Machines Heat Treat Ovens w/Quench Oil Grind Machines L1 – Rough Lapping Machines Interprocess Washers L2 – Final Lapping Machines Visual Inspection Machines – Wash Application Visual Inspection Machines – RP Application Pack Flow Coater Machines	09-A-141-S1	CE Smog Hog SG-2 WH CE-A3000

1. The facility will be allowed 60 days from the date of permit issuance to submit Facility Maintained Operation & Maintenance Plans for the above sources