

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

BUREAU OF AIR

DIVISION of AIR POLLUTION CONTROL

PERMIT SECTION

PROJECT SUMMARY for the  
DRAFT CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT

BP Pipelines (North America), Inc. - Manhattan Station,  
Pipe Line Breakout Station  
15600 Bruns Road, Manhattan, Will County

Illinois EPA ID Number: 197811AAA

Application Number: 95090005

Application Type: Renewal Permit

Start of Public Comment Period: March 31, 2011

Close of Public Comment Period: April 30, 2011

Permit Engineer/Technical Contact: Mike Davidson, 217/782-2113

Community Relations/Comments Contact: Brad Frost, 217/782-7027

## I. INTRODUCTION

This source has applied for a renewal of the Clean Air Act Permit Program (CAAPP) operating permit. The CAAPP is the program established in Illinois for operating permits for significant stationary sources as required by Title V of the federal Clean Air Act and Section 39.5 of Illinois' Environmental Protection Act. The conditions in a CAAPP permit are enforceable by the Illinois Environmental Protection Agency (Illinois EPA), the USEPA, and the public. This document is for informational purposes only and does not shield the Permittee from enforcement actions or its responsibility to comply with applicable regulations. This document shall not constitute a defense to a violation of the Act or any rule or regulation.

A CAAPP permit contains conditions identifying the applicable state and federal air pollution control requirements that apply to a source. The permit also establishes emission limits, appropriate compliance procedures, and specific operational flexibility. The appropriate compliance procedures may include monitoring, record keeping, and reporting to show compliance with these requirements. The Permittee must carry out these procedures on an on-going basis to demonstrate that the source is operating in accordance with the requirements of the permit. Further explanations of the specific provisions of the draft CAAPP permit are contained in the attachments to this document, which also identify the various emission units at the source.

This permit renewal has several changes from the earlier version of this permit, including conditions which are revised or added based on recent construction permit activity. These include but are not limited to the following:

- Change in responsible official and operator contact;
- Incorporation of new MACT/GACT regulations (i.e., 40 CFR 63 Subparts ZZZZ and BBBBBB);
- Inclusion of the new Tank 7295 and the Title 1 limits (See Construction Permit 02050083 and Section 7.3);
- Removal of idled and demolished tanks (Tanks 6723, 6724, and 6726) from the permit;
- Moved Tank 6973 to the new Section 7.5 from Section 7.2; Note that this unit was identified as an external floating roof tank in the previous CAAPP permit, the unit has since been converted to an internal floating roof tank through the addition of a domed roof- A construction permit was not required for this unit since the addition of the roof is not considered to be a "modification" as per the definition in 35 IAC 201.102 and is exempt pursuant to 35 IAC 201.146(hhh) since there was no increase in emissions;
- Addition of fugitive emissions as a significant emission unit (Section 7.6);
- Addition of the existing 425 hp diesel fired emergency electrical generator as a significant emission unit (Section 7.7) in order to incorporate the requirements pursuant to 40 CFR 63 Subpart ZZZZ. The emission unit was not previously identified in the previously issued CAAPP permit, however pursuant to 35 IAC 201.210(a)(16), the unit would have been categorized as insignificant emission unit

since the engine is rated at between 1500 and 150 horsepower and it is an emergency or standby unit,; and

- Addition of a new diesel fired Emergency Fire Pump Engine (Section 7.8) pursuant to 40 CFR 60 Subpart IIII - Note that a construction permit was not required for this unit since it is exempt under 35 IAC 201.146(i);

II. GENERAL SOURCE DESCRIPTION

a. Nature of source

The BP Pipelines (North America), Inc. is located at 15600 Bruns Road, Manhattan. The source is a pipeline breakout station for crude oil and refined petroleum products. Materials being transferred by pipeline may be temporarily stored at the source depending on the schedule of the pipeline for shipment of material to different destinations.

b. Ambient air quality status for the area

The source is located in an area that is currently designated attainment or unclassifiable for the National Ambient Air Quality Standards for all criteria pollutants (carbon monoxide, lead, nitrogen dioxide, ozone, PM2.5, PM10, sulfur dioxide).

c. Major source status

The source requires a CAAPP permit as a major source of VOM emissions.

d. Source Emissions

The following table lists annual emissions of criteria pollutants from this source, as reported in the Annual Emission Reports sent to the Illinois EPA.

Pollutant	Annual Emissions (tons)				
	2005	2006	2007	2008	2009
CO	--	--	--	--	--
NO <sub>x</sub>	--	--	--	--	--
PM	--	--	--	--	--
SO <sub>2</sub>	--	--	--	--	--
VOM	26.53	27.65	32.39	35.32	27.87
(top HAP)	--	--	--	--	--

e. Greenhouse Gases (GHG)

Based on available data, this source is not a major source of emissions for GHG. Based upon the addition of the emergency generator and emergency fire pump engine and information submitted in the CAAAPP permit, actual annual emissions of GHG of 2999.53 tons of CO<sub>2</sub>, 0.0243 tons of N<sub>2</sub>O and 0.1217 tons of methane.

"This source is not currently subject to any "applicable requirements," as defined by Section 39.5(1) of the Act, for emissions of greenhouse gases (GHG) as defined by 40 CFR 86.1818-12(a) , as referenced by 40 CFR 52.21(b)(49)(i). There are no GHG-related requirements under the Act, Illinois' State Implementation Plan, or the CAA that apply to this facility, including terms or conditions in a construction permit addressing emissions of GHG or BACT for emissions of GHG from a major project at this facility under the PSD rules. In particular, the USEPA's Mandatory Reporting Rule for GHG emissions, 40 CFR Part 98, does not constitute an "applicable requirement" because it was adopted under the authority of Sections 114(a)(1) and 208 of the CAA. This permit also does not relieve the Permittee from the legal obligation to comply with the relevant provisions of the Mandatory Reporting Rule for this facility."

### III. NEW SOURCE REVIEW / TITLE I CONDITIONS

This draft permit contains terms and conditions that address the applicability of permit programs for new and modified sources under Title I of the Clean Air Act (CAA) and regulations promulgated thereunder, including 40 CFR 52.21, Prevention of Significant Deterioration (PSD) and 35 IAC Part 203, Major Stationary Sources Construction and Modification. Any such terms and conditions are identified within the draft permit by T1, T1R, or T1N. Any conditions established in a construction permit pursuant to Title I and not revised or deleted in this draft permit, remain in effect pursuant to Title I provisions until such time that the Illinois EPA revises or deletes them. Where the source has requested that the Illinois EPA establish new conditions or revise such conditions in a Title I permit, those conditions are consistent with the information provided in the CAAPP application and will remain in effect pursuant to Title I provisions until such time that the Illinois EPA revises or deletes them.

This draft permit would not establish any new Title I requirements or revised Title I requirements.

### IV. COMPLIANCE INFORMATION

The source has certified compliance with all applicable rules and regulations; therefore, a compliance schedule is not required for this source. In addition, the draft permit requires the source to certify its compliance status on an annual basis.

### V. PROPOSED ILLINOIS EPA ACTION / REQUEST FOR COMMENTS

It is the Illinois EPA's preliminary determination that this source's permit application meets the standards for issuance of a CAAPP permit. The Illinois EPA is therefore proposing to issue a CAAPP permit, subject to the conditions proposed in the draft permit.

Comments are requested by the Illinois EPA for the draft or proposed permit, pursuant to 35 IAC Part 252 and Sections 39.5(8) and (9) of the

Illinois Environmental Protection Act. A final decision on the draft or proposed permit will not be made until the public, affected states, and USEPA have had an opportunity to comment. The Illinois EPA is not required to accept recommendations that are not based on applicable requirements. If substantial public interest is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 IAC Part 166.

ATTACHMENT 1: Summary of Source-Wide Requirements

The following table indicates the source-wide emissions control programs and planning requirements that are applicable to this source. These programs are addressed in Sections 5 and 6 of the draft permit.

<b>Program/Plan</b>	<b>Applicable</b>
Emissions Reduction Market System (ERMS) <sup>1</sup>	Yes
Nitrogen Oxides (NOx) Trading Program	No
Acid Rain Program	No
Compliance Assurance Monitoring (CAM) Plan <sup>2</sup>	No
Fugitive Particulate Matter (PM) Operating Program	No
Risk Management Plan (RMP)	No
PM10 Contingency Measure Plan	No

1. The ERMS is a market-based program designed to reduce VOM emissions from stationary sources located in the Chicago ozone non-attainment area in order to contribute to reasonable further progress toward attainment (35 IAC Part 205). If applicable, this program is further described in Section 6.0 of the draft permit, including the Illinois EPA's determination of the source's baseline emissions and allotment of trading units under the ERMS.

Table 1 (Section 5.0 - OVERALL SOURCE CONDITIONS of the draft permit)

Applicable Rules and Requirements	
Emission Standards	<ul style="list-style-type: none"> <li>• 35 IAC 212.301 and 212.314: General fugitive particulate matter limitations;</li> <li>• 35 IAC 212.123(a): General opacity limitation</li> <li>• 35 IAC 218.585: Gasoline Volatility Standards                             <ul style="list-style-type: none"> <li>• The source is subject to the standards since it meets the criteria shown in 35 IAC 218.585(a) (i.e., the source offers for sale, supplies, offer for supply, or transport for use in Illinois, gasoline</li> </ul> </li> <li>• 40 CFR 63 Subpart BBBBBB - National Emission Standards For Hazardous Air Pollutants For Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, And Pipeline Facilities                             <ul style="list-style-type: none"> <li>• The source is an area source bulk gasoline that is not subject to the control requirements of 40 CFR part 63, subpart R - National Emission Standards For Gasoline Distribution Facilities (Bulk Gasoline Terminals And Pipeline Breakout Stations) (§§63.422, 63.423, and 63.424) or 40 CFR part 63, subpart CC - National Emission Standards For Hazardous Air Pollutants From Petroleum Refineries (§§63.646, 63.648, 63.649, and 63.650).</li> </ul> </li> </ul>
Streamlining	Not Applicable
Title I Conditions	Not Applicable

Non-applicability	<ul style="list-style-type: none"> <li>• 40 CFR 63, Subparts R - National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals) because the source is not a major source of HAPs (i.e., aggregate actual HAP emissions from the source is less than 10 tons of each individual HAP and 25 tons for all HAPs). (See also Condition 5.1.2)</li> <li>• 40 CFR 63, SUBPART EEEE-National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) because the source is not a major source of HAPs (i.e., aggregate actual HAP emissions from the source is less than 10 tons of each individual HAP and 25 tons for all HAPs). (See also Condition 5.1.2)</li> <li>• 40 CFR 61, Subpart J - National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene because the pumps, compressors, pressure relief devices, sampling connections, systems, open-ended valves or lines, valves, flanges and other connectors, product accumulator vessels and storage tanks at the source are not in benzene service as defined in 40 CFR 61.111.</li> <li>• 40 CFR 61, Subpart V - National Emission Standard for Equipment Leaks (Fugitive Emission Sources): Applicable emission units are not in volatile hazardous air pollutant service as defined in 40 CFR 61.241.</li> <li>• Chemical Accident Prevention in 40 CFR Part 68: Source does not meet the applicability threshold quantity criteria shown in 40 CFR 68.10. (See also Condition 5.5.3)</li> <li>• 35 IAC 212.302 through 212.216 &amp; 35 IAC Part 212, Subpart U: Source does not meet the applicability requirements shown in the respective sections.</li> </ul>
Periodic Monitoring (other than basic regulatory requirements)	
Testing	<ul style="list-style-type: none"> <li>• General Testing requirement: 35 IAC 201.282 and Section 4(b) of the Act</li> <li>• Gasoline Volatility Standards: 35 IAC 218.585</li> <li>• Monitoring VOL Operations: 35 IAC 218.128 - maximum true vapor pressure determination is required pursuant to the limits in Conditions 7.1.6, 7.2.6, 7.3.6(a), 7.4.6, and 7.5.6 and the information provided in the permit application.</li> </ul>
Emissions Monitoring	None
Operational Monitoring	Not Applicable
Inspections	None

Recordkeeping	<ul style="list-style-type: none"> <li>• Annual Emission Records: Condition 5.6.1, pursuant to Section 39.5(7)(b) of the Act</li> <li>• General Records for Storage Tanks: Section 39.5(7)(b) and 39.5(7)(1)(i)(A) of the Act</li> <li>• Records for Floating Roof Storage Tanks: Condition 5.6, pursuant to Section 39.5(7)(b) of the Act</li> <li>• Records for Operating Scenarios: Condition 5.11 and 39.5(7)(1)(i)(A) of the Act</li> <li>• 40 CFR 63 Subpart BBBBBB - National Emission Standards For Hazardous Air Pollutants For Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, And Pipeline Facilities</li> <li>• The Permittee shall comply with the applicable general recordkeeping requirements under 40 CFR 63 Subpart A as listed in 40 CFR 63 Subpart BBBBBB - Table 3 (40 CFR Table 3 To Subpart BBBBBB Of Part 63 -- Applicability Of General Provisions), See Appendix 8.</li> <li>• Additional requirements for the specific affected emission units are provided in Section 7.0, as applicable.</li> <li>• Gasoline Volatility Standards: 35 IAC 218.585(h)(2)</li> <li>• Records for VOM and HAP Emissions and Other Compliance Records: Condition 5.6 and 39.5(7)(1)(i)(A) of the Act</li> </ul>
Other	
Reporting	
Prompt Reporting	<ul style="list-style-type: none"> <li>• General Source-Wide Reporting Requirements: Section 39.5(7)(f)(ii)</li> </ul>
Other Reporting	<ul style="list-style-type: none"> <li>• Annual Emissions Report and ; Annual Reporting of HAP Emissions: Condition 9.7 and Section 39.5(7)(b) of the Act</li> <li>• 40 CFR 63 Subpart BBBBBB - National Emission Standards For Hazardous Air Pollutants For Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, And Pipeline Facilities <ul style="list-style-type: none"> <li>• The Permittee shall comply with the applicable general notification and reporting requirements under 40 CFR 63 Subpart A as listed in 40 CFR 63 Subpart BBBBBB - Table 3 (40 CFR Table 3 To Subpart BBBBBB Of Part 63 -- Applicability Of General Provisions), See Appendix 8.</li> <li>• Notifications [40 CFR 63.11093]</li> <li>• Reports [40 CFR 63.11095]</li> </ul> </li> </ul>

ATTACHMENT 2: Summary of Requirements for Specific Emission Units

The following tables include information on the requirements that apply to significant emission units at this source. The requirements are found in Section 7 of the draft permit, which is further divided into subsection, i.e., Section 7.1, 7.2, etc., for the different categories of units at the source. A separate table is provided for each subsection in Section 7 of the draft permit. An explanation of acronyms and abbreviations is contained in Section 2 of the draft permit.

Table 1 (Section 7.1 of the draft permit)

Emission Unit	
Name	Group 1 Storage Tanks - Existing External Floating Roof Petroleum Liquid Storage Tanks
Description	External floating roof storage tanks each equipped with a either mechanical shoe primary seal and a rim mounted secondary seal that store crude oil and a blend of crude oil and heavy naphtha. Permanent submerged loading must be used at these tanks, minimizing turbulence and evaporation of VOM during loading.
Date Constructed	1944 - 1951
Emission Control Equipment	Permanent Submerged Loading Pipe and External Floating Roof
Applicable Rules and Requirements	
Emission Standards	35 IAC 218.121, 218.122(b), 218.123(b) and 218.124.: Each tank has a capacity greater 151.42 cubic meters (approx. 40,000 gallons) and they store volatile petroleum liquid (VPL)
Streamlining	Not Applicable
Title I Conditions	Not Applicable
Non-applicability	<ul style="list-style-type: none"> <li>• 35 IAC 218.120, 218.127, 218.128, and 218.129, because the affected tank is used solely for the storage of petroleum liquids, [35 IAC 218.119(e)]</li> <li>• 35 IAC Part 218, Subpart QQ or TT: The affected tanks are subject to 35 IAC 218, Subpart B which exempts them from 35 IAC Part 218, Subpart QQ or TT. [35 IAC 218.940(a) and (b) and 218.980(a) and (b)]</li> <li>• 40 CFR Part 60, Subpart Subparts K, Ka or Kb: The affected tanks were constructed prior to the applicability dates listed in the respective subparts, i.e., the affected tanks were constructed prior to June 11, 1973, May 18, 1978, and July 23, 1984, respectively. [40 CFR 60.110(c)(2), 40 CFR 60.110a(a), and 40 CFR 60.110b(a)]</li> </ul>

Non-applicability (Continued)	<ul style="list-style-type: none"> <li>• 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources: because the affected tanks use passive control measures, which include "seals, lids, and roofs, that are not considered to be a "control device" as per the definition in 40 CFR 64.1.</li> <li>• 40 CFR 63 Subpart BBBBBB - National Emission Standards For Hazardous Air Pollutants For Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, And Pipeline Facilities, because the affected tanks do not store gasoline (See Condition 7.1.6).</li> <li>• 40 CFR 63, Subpart EEEE-National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) because the source is not a major source of HAPs (i.e., aggregate actual HAP emissions from the source is less than 10 tons of each individual HAP and 25 tons for all HAPs). (See also Condition 5.1.2)</li> </ul>
Periodic Monitoring (other than basic regulatory requirements)	
Testing	None
Emissions Monitoring	None
Operational Monitoring	None
Inspections	<ul style="list-style-type: none"> <li>• Semiannually floating roof seals inspections required to insure compliance with the applicable control and operating requirements in Condition 7.1.5(b) [35 IAC 218.123(b)(4)].</li> <li>• Cover and seals of each affected tank are required to be inspected whenever the tank is emptied for any reasons other than the transfer of liquid during the normal operation of the tank, or whenever repairs are made as a result of any semi-annual inspection or incidence of roof damage or defect required to insure compliance with the applicable control and operating requirements in Condition 7.1.5(b) [35 IAC 218.123(b)(5)].</li> <li>• Routine inspections of each affected tank's floating roof seals through roof hatches prior to May 1 of each year to insure compliance with the applicable control and operating requirements in Condition 7.1.5(c). [35 IAC 218.124(a)(5)]</li> <li>• Measurement of the secondary seal gap of each affected tank's floating roof prior to May 1 of each year and within 30 days of a written request from the Illinois EPA to insure compliance with Condition 7.1.5(c)(ii)(B). [35 IAC 218.124(a)(6)]</li> </ul>

Recordkeeping	<ul style="list-style-type: none"> <li>• Records of the results of inspections required under Conditions 7.1.8(a) and (b) [35 IAC 218.123(b)(6)]</li> <li>• Records of the types of petroleum liquid stored, the maximum true vapor pressure of the liquid as stored, the results of the inspections and the results of the secondary seal gap measurements required under Conditions 7.1.8(c) and (d) [35 IAC 218.124(a)(7)]</li> <li>• General Records [Section 39.5(7)(b) of the Act] <ul style="list-style-type: none"> <li>• Inspections and/or measurements records</li> <li>• Throughput and Emissions Records</li> <li>• Maintenance, repair, and inspection records</li> <li>• Compliance with emission limits in Conditions 5.6.1, 5.6.3 and 7.1.8.</li> </ul> </li> </ul>
Basis	<p>Periodic Monitoring is sufficient for these emission units because:</p> <p>The source has a substantial margin of compliance; and Monitoring is consistent with other sources in this source category.</p>
Reporting	
Prompt Reporting	<ul style="list-style-type: none"> <li>• 5 day reporting: Storage of VPL in an affected storage tank that is not in compliance with the control requirements (due to absence of the features) required by Condition 7.1.5:</li> <li>• 30 day report: Storage of VPL in an affected storage tank that is out of compliance with the control requirements (Condition 7.1.5) due to damage, deterioration, or other condition of the tank</li> <li>• 30 day reporting: Storage of VPL in an affected storage tank that is out of compliance with the limit on the material that may be stored (Condition 7.1.6).</li> </ul>

Table 2 (Section 7.2 of the draft permit)

Emission Unit	
Name	Group 2 Storage Tank - External Floating Roof Petroleum Liquid Storage Tank Subject to 40 CFR 60 Subpart K
Description	The Permittee operates an external floating roof storage tank equipped with a mechanical shoe primary seal and a rim mounted secondary seal that stores petroleum liquids (typically crude oil). Permanent submerged loading must be used on the tank, minimizing turbulence and evaporation of VOM during loading.
Date Constructed	8/1974
Emission Control Equipment	Permanent Submerged Loading Pipe and External Floating Roof
Applicable Rules and Requirements	
Emission Standards	<ul style="list-style-type: none"> <li>• 35 IAC 218.121(b)(1): Tanks which store volatile petroleum liquid (VPL) with a vapor pressure of 10.34 kPa (1.5 psia) or greater at 294.3°K (70°F) and have a capacity greater than 151 cubic meters (40,000 gal) are required to have a vapor loss control device in this case the source complies by having a floating roof.</li> <li>• 35 IAC 218.122(b): Tanks having a storage capacity of greater than 946 l (250 gal) are required to have a Submerged Loading Pipe</li> <li>• 40 CFR Part 60 Subpart K--Standards Of Performance For Storage Vessels For Petroleum Liquids For Which Construction, Reconstruction, Or Modification Commenced After June 11, 1973, And Prior To May 19, 1978: the storage vessel is required to be equipped with a floating roof, a vapor recovery system, or their equivalents, in this case the source complies by having a floating roof.</li> </ul>
Streamlining	Not Applicable
Title I Conditions	None

Non-applicability	<ul style="list-style-type: none"> <li>• 35 IAC 35 IAC 218.120, 218.127, 218.128, and 218.129: because the tank is used solely for the storage of petroleum liquids [35 IAC 218.119(e)].</li> <li>• 35 IAC 218.123(b): Because the affected storage tank are subject to a new source performance standards for storage vessels of petroleum liquid, See Condition 7.2.3(c)</li> <li>• 35 IAC 218.124(a): Because the affected storage tank are exempted under 35 IAC 218.123(a)(5) since the affected storage tanks are subject to a new source performance standards for storage vessels of petroleum liquid, See Condition 7.2.3(c)</li> <li>• 35 IAC Part 218, Subpart QQ or TT because it is subject to 35 IAC 218, Subpart B. [35 IAC 218.940(a) and (b) and 218.980(a) and (b)]</li> <li>• 40 CFR Part 60, Subpart Ka or Kb: Because the affected tank is subject to 40 CFR Part 60, Subpart K, See Condition 7.2.3(c)</li> <li>• 40 CFR 63 Subpart BBBB - National Emission Standards For Hazardous Air Pollutants For Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, And Pipeline Facilities: because the affected storage tank does not store gasoline (See Condition 7.2.6)</li> <li>• 40 CFR 63, Subpart EEEE-National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) because the source is not a major source of HAPs (i.e., aggregate actual HAP emissions from the source is less than 10 tons of each individual HAP and 25 tons for all HAPs).</li> <li>• 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources: Because the affected tanks use passive control measures, which include "seals, lids, and roofs, that are not considered to be a "control device" as per the definition in 40 CFR 64.1.</li> </ul>
Periodic Monitoring (other than basic regulatory requirements)	
Testing	None
Emissions Monitoring	None
Operational Monitoring	<ul style="list-style-type: none"> <li>• 40 CFR 60, Subpart K: Reid vapor pressure. [40 CFR 60.113 (b)]</li> <li>• 39.5(7)(b) and (d) of the Act: Periodic inspection of the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed and annual secondary seal gap measurements</li> <li>• Inspection of the seals and roof fittings and annual secondary seal gap measurements ensure that excess evaporative emissions are not occurring, the correct equipment is being used, and that the equipment is not deteriorating.</li> </ul>
Inspections	None

Recordkeeping	<ul style="list-style-type: none"> <li>• 40 CFR 60, Subpart K: Records of the petroleum liquid stored, the period of storage, and the maximum true vapor pressure of that liquid during the respective storage period. [40 CFR 60.113(a)] <ul style="list-style-type: none"> <li>• General Records [to Section 39.5(7)(b) of the Act]</li> <li>• Inspections and/or measurements records</li> <li>• Throughput and emissions Records with supporting documentation</li> <li>• Maintenance, repair, and inspection records</li> </ul> </li> </ul>
Basis	<p>Periodic Monitoring is sufficient for these emission units because:</p> <p>The source has a substantial margin of compliance; and Monitoring is consistent with other sources in this source category.</p>
Reporting	
Prompt Reporting	<ul style="list-style-type: none"> <li>• 5 day reporting: Storage of VPL in an affected storage tank that is not in compliance with the control requirements (due to absence of the features) required by Condition 7.2.5:</li> <li>• 30 day report: Storage of VPL in an affected storage tank that is out of compliance with the control requirements (Condition 7.2.5) due to damage, deterioration, or other condition of the tank</li> <li>• 30 day reporting: Storage of VPL in an affected storage tank that is out of compliance with the limit on the material that may be stored (Condition 7.2.6).</li> </ul>
Other Reporting	

Table 3 (Section 7.3 of the draft permit)

Emission Unit	
Name	Group 3 Storage Tank - External Floating Roof Petroleum Liquid Storage Tank Subject to 40 CFR 60 Subpart Kb
Description	The Permittee operates an external floating roof storage tank equipped with a liquid mounted primary seal and a rim mounted secondary seal that stores petroleum liquids (typically crude oil). Permanent submerged loading must be used on the tank, minimizing turbulence and evaporation of VOM during loading. The tank is subject to specific NSPS requirements.
Date Constructed	2003
Emission Control Equipment	Permanent Submerged Loading Pipe and External Floating Roof
Applicable Rules and Requirements	
Emission Standards	<ul style="list-style-type: none"> <li>• 35 IAC 218.121(b)(1): Tanks store volatile petroleum liquid (VPL) with a vapor pressure of 10.34 kPa (1.5 psia) or greater at 294.3°K (70°F) and have a capacity greater than 151 cubic meters (40,000 gal) - Floating roof required.</li> <li>• 35 IAC 218.122(b): Tanks having a storage capacity of greater than 946 l (250 gal) - Submerged Loading Pipe required</li> <li>• 40 CFR Part 60 Subpart Kb--Standards Of Performance For Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) For Which Construction, Reconstruction, Or Modification Commenced After July 23, 1984</li> </ul>
Streamlining	Not Applicable
Title I Conditions	The draft permit contains limits on operation and emissions in Condition 7.3.6. These limits were incorporated from Permit 02050083.

Non-applicability	<ul style="list-style-type: none"> <li>• 35 IAC 35 IAC 218.120, 218.127, 218.128, and 218.129: Tanks are used solely for the storage of petroleum liquids [35 IAC 218.119(e)].</li> <li>• 35 IAC 218.123(b): Because the affected storage tanks are subject to a new source performance standards for storage vessels of petroleum liquid, See Condition 7.3.3(b) [35 IAC 218.123(a)(5)]</li> <li>• 35 IAC 218.124(a): Because the affected storage tanks are exempted under 35 IAC 218.123(a)(5) since the affected storage tanks are subject to a new source performance standards for storage vessels of petroleum liquid, See Condition 7.3.3(c) [35 IAC 218.124(b)(1)]</li> <li>• 35 IAC Part 218, Subpart QQ or TT: Tanks are subject to 35 IAC 218, Subpart B and are therefore exempt. [35 IAC 218.940(a) and (b) and 218.980(a) and (b)]</li> <li>• 40 CFR Part 60, Subpart K or Ka: Because the affected tank is subject to 40 CFR Part 60, Subpart Kb, See Condition 7.3.3(c).</li> <li>• 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources: Because the affected tank uses passive control measures, which include "seals, lids, and roof, that are not considered to be a "control device" as per the definition in 40 CFR 64.1.</li> <li>• 40 CFR 63 Subpart BBBB - National Emission Standards For Hazardous Air Pollutants For Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, And Pipeline Facilities: Because the affected storage tanks do not store gasoline (See Condition 7.3.6)</li> <li>• 40 CFR 63, Subpart EEEE-National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) because the source is not a major source of HAPs (i.e., aggregate actual HAP emissions from the source is less than 10 tons of each individual HAP and 25 tons for all HAPs). (See also Condition 5.1.2)</li> </ul>
Periodic Monitoring (other than basic regulatory requirements)	
Testing	Maximum true vapor pressure [40 CFR 60.116b(e)]
Emissions Monitoring	None
Operational Monitoring	40 CFR 60, Subpart Kb: Primary and secondary seal gap areas and maximum gap widths measurements, inspection, and maintenance,...etc. [40 CFR 60.113b(b)]
Inspections	None

Recordkeeping	<ul style="list-style-type: none"> <li>• 40 CFR 60, Subpart Kb</li> <li>• Tank Dimensions [40 CFR 60.116b(e)]</li> <li>• VOL stored [40 CFR 60.116b(c)]</li> <li>• Maximum true vapor pressure [40 CFR 60.116b(e)]</li> <li>• Inspections and/or measurements [40 CFR 60.115b(b)(3)]</li> <li>• General Records [to Section 39.5(7)(b) of the Act]</li> <li>• Inspections and/or measurements records</li> <li>• Throughput and Emissions Records</li> <li>• Maintenance, repair, and inspection records</li> </ul>
Basis	<p>Periodic Monitoring is sufficient for this emission unit because:</p> <ul style="list-style-type: none"> <li>• The source has a substantial margin of compliance; and</li> <li>• Monitoring is consistent with other sources in this source category.</li> </ul>
Reporting	
Prompt Reporting	<ul style="list-style-type: none"> <li>• 5 day reporting: Storage of VPL in an affected storage tank that is not in compliance with the control requirements (due to absence of the features) required by Condition 7.2.5:</li> <li>• 30 day report: Storage of VPL in an affected storage tank that is out of compliance with the control requirements (Condition 7.2.5) due to damage, deterioration, or other condition of the tank</li> <li>• 30 day reporting: Storage of VPL in an affected storage tank that is out of compliance with the limit on the material that may be stored (Condition 7.2.6).</li> </ul>
Other Reporting	<ul style="list-style-type: none"> <li>• 40 CFR Part 60 Subpart Kb</li> <li>• 60 days: Seal Gap Measurement Report [40 CFR 60.115b(b)(2)]</li> <li>• 30 day: Report seal gap measurement that exceed the limitations specified in 40 CFR 60.113b(b)(6) and Condition 7.2.8(a)(iv). [40 CFR 60.115b(b)(4)]</li> <li>• Other notification and reporting requirement shown in Condition 7.2.8(a)(iv) through (vi). [40 CFR 60.113b(b)(4) through (6)]</li> </ul>

Table 4 (Section 7.4 of the draft permit)

Emission Unit	
Name	Group 4 Storage Tanks - Internal Floating Roof Petroleum Liquid Storage Tanks Subject to 40 CFR 60 Subpart Kb
Description	The Permittee operates five internal floating roof storage tanks each equipped with a mechanical shoe primary seal that store various petroleum products including gasoline and distillate fuel. Permanent submerged loading must be used at these tanks, minimizing turbulence and evaporation of VOM during filling.
Date Constructed	1986
Emission Control Equipment	Permanent Submerged Loading Pipe and Internal Floating Roof (Mechanical Shoe Primary Seal)
Applicable Rules and Requirements	
Emission Standards	<ul style="list-style-type: none"> <li>• 35 IAC 218.121(b)(1): Tanks store volatile petroleum liquid (VPL) with a vapor pressure of 10.34 kPa (1.5 psia) or greater at 294.3°K (70°F) and have a capacity greater than 151 cubic meters (40,000 gal) - Internal floating roof required.</li> <li>• 35 IAC 218.122(b): Tanks having a storage capacity of greater than 946 l (250 gal) - Submerged Loading Pipe required</li> <li>• 40 CFR Part 60 Subpart Kb--Standards Of Performance For Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) For Which Construction, Reconstruction, Or Modification Commenced After July 23, 1984</li> <li>• 40 CFR 63 Subpart BBBBBB - National Emission Standards For Hazardous Air Pollutants For Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, And Pipeline Facilities</li> </ul>
Streamlining	Not Applicable
Title I Conditions	Not Applicable

Non-applicability	<ul style="list-style-type: none"> <li>• 35 IAC 35 IAC 218.120, 218.127, 218.128, and 218.129: Tanks are used solely for the storage of petroleum liquids [35 IAC 218.119(e)].</li> <li>• 35 IAC 218.123(b): Because the affected tanks are subject to new source performance standards for storage vessels of petroleum liquid, 40 CFR Part 60, Subpart Kb, See Condition 7.4.3(c) [35 IAC 218.123(a)(5)]</li> <li>• 35 IAC 218.124(a): Because the affected tanks are not equipped with external floating roofs.</li> <li>• 35 IAC Part 218, Subpart QQ or TT: Tanks are subject to 35 IAC 218, Subpart B. [35 IAC 218.940(a) and (b) and 218.980(a) and (b)]</li> <li>• 40 CFR 63, Subpart EEEE–National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline): Because the source is not a major source of HAPs (i.e., aggregate actual HAP emissions from the source is less than 10 tons of each individual HAP and 25 tons for all HAPs). (See also Condition 5.1.2)</li> <li>• 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources: not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected tank uses passive control measures, which include seals, lids, or roof, that are not a “control device” as defined in 40 CFR 64.1.</li> </ul>
Periodic Monitoring (other than basic regulatory requirements)	
Testing	Maximum true vapor pressure [40 CFR 60.116b(e)]
Emissions Monitoring	None
Operational Monitoring	40 CFR 60, Subpart Kb & 40 CFR 63 Subpart BBBBBB: Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service. [40 CFR 60.113b(a) & 40 CFR 63.11092(e)(1)]
Inspections	None

Recordkeeping	<ul style="list-style-type: none"> <li>• 40 CFR 60, Subpart Kb</li> <li>• Tank Dimensions [40 CFR 60.116b(b)]</li> <li>• VOL stored [40 CFR 60.116b(c)]</li> <li>• Maximum true vapor pressure [40 CFR 60.116b(e)]</li> <li>• Inspections and/or measurements [40 CFR 60.115b(b)(2)]</li> <li>• General Records</li> <li>• Inspections and/or measurements records</li> <li>• Throughput and Emissions Records</li> <li>• Maintenance, repair, and inspection records</li> <li>• 40 CFR 63 Subpart BBBBBB</li> <li>• Records as specified in 40 CFR 60.115b if the Permittee is complying with options 2(a), 2(b), or 2(c) in Table 1 of 40 CFR 63 Subpart BBBBBB, except records shall be kept for at least 5 years. If the Permittee is complying with the requirements of option 2(d) in Table 1 of 40 CFR 63 Subpart BBBBBB, the Permittee shall keep records as specified in 40 CFR 63.1065 [40 CFR 63.11094(a)]</li> </ul>
Basis	<p>Periodic Monitoring is sufficient for these emission units because:</p> <ul style="list-style-type: none"> <li>o The source has a substantial margin of compliance; and</li> <li>o Monitoring is consistent with other sources in this source category.</li> </ul>
<b>Reporting</b>	
Prompt Reporting	<ul style="list-style-type: none"> <li>• 5 day reporting: Storage of VPL in an affected storage tank that is not in compliance with the control requirements (due to absence of the features) required by Condition 7.4.5:</li> <li>• 30 day report: Storage of VPL in an affected storage tank that is out of compliance with the control requirements (Condition 7.4.5) due to damage, deterioration, or other condition of the tank</li> <li>• 30 day reporting: Storage of VPL in an affected storage tank that is out of compliance with the limit on the material that may be stored (Condition 7.4.6).</li> </ul>

<p>Other Reporting</p>	<ul style="list-style-type: none"> <li>• 40 CFR Part 60 Subpart Kb <ul style="list-style-type: none"> <li>○ 30 day Notification: Prior to the filling or refilling of each storage vessel for which an inspection is required by Condition 7.4.8(a) and (d) and 40 CFR 60.113b(a)(1)and (a)(4) to afford the Illinois EPA the opportunity to have an observer present. [40 CFR 60.113b(a)(5)]</li> <li>○ 30 day: Report seal gap measurement that exceed the limitations specified in Condition 7.4.8(b) and 40 CFR 60.113b(a)(2). [40 CFR 60.115b(a)(3)]</li> <li>○ 30 day: Report of inspections that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in Condition 7.4.8(c)(ii) and 40 CFR 60.113b(a)(3)(ii). [40 CFR 60.115b(a)(4)]</li> </ul> </li> <li>• 40 CFR 63 Subpart BBBBBB: pursuant to Condition 5.10.4(c) and 40 CFR 63.11095(a)(1), semi-annual compliance report, with the information specified in Condition 7.4.10(b)(ii) and (iii) and 40 CFR 60.115b(a).</li> </ul>
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Table 5 (Section 7.5 of the draft permit)

<b>Emission Unit</b>	
Name	Group 5 Storage Tank - Existing Internal Floating Roof Petroleum Liquid Storage Tank
Description	A former external floating roof tank that has had a geodesic dome installed. It is now being operated as an internal floating roof storage tank and is equipped with a mechanical shoe primary seal and a rim mounted secondary seal and permanent submerged loading in order to minimize turbulence and evaporation of VOM. The tank is used to store petroleum liquids (typically crude oil).
Date Constructed	1951 Dome Installed: November 2009
Emission Control Equipment	Permanent Submerged Loading Pipe and Internal Floating Roof
<b>Applicable Rules and Requirements</b>	
Emission Standards	<ul style="list-style-type: none"> <li>• 35 IAC 218.121(b)(1): Tanks store volatile petroleum liquid (VPL) with a vapor pressure of 10.34 kPa (1.5 psia) or greater at 294.3°K (70°F) and have a capacity greater than 151 cubic meters (40,000 gal) - Internal floating roof required.</li> <li>• 35 IAC 218.122(b)(1): Tanks having a storage capacity of greater than 946 l (250 gal) - Submerged Loading Pipe required</li> <li>• 35 IAC 218.123(b): Tanks store volatile petroleum liquid (VPL) is required to be equipped with one of the vapor loss control devices specified in 35 IAC 218.121(b) - Internal floating roof required.</li> </ul>
Streamlining	Not Applicable
Title I Conditions	Not Applicable

Non-applicability	<ul style="list-style-type: none"> <li>• 35 IAC 35 IAC 218.120, 218.127, 218.128, and 218.129: Tanks are used solely for the storage of petroleum liquids [35 IAC 218.119(e)].</li> <li>• 35 IAC 218.124(a): Because the affected tank is equipped with an internal floating roof not an external floating roof.</li> <li>• 35 IAC Part 218, Subpart QQ or TT: Tanks are subject to 35 IAC 218, Subpart B. [35 IAC 218.940(a) and (b) and 218.980(a) and (b)]</li> <li>• 40 CFR Part 60, Subpart Subparts K, Ka or Kb, because the affected tank was constructed prior to the applicability dates listed in the respective subparts, i.e., the affected tank was constructed prior to June 11, 1973, May 18, 1978, and July 23, 1984, respectively Note: Installation of the geodesic dome is not considered to be a "modification" since there was no change in material stored or increase in emissions due to the addition and/or "reconstruction" since the fixed capital cost of the new domed roof did not exceed 50 percent of the fixed capital cost that would be required to construct a comparable entirely new internal floating roof tank, as per the definitions in 40 CFR 60.14 or 60.15, respectively.</li> <li>• 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources: Because the affected tank uses passive control measures, which include seals, lids, or roof, that are not a "control device" as per the definition in 40 CFR 64.1.</li> <li>• 40 CFR 63 Subpart BBBBBB - National Emission Standards For Hazardous Air Pollutants For Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, And Pipeline Facilities: Because the affected storage tank does not store gasoline (See Condition 7.5.6)</li> <li>• 40 CFR 63, Subpart EEEEE-National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline): Because the source is not a major source of HAPs (i.e., aggregate actual HAP emissions from the source is less than 10 tons of each individual HAP and 25 tons for all HAPs). (See also Condition 5.1.2)</li> </ul>
<b>Periodic Monitoring (other than basic regulatory requirements)</b>	
Testing	None
Operational Monitoring	None
Inspections	<ul style="list-style-type: none"> <li>• Semiannually floating roof seals inspections required to insure compliance with the applicable control and operating requirements [35 IAC 218.123(b)(4)].</li> <li>• Cover and seals of each affected tank are required to be inspected whenever the tank is emptied for any reasons other than the transfer of liquid during the normal operation of the tank, or whenever repairs are made as a result of any semi-annual inspection or incidence of roof damage or defect [35 IAC 218.123(b)(5)].</li> </ul>

Operational Monitoring	None
Recordkeeping	<ul style="list-style-type: none"> <li>• Inspections and/or measurements records required under Conditions 7.5.8(a) or (b) [35 IAC 218.123(b)(6)]</li> <li>• General Records [Section 39.5(7)(b) of the Act] <ul style="list-style-type: none"> <li>o Throughput and Emissions Records</li> <li>o Maintenance, repair, and inspection records</li> </ul> </li> </ul>
Basis	<p>Periodic Monitoring is sufficient for this emission unit because:</p> <ul style="list-style-type: none"> <li>o The source has a substantial margin of compliance; and</li> <li>o Monitoring is consistent with other sources in this source category.</li> </ul>
<b>Reporting</b>	
Prompt Reporting	<ul style="list-style-type: none"> <li>• 5 day reporting: Storage of VPL in an affected storage tank that is not in compliance with the control requirements (due to absence of the features) required by Condition 7.5.5:</li> <li>• 30 day report: Storage of VPL in an affected storage tank that is out of compliance with the control requirements (Condition 7.5.5) due to damage, deterioration, or other condition of the tank</li> <li>• 30 day reporting: Storage of VPL in an affected storage tank that is out of compliance with the limit on the material that may be stored (Condition 7.5.6).</li> </ul>
Other Reporting	None

Table 6 (Section 7.6 of the draft permit)

<b>Emission Unit</b>	
Name	Fugitive Emissions from Leaking Equipment Components
Description	Fugitive emissions from leaking equipment and components, i.e., each valve, pump, pressure relief device, sampling connection system, open-ended valve or line, and flange or other connector, which are generated during the processing of material through the piping distributed throughout the source. Equipment and components associated with storage tanks that are insignificant activities under Section 3 of this permit are not covered by this Section 7.6 of the permit.
Date Constructed	--
Emission Control Equipment	None
<b>Applicable Rules and Requirements</b>	
Emission Standards	<ul style="list-style-type: none"> <li>• 35 IAC 218.142: VOL from Pumps And Compressors</li> <li>• 40 CFR 63 Subpart BBBBBB - National Emission Standards For Hazardous Air Pollutants For Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, And Pipeline Facilities               <ul style="list-style-type: none"> <li>o Affected leaking equipment components in vapor or liquid gasoline service</li> </ul> </li> </ul>
Streamlining	Not Applicable
Title I Conditions	Not Applicable
Non-applicability	<ul style="list-style-type: none"> <li>• The affected leaking equipment components are not subject to the requirements of 35 IAC Part 218, Subpart QQ or TT, because the potential to emit VOM from the subject units does not exceed 25 tpy.</li> <li>• The affected leaking equipment components are not subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because they do not use an add-on control device to achieve compliance with an emission limitation or standard.</li> </ul>
<b>Periodic Monitoring (other than basic regulatory requirements)</b>	
Testing	None
Emissions Monitoring	None
Operational Monitoring	None
Inspections	<ul style="list-style-type: none"> <li>• Condition 7.6.5: Leak inspections at least once per month: Compliance with Conditions 5.6.3(c)(ii) and 7.6.3(b) and (c) [39.5(7)(b) and (d) of the Act]</li> </ul>

Recordkeeping	<ul style="list-style-type: none"> <li>• General Records: Compliance with Conditions 5.6.1, 5.6.3, 7.6.3, 7.6.4, and 7.6.5, pursuant to Section 39.5(7)(b) of the Act</li> <li>• Inspection Records: Compliance with Condition 7.6.5</li> <li>• 40 CFR 63 Subpart BBBBBB - National Emission Standards For Hazardous Air Pollutants For Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, And Pipeline Facilities</li> <li>• Applicable recordkeeping requirements specified in 40 CFR 63.11094(d) and (e)</li> </ul>
Basis	<p>Periodic Monitoring is sufficient for these emission units because:</p> <ul style="list-style-type: none"> <li>o The source has a substantial margin of compliance; and</li> <li>o Monitoring is consistent with other sources in this source category.</li> </ul>
<b>Reporting</b>	
Prompt Reporting	<ul style="list-style-type: none"> <li>• 30 days of operation in excess of the limitations of Conditions 5.6.3 and 7.6.5</li> </ul>
Other Reporting	<ul style="list-style-type: none"> <li>• 40 CFR 63 Subpart BBBBBB - National Emission Standards For Hazardous Air Pollutants For Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, And Pipeline Facilities <ul style="list-style-type: none"> <li>o Affected leaking equipment components in vapor or liquid gasoline service</li> </ul> </li> </ul>

Table 7 (Section 7.7 of the draft permit)

<b>Emission Unit</b>	
Name	RICE Engine (Subject to NESHAP - 40 CFR 63 Subpart ZZZZ)
Description	The diesel fired reciprocating internal combustion engine (RICE) is used to provide power to a stationary emergency electrical generator
Date Constructed	1982
Emission Control Equipment	None
<b>Applicable Rules and Requirements</b>	
Emission Standards	<ul style="list-style-type: none"> <li>• 35 IAC 212.123: General Opacity Requirements</li> <li>• 35 IAC 214.301: SO2 requirements (Emissions less than 2000 ppm).</li> <li>• 35 IAC 214.304: Requires that the emission unit comply with comply with the applicable Subparts B through F of 35 IAC Part 214. In this case 35 IAC 214.122(b)(2) applies, no person shall cause or allow the emission of sulfur dioxide into the atmosphere in any one hour period from any new fuel combustion source with actual heat input smaller than, or equal to, 73.2 MW (250 mmbtu/hr), burning liquid fuel exclusively to exceed 0.3 lbs/mmbtu of sulfur dioxide per MW-hr of actual heat input when distillate fuel oil is burned. Pursuant to Condition 7.7.4(f), the source is excluded from the other possible requirements shown in Subparts B through F of 35 IAC Part 214 (See below).</li> <li>• 40 CFR Part 63 Subpart ZZZZ--National Emissions Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines               <ul style="list-style-type: none"> <li>o 40 CFR 63.6590(a)(1)(iii): an existing stationary RICE located at an area source (See Condition 5.1.2) is an affected source pursuant to 40 CFR Part 63 Subpart ZZZZ, a stationary RICE is existing if construction or reconstruction commenced for the stationary RICE was before June 12, 2006, See Section 7.7.2.</li> <li>o 40 CFR 63.6595(a)(1): the Permittee must comply with the applicable emission limitations and operating limitations of 40 CFR 63 subpart ZZZZ no later than May 3, 2013</li> <li>o 40 CFR 63.6665 and Table 8 of 40 CFR 63 Subpart ZZZZ: the Permittee must comply with the General Provisions shown in 40 CFR 63 Subpart A (i.e., 40 CFR 63.1 through 63.15) that apply. This requirement excludes the provisions that are not applicable as shown in Conditions 7.7.4(h) and (i).</li> </ul> </li> </ul>
Streamlining	Not Applicable
Title I Conditions	Not Applicable

Non-applicability	<ul style="list-style-type: none"> <li>• 40 CFR Part 60, Subpart IIII, Compression Ignition Internal Combustion Engines, because the Permittee did not commence construction (date that construction commences is the date the engine is ordered by the Permittee) of the affected engine after July 11, 2005 where the affected engine were manufactured after April 1, 2006 and are not fire pump engines, pursuant to 40 CFR 60.4200(a)(2)(i).</li> <li>• Acid Rain Program, 40 CFR 72, because the affected engine is a non-utility unit, as defined by 40 CFR 72.6(b)(8). Pursuant to 40 CFR 72.2, a "utility unit" is defined as a unit owned or operated by a utility (i.e., an entity that "sells electricity")</li> <li>• 35 IAC 212.321 or 212.322, since a process weight rate cannot be determined because liquid and gaseous fuels and combustion air are excluded from the definition of process weight rate, as per the definition in 35 IAC 211.5250, so that such rules cannot reasonably be applied.</li> <li>• 35 IAC 216.121 &amp; 217.141: because the affected engine is not a fuel combustion unit, as defined by 35 IAC 211.2470.</li> <li>• 35 IAC 214.121 and 35 IAC 214 Subparts C through F, pursuant to 35 IAC 214.304, because the affected emergency stationary RICE's rated actual heat input is less than 73.2 MW (250 mmbtu/hr) and because it is defined as a "new emission source", as defined by 35 IAC 201.102, respectively.</li> <li>• 35 IAC Part 217, Subpart Q: Stationary Reciprocating Internal Combustion Engines and Turbines, because the affected engine is an emergency or standby unit as defined by 35 IAC 211.1920 [35 IAC 217.386(b)(1)].</li> <li>• The affected equipment components are not subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because they do not use an add-on control device to achieve compliance with an emission limitation or standard. [40 CFR 64.2(a)(2)]</li> <li>• The notification provisions under 40 CFR 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) pursuant to 40 CFR 63.6645(a), because the emergency stationary RICE is excluded from the listed provisions [40 CFR 63.6645(a)(5)]</li> <li>• The affected emergency stationary RICE is not subject to the performance tests or other compliance demonstration, pursuant to 40 CFR 63.6612, 63.6615, and 63.6620 and Tables 3, 4 and 5 of 40 CFR 63 Subpart ZZZZ, since, the affected emergency stationary RICE is not subject to any the numerical emission limitations pursuant to 40 CFR 63.6603(a) and Tables 2b and 2d of 40 CFR 63 Subpart ZZZZ.</li> </ul>
<b>Periodic Monitoring (other than basic regulatory requirements)</b>	
Testing	<ul style="list-style-type: none"> <li>• Opacity testing required upon written request by the Illinois EPA, pursuant to Section 39.5(7)(d) of the Act.</li> <li>• Sulfur content of the fuel oil supply for the affected diesel engines, pursuant to Section 39.5(7)(d) of the Act.</li> </ul>

Emissions Monitoring	None
Operational Monitoring	Visible emissions and proper engine operational monitoring
Inspections	None
Recordkeeping	<ul style="list-style-type: none"> <li>• General Records: Compliance with Conditions 5.6.1 and 7.5.3, pursuant to Section 39.5(7)(b) of the Act <ul style="list-style-type: none"> <li>o Operating log for each affected diesel engine</li> <li>o Maintenance and repair log</li> <li>o If applicable, records of compliance pursuant to Condition 7.5.3(d)(vi), i.e., 40 CFR Part 60 Subpart IIII, for compression ignition engines or 40 CFR Part 60 Subpart JJJJ, for spark ignition engines. [40 CFR 63.6590(c)]</li> <li>o Records of good operating practices for each affected engine, as defined in Condition 7.5.5(a).</li> </ul> </li> <li>• Fuel usage for the affected engine</li> <li>• Sulfur content of the oil fuel supply and SO2 emissions of the affected engine</li> <li>• Emissions from the affected engine (i.e., NOx, CO, SO2, VOM, and PM) in tons/month and tons/year with supporting calculations and data as required by Condition 7.5.9</li> <li>• 40 CFR 63 Subpart ZZZZ <ul style="list-style-type: none"> <li>o Plans and/or instructions used to demonstrate continuous compliance [40 CFR 63.6655(d)]</li> <li>o Maintenance Records [40 CFR 63.6655(e)]</li> <li>o Hours of operation recorded through the non-resettable hour meter [40 CFR 63.6655(f)]</li> </ul> </li> </ul>
Basis	<p>Periodic Monitoring is sufficient for this emission unit because:</p> <ul style="list-style-type: none"> <li>• Presumed by rule as the source is subject to a standard promulgated after Nov. 1990.</li> </ul>
<b>Reporting</b>	
Prompt Reporting	<ul style="list-style-type: none"> <li>• 30 days: Emissions of opacity and SO2, from the affected engine in excess of the limits specified in Conditions 7.5.3</li> <li>• 30 days: Operation of the affected engine in noncompliance with the requirements specified in Condition 7.5.5</li> </ul>

Other Reporting	<ul style="list-style-type: none"> <li>• 40 CFR Part 63 Subpart ZZZZ--National Emissions Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines <ul style="list-style-type: none"> <li>o Semiannual Compliance reports [40 CFR 63.6650(a) and (b)]</li> <li>o Compliance report [40 CFR 63.6650(c)(1) through (5)]</li> <li>o Deviation Report [40 CFR 63.6650(d)]</li> <li>o 60 day notice: Plans to reconstruct an affected engine</li> <li>o Notifications as required pursuant to 40 CFR 60.4214(a) and/or 60.4245(c), of the date construction (or reconstruction as defined under 40 CFR 60.15) of an affected facility is commenced postmarked no later than 30 days after such date</li> </ul> </li> </ul>
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- i. The source is subject 40 CFR 63 Subpart ZZZZ since the Permittee owns or operates a stationary RICE located at an area source (See Condition 5.1.3). [40 CFR 63.6585]
- ii. A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition. [40 CFR 63.6585(a)]
- iii. An area source of HAP emissions is a source that is not a major source (See Condition 5.1.3). [40 CFR 63.6585(c)]
- iv. The affected engine is classified as being existing emergency stationary IC RICE based upon the following:
  - A. For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006. [40 CFR 63.6590(a)(1)(iii)]
  - B. A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE. [40 CFR 63.6590(a)(1)(iv)]
  - C. *Emergency stationary RICE* means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc. Stationary CI ICE used for peak shaving are not considered emergency stationary ICE. Stationary CI ICE used to supply power to an electric grid or that supply non-emergency power as part of a financial arrangement with another entity are not considered to be emergency engines, except as permitted under § 63.6640(f). Emergency stationary RICE with a site-rating of more than 500

brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may also operate an additional 50 hours per year in non-emergency situations. All other emergency stationary RICE must comply with the requirements specified in § 63.6640(f). [40 CFR 63.6675]

- v. Pursuant to 40 CFR 63.6645(a)(5), the notification requirements in §63.6645, and in 40 CFR part 63, subpart A do not apply. The preamble of 75 FR 9648 (National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines; Final Rule - pp 9655 and 9679) states the following:

"In terms of reporting requirements, owners and operators of existing stationary RICE, except stationary RICE that are less than 100 HP, existing emergency stationary RICE, and existing stationary RICE that are not subject to numerical emission standards, must submit all of the applicable notifications as listed in the NESHAP General Provisions (40 CFR part 63, subpart A), including an initial notification, notification of performance test, and a notification of compliance for each stationary RICE which must comply with the specified emission limitations

- vi. The Permittee is not required to conduct any initial performance tests or other initial compliance demonstration, pursuant to 40 CFR 63.6612 and Tables 4 and 5 of 40 CFR 63 Subpart ZZZZ, since the affected engine is not subject to any emission and operating limits. The preamble of 75 FR 9648 (National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines; Final Rule - pp 9654) states that "Owners and operators of existing stationary RICE that are subject to management practices do not have to conduct any performance testing."

Table 8 (Section 7.8 of the draft permit)

<b>Emission Unit</b>	
Name	Emergency Fire Pump Engine
Description	The engine is a process emission units used for powering an emergency fire pump. The engine is classified as a distillate fuel oil (diesel) fired stationary compression ignition (CI) internal combustion engine (ICE).
Date Constructed	November 2010
Emission Control Equipment	None
<b>Applicable Rules and Requirements</b>	
Emission Standards	<ul style="list-style-type: none"> <li>• 40 CFR 60.4200(a)(2), the affected diesel engine is subject to the NSPS for Compression Ignition Internal Combustion Engines, 40 CFR Part 60, Subpart I III</li> <li>• 35 IAC 212.123: General Opacity Requirements</li> <li>• 35 IAC 214.301: SO2 requirements (Emissions less than 2000 ppm).</li> <li>• 35 IAC 214.304: Requires that the emission unit comply with 35 IAC 214.122(b), no person shall cause or allow the emission of sulfur dioxide into the atmosphere in any one hour period from any new fuel combustion source with actual heat input smaller than, or equal to, 73.2 MW (250 mmBtu/hr), burning liquid fuel exclusively to exceed 0.3 lbs/mmBtu of sulfur dioxide per MW-hr of actual heat input when distillate fuel oil is burned.</li> </ul>
Streamlining	Not Applicable
Title I Conditions	Not Applicable

Non-  
applicability

- 40 CFR Part 60, Subpart JJJJ, Spark Ignition Internal Combustion Engines, because the affected diesel engine is by definition, 40 CFR 60.4248, a compression ignition engine rather than a spark ignition engine.
- The affected diesel engine is excluded from certain requirements of the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines 40 CFR Part 63, Subpart ZZZZ, pursuant to 40 CFR 63.6590(c), because the affected diesel engine is a new stationary RICE, as defined under 40 CFR Part 63, Subpart ZZZZ, located at an area source and is both an emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP and a compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP. Therefore, the affected diesel engine must meet the requirements of 40 CFR Part 63, Subpart ZZZZ by meeting the requirements of 40 CFR part 60 Subpart IIII, for compression ignition engines (See Condition 7.8.3(b)). No further requirements apply for such engines under 40 CFR Part 63, Subpart ZZZZ.
- Acid Rain Program, 40 CFR 72, because the affected engine is a non-utility unit, pursuant to 40 CFR 72.6(b)(8). Pursuant to 40 CFR 72.2, a "utility unit" is defined as a unit owned or operated by a utility (i.e., an entity that "sells electricity").
- 35 IAC 212.321 or 212.322, due to the unique nature of such units, a process weight rate cannot be set because liquid and gaseous fuels and combustion air are excluded from the determination of process weight rate, as per the definition in 35 IAC 211.5250, so that such rules cannot reasonably be applied, pursuant to 35 IAC 212.323.
- 35 IAC 214.121 and 35 IAC 214 Subparts C through F, pursuant to 35 IAC 214.304, because the affected emergency stationary RICE's rated actual heat input is less than 73.2 MW (250 mmBtu/hr) and because it is defined as a "new emission source", as defined by 35 IAC 201.102, respectively.
- 35 IAC 214.121 and 35 IAC 214 Subparts C through F, pursuant to 35 IAC 214.304, because the affected emergency stationary RICE's rated actual heat input is less than 73.2 MW (250 mmBtu/hr) and because it is defined as a "new emission source", as defined by 35 IAC 201.102, respectively.
- 35 IAC Part 217, Subpart Q: Stationary Reciprocating Internal Combustion Engines and Turbines, because the affected engine is not stationary reciprocating internal combustion engine listed in Appendix G of that Part, pursuant to 35 IAC 217.386.
- The affected equipment components are not subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because they do not use an add-on control device to achieve compliance with an emission limitation or standard.

<b>Periodic Monitoring (other than basic regulatory requirements)</b>	
Testing	<ul style="list-style-type: none"> <li>• Opacity testing required upon written request by the Illinois EPA, pursuant to Section 39.5(7)(d) of the Act.</li> <li>• Sulfur content of the fuel oil supply for the affected diesel engines, pursuant to Section 39.5(7)(d) of the Act.</li> </ul>
Emissions Monitoring	None
Operational Monitoring	Visible emissions and proper engine operational monitoring
Inspections	<ul style="list-style-type: none"> <li>• None</li> </ul>
Recordkeeping	<ul style="list-style-type: none"> <li>• General Records: Compliance with Conditions 5.6.1 and 7.8.3, pursuant to Section 39.5(7)(b) of the Act <ul style="list-style-type: none"> <li>o Operating log for the affected diesel engine</li> <li>o Hours of operation as per hour meter required in Condition 7.8.8(b);</li> <li>o Observations required as per Condition 7.8.7(a) or 7.8.8(a);</li> <li>o Copies of notifications required to comply with this 40 CFR 60 Subpart IIII and all documentation supporting any notification [40 CFR 60.4214(a)(2)(i)]</li> <li>o Maintenance and repair log [40 CFR 60.4214(a)(2)(ii)]</li> <li>o Documentation from the manufacturer that the engine is certified to meet the emission standards [40 CFR 60.4214(a)(2)(iii)]</li> <li>o Documentation verifying that the the affected diesel engine is in compliance with the requirements in Conditions 7.8.5(a) and (b).</li> <li>o Records of any test plans and test reports performed pursuant to Condition 7.8.7.</li> <li>o Pursuant to Condition 7.8.5(b)(ii), records of diesel fuel sulfur content which may be provided by either fuel supplier or the results of testing conducted under Condition 7.8.7.</li> </ul> </li> <li>• Fuel usage for the affected engine</li> <li>• Emissions from the affected engine (i.e., NOx, CO, SO2, VOM, and PM) in tons/month and tons/year with supporting calculations and data as required by Condition 7.5.9</li> </ul>
<b>Reporting</b>	
Prompt Reporting	<ul style="list-style-type: none"> <li>• 30 days: Emissions of opacity and SO2, from the affected engine in excess of the limits specified in Conditions 7.8.3</li> <li>• 30 days: Operation of the affected engine in noncompliance with the requirements specified in Condition 7.8.5</li> </ul>

Other Reporting	<ul style="list-style-type: none"><li data-bbox="430 310 1422 663">• Pursuant to 40 CFR 60.4214(b), if the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to 40 CFR 60 Subpart IIII, if the emergency engine does not meet the standards applicable to non-emergency engine in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non- resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.</li></ul>
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### ATTACHMENT 3: Prompt Reporting of Deviations

Prompt reporting of deviations is critical in order to have timely notice of deviations and the opportunity to respond, if necessary. The effectiveness of the permit depends upon, among other important elements, timely and accurate reporting. The Illinois EPA, USEPA and the public rely on timely and accurate reports submitted by the Permittee to measure compliance and to direct investigation and follow-up activities. Prompt reporting is evidence of a Permittee's good faith in disclosing deviations and describing the steps taken to return to compliance and prevent similar incidents.

Any occurrence that results in an excursion from any emission limitation, operating condition, or work practice standard as specified in this CAAPP permit is a deviation subject to prompt reporting. Additionally, any failure to comply with any permit term or condition is a deviation of that permit term or condition and must be reported to the Illinois EPA as a permit deviation. The deviation may or may not be a violation of an emission limitation or standard. A permit deviation can exist even though other indicators of compliance suggest that no emissions violation or exceedance has occurred. Reporting permit deviations does not necessarily result in enforcement action. The Illinois EPA has the discretion to take enforcement action for permit deviations that may or may not constitute an emission limitation or standard or the like, as necessary and appropriate.

Section 39.5(7)(f)(ii) of the Illinois Environmental Protection Act, which mirrors 40 CFR 70.6(a)(3)(iii)(B), requires prompt reporting of deviations from the permit requirements. The permitting authority (in this case, Illinois EPA) has the discretion to define "prompt" in relation to the degree and type of deviation likely to occur. Furthermore, Section 39.5(7)(f)(i) of the Illinois Environmental Protection Act, which mirrors 40 CFR 70.6(a)(3)(iii)(A) requires that monitoring reports must be submitted at least every 6 months. Therefore, USEPA generally considers anything less than 6 months to be "prompt" as long as the selected time frame is justified appropriately (60 Fed. Reg. 36083, 36086 (July 13, 1995)).

The USEPA has stated that, for purposes of administrative efficiency and clarity, it is acceptable to define prompt in each individual permit. The Illinois EPA has elected to follow this approach and defines prompt reporting on a permit by permit basis. In instances where the underlying applicable requirement contains "prompt" reporting, this frequency or a shorter frequency of reporting is the required timeframe used in this permit. Where the underlying applicable requirement fails to explicitly set forth the timeframe for reporting deviations, the Illinois EPA has developed a structured manner to determine the reporting approach used in this permit.

The Illinois EPA generally uses a time frame of 30 days to define prompt reporting of most deviations. Also, for certain permit conditions in individual permits, the Illinois EPA may require an alternate timeframe that is less than 30 days if the permit requirement justifies a shorter reporting time period. Under certain circumstances, EPA may establish a deviation reporting period longer than 30 days, but, in no event exceeding 6 months. Where it has established a deviation reporting period other than 30 days in an individual permit (specifically Section 7.x.10), the Illinois EPA has explained the reason for the alternative timeframe. (See Attachment 2 of this Project Summary.)

The timing for certain deviation reporting may be different when a source or emission unit at a source warrants reporting to address operation, independent of the occurrence of any deviations. This is the case for a source that is required to perform continuous monitoring for the emission unit, for which quarterly or semi-annual "monitoring" reports are appropriate. Where appropriate, reporting of deviations has generally been combined in, or coordinated with these quarterly or semi-annual reports, so that the overall performance of the plant can be reviewed in a comprehensive fashion. This will allow a more effective and efficient review of the overall performance of the source by the Illinois EPA and other interested parties, as well as by the source itself.

At the same time, there are certain deviations for which quicker reporting is appropriate. These are deviations for which individual attention or concern may be warranted by the Illinois EPA, USEPA, and other interested parties. Under this scenario, emphasis has been placed primarily on deviations that could represent substantial violations of applicable emission standards or lapses in control measures at the source. For these purposes, depending on the deviation, immediate notification may be required and preceded by a follow-up report submitted within 15 days, during which time the source may further assess the deviation and prepare its detailed plan of corrective action.

In determining the timeframe for prompt reporting, the Illinois EPA assesses a variety of criteria such as:

- historical ability to remain in continued compliance,
- level of public interest in a specific pollutant and/or source,
- seriousness of the deviation and potential to cause harm,
- importance of applicable requirement to achieving environmental goals,
- designation of the area (i.e., non-attainment or attainment),
- consistency among industry type and category,
- frequency of required continuous monitoring reports (i.e., quarterly),
- type of monitoring (inspection, emissions, operational, etc.), and
- air pollution control device type and operation

These prompt reporting decisions reflect the Illinois EPA's consideration of the possible nature of deviations by different emission units and the responses that might be required or taken for those different types of deviations. As a consequence, the conditions for different emission units may identify types of deviations which include but are not limited to: 1) Immediate (or very quick) notification; 2) Notification within 30 days as the standard; or 3) Notification with regular quarterly or semi-annual monitoring reports.

The Illinois EPA's decision to use the above stated prompt reporting approach for deviations as it pertains to establishing a shorter timeframe in certain circumstances reflects the criteria discussed as well as USEPA guidance on the topic.

- 40 CFR 71.6(a)(3)(iii)(B) specifies that certain potentially serious deviations must be reported within 24 or 48 hours, but provides for semi-annual reporting of other deviations. (Serious or severe consequences)

- FR Vol. 60, No. 134, July 13, 1995, pg. 36086 states that prompt should generally be defined as requiring reporting within two to ten days of the deviation, but longer time periods may be acceptable for a source with a low level of excess emissions. (intermediate consequences)
- Policy Statement typically referred to as the "Audit Policy" published by the USEPA defines prompt disclosure to be within 21 days of discovery. (Standard for most "pollutant limiting" related conditions)
- Responses to various States by USEPA regarding other States' definition of prompt.

As a result, the Illinois EPA's approach to prompt reporting for deviations as discussed herein is consistent with the requirements of 39.5(7)(f)(ii) of the Act as well as 40 CFR part 70 and the CAA. This reporting arrangement is designed so that the source will appropriately notify the Illinois EPA of those events that might warrant individual attention. The timing for these event-specific notifications is necessary and appropriate as it gives the source enough time to conduct a thorough investigation into the causes of an event, collecting any necessary data, and to develop preventative measures, to reduce the likelihood of similar events, all of which must be addressed in the notification for the deviation.

#### ATTACHMENT 4: Periodic Monitoring Discussion

The Illinois EPA must evaluate whether sufficient monitoring is contained in each sources CAAPP permit to assure compliance with regulations developed to meet Clean Air Act requirements. Under the CAAPP permit program, periodic monitoring is required for each emission point at a source subject to Clean Air Act requirements. No emission points are categorically exempt from this requirement.

Significant benefits of Title V include compliance assurance and public access to data. Periodic monitoring provides data sources can use to promptly identify and correct compliance problems and to certify compliance. This data is also reported to the Illinois EPA and available to the USEPA and to the public. Periodic monitoring provides information and compliance tools to the public that may not otherwise always be available under state law.

USEPA has not mandated specific monitoring or protocols for developing monitoring to meet the above requirements. Periodic monitoring determinations are therefore made on a case-by-case basis. Because of the case-by-case nature of periodic monitoring determinations, it is important that the determinations are made consistent with Section 39.5 of the Act.

#### **What is Periodic Monitoring?**

In addition to gathering all requirements that apply to a source into one document, the CAAPP permit is meant to enable the public, USEPA, and the Illinois EPA to know whether the source can comply with those requirements. To achieve that goal, every CAAPP permit must include adequate "periodic monitoring." What this means is that the CAAPP permit must require the source to perform monitoring, recordkeeping and reporting so that it can assure the Illinois EPA, USEPA and the public that it is complying with its CAAPP permit or that it is identifying, reporting and addressing non-compliance. Ensuring that a CAAPP permit includes adequate periodic monitoring is the most important aspect of permit development.

Monitoring is a broad term that describes a source's ongoing activities to determine how it is operating in relation to its emission limitations and standards. Monitoring provisions must be set forth in the permit. The monitoring must be done at the source's initiative and a requirement to prepare or maintain a "monitoring plan" is not enough. Inspections by the Illinois EPA are also not sufficient.

The most obvious type of pollution monitoring is the direct measurement of smokestack emissions. Sometimes, a source is equipped with continuous emissions monitoring systems (CEMS) or continuous opacity monitoring systems (COMS). As their name implies, these systems are designed to directly measure smokestack emissions on a continuous basis. While continuous monitoring is one of the best ways to assure sources are in compliance with an emission limitation, installation of CEMS and COMS may be technically or economically infeasible compared to frequent manual monitoring. If a source has CEMS and COMS, these systems are identified in the sources CAAPP permit. If a source lacks CEMS and COMS, the source may be required to install these systems. However, the Illinois EPA may decide that some other type of monitoring is sufficient to assure the sources compliance with applicable requirements.

Periodic monitoring must be included with all types of permit conditions, not just those that directly limit pollution levels. For example, a CAAPP permit is likely to include conditions that require equipment maintenance and work practices. For these types of conditions, recordkeeping, and inspections is usually necessary to satisfy the periodic monitoring requirement. Monitoring includes activities such as:

- Continuous Emission Monitoring Systems (CEMS)
- Continuous Opacity Monitoring Systems (COMS)
- Parametric Emissions Monitoring (PEMS)
- Parametric Monitoring (continuous or at specified intervals)
- Periodic Source Testing
- Readings/Inspections
- Recordkeeping

Periodic Monitoring, a term used in 39.5(7)(d)(ii) of the Act, describes the combination of monitoring required by the applicable requirements and monitoring created in the CAAPP permit as necessary to meet the CAA requirement that the permit assure compliance with the applicable requirements. Periodic monitoring is required because some applicable requirements do not contain adequate provisions for determining whether a source is in compliance with its emissions limitations or how this is to be accomplished.

In addition to the requirement for periodic monitoring, permits must contain "conditions as are necessary to assure compliance." This requirement is reflected in 39.5(7)(d)(ii) of the Act, which requires "monitoring sufficient to yield reliable data from the relevant time period that are representative of the sources compliance" and 39.5(7)(a) of the Act, which requires all CAAPP permits to contain "testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit."

If the permit contains good periodic monitoring, the source can most certainly be held accountable if it violates applicable air quality requirements. Without adequate periodic monitoring, it may be more difficult for the Illinois EPA, USEPA and a member of the public to determine whether a source is violating an air quality requirement. Also, good periodic monitoring will provide the source with information necessary to identify and minimize compliance problems and assist the source with the annual certification of compliance.

#### **When is Periodic Monitoring Presumed in a Rule?**

Sometimes, the underlying statute or regulation explicitly requires a source to perform a particular kind of monitoring. Any monitoring that is specifically required by statute or regulation must be included in the CAAPP permit. However, many air quality statutes and regulations do not identify a monitoring method. And, even when a monitoring method is specified, there is often no indication of how often the monitoring must be performed. Many statutes and regulations require a source to perform an initial test to demonstrate compliance, but never require any additional monitoring.

Periodic monitoring is not required unless the applicable requirement "requires no periodic testing, specifies no frequency, or requires only a

one-time test." If the underlying State or federal standard requires a source to perform a specific type of testing or monitoring from time to time (yearly, monthly, weekly, daily, hourly), then this satisfies the periodic monitoring requirement of 40 CFR 70.6(a)(3)(i)(B). If an underlying requirement (1) has no periodic testing or monitoring, (2) does not mention how frequently testing or monitoring should be done, or (3) requires just a one-time test, then periodic monitoring is added to the CAAPP permit. The basic types of scenarios that are presumed to already contain sufficient monitoring requirements are those such as:

- NSPS and NESHAP promulgated after November 15, 1990
- When the Pollutant Specific Emission Unit is subject to a CAM Plan
- Federal or SIP standards specifying a continuous compliance determination method
- Acid Rain/CAIR/CAMR rules

#### **What is the Process for Evaluating Periodic Monitoring?**

In evaluating periodic monitoring, Illinois EPA determines whether a source's applicable requirements already contain adequate monitoring, and, if not, identifies additional necessary monitoring after consideration of certain factors. Review each applicable requirement emission limit or standard to determine what monitoring, recordkeeping and reporting (MRR) is associated with the emission limit. Note that periodic monitoring is only required if there is an applicable emission limit or standard. The term emission limit includes mass, rate and concentration limits, technology requirements, percent reduction requirements, work practice standards, process or control device parameters, and design, operational, or maintenance requirements. Determine whether the monitoring yields reliable data from the relevant time period that are representative of the source's compliance, and will assure compliance with the emissions limit or standard. Even if the MRR is not presumptively acceptable, it may still be acceptable. If the monitoring is not adequate to assure compliance, monitoring must be added to the permit. There are often various monitoring options that would satisfy the periodic monitoring requirement.

The frequency and averaging period of the emission limit of the monitoring must be made clear (periodic = e.g., hourly, daily, annual, etc.). When the emission limit has no time element (e.g., 0.5 grains/dscf), the relevant time period is the time needed to conduct an emission test. The relevant time period can be instantaneous as well (e.g., no holes or cracks in a lid for any amount of time). The data collected should provide for a reasonable assessment of the sources compliance status with permit emission limits.

#### **Factors Considered in Evaluating Periodic Monitoring**

- Likelihood of violating an applicable requirement. (Margin of compliance with the applicable requirement)
- Presence of add-on controls to comply with underlying rules. (If controls are required, consider whether the controls will assure compliance with the emission limit. If so, the best option may be to monitor the control equipment for proper operation instead of or in addition to the process.)

- Variability of emission level over time. (Consider how close a unit's emissions are to the emission limits during normal and anticipated upset operations.)
- Consider how emissions may vary. (Emissions may vary day to day under normal operation, e.g., as a turbine or engine increases or decreases load emissions change. Emissions may vary slowly over time, e.g., SCR catalyst may degrade over time. Emissions may vary quickly due to malfunction, e.g., a baghouse bag may break.)
- Monitoring data already available. (The source often maintains monitoring, process, maintenance, or control equipment data of emission units even if not required under an applicable requirement. Consider whether these activities would assure compliance; if so, they may be the best fit monitoring option for that source.)
- Technical and economic feasibility
- Monitoring done for similar emission Units/Emissions. (Existing CAAPP and construction permits, Federal, State and Local rules, CAM Guidelines Document)
- Will the monitoring method yield reliable data with respect to the emission limit?
- Will the monitoring method provide data that can be related to the relevant time period over which compliance with the emission limit is determined?
- Will the monitoring data be collected at a frequency that will provide information that is representative of the sources compliance with the permit?
- Is the monitoring condition written in a way that is practically enforceable? (Practical Enforceability involves ensuring that the following items are present: Frequency of monitoring, Data averaging period, Procedures for checking data validity, Minimum period of data availability, Recordkeeping, Prompt deviation and summary reports)

#### **What is the Periodic Monitoring Criterion?**

Compliance Assurance Monitoring that assures compliance is designed to:

- Monitor key parameters which determine compliance
- Be done at a frequency consistent with the likely variability of emissions and margin of compliance
- Detect deviations within specific timeframes (provide information to operator to correct problems promptly)
- Provide information that the Illinois EPA, USEPA and the public could use for enforcement

Margin of compliance: Amount of monitoring varies based on how a unit is operating with respect to emission limits (x% of emission limit); less monitoring if there is a comfortable margin of compliance. In determining margin of compliance, consider accuracy of emission estimation method - less monitoring if reliable emission factors exist. Consider reference method accuracy range. AP-42 or other emission factor accuracy, e.g., rating and range of emission factor.

Consider existence of control equipment and variability:

- Look at emissions over time under normal/upset conditions (within an individual unit)
- More variability more monitoring; less variability less monitoring. Variability within margin of compliance is acceptable.
- Also consider variability within a source category.
- Equipment failure or degradation.

Source size: Vary monitoring based on unit size as a lb/day or ton/year threshold based on potential uncontrolled emissions, e.g., more monitoring if uncontrolled emissions exceed major source threshold.

Burden/Cost to Permittee: Cost of equipment, personnel (training, time spent on job, etc), administrative costs (e.g., time and expense of MRR), burden on agency (i.e., inspections, record review), reasonableness (does it make sense?), time to implement condition, technical feasibility of monitoring and test methods (e.g., stack testing of fugitive emissions), existing burden for monitoring.

Consistency: Consistency means monitoring may be different but consistently meets the established criteria. Consistency is important between similar or identical sources, e.g., with regard to size, source emission unit category, types of emissions and emission limits.

Historical capability to demonstrate compliance: A source that has a history of violating emission limitations is likely to be required more frequent monitoring than a source that has a strong record of compliance.

### **Step Description**

Preliminary investigation. The first step toward establishing appropriate monitoring is to identify the need for additional monitoring for the emitting processes or applicable requirements at this point.

Brainstorm possible MRR types. Next, brainstorm potential monitoring proposals. Ideas for monitoring proposals may come from experience, from the source, be developed by applying technologies used for similar source categories, or they may be innovative.

Choose MRR method and frequency. Choose the most appropriate monitoring method and frequency. Some of the criteria, such as technical feasibility and data necessary to determine compliance on an ongoing basis will be mandatory. A monitoring method that is not technologically feasible, or that will not provide necessary data cannot be chosen. For other criteria such as cost and consistency, there is not the mandatory element. The relative merits of each option with respect to the criteria must be considered. Keep in mind that periodic monitoring can include a mix of monitoring techniques. For example, a sources permit might require daily or weekly inspections of pollution control equipment in addition to a stack test every few months or years.

Also, instead of requiring a source to monitor emissions coming from its smokestack, a permit might allow a source to monitor some other aspect of its operations instead. This type of monitoring is called "surrogate" (e.g., substitute) monitoring. Surrogate monitoring is allowed when (1) monitoring of actual emissions is technically or economically infeasible and/or

impractical, and (2) surrogate monitoring is adequate to assure compliance with the underlying applicable requirement. The CAA "does not prohibit the use of an appropriate surrogate pollutant for individual species to confirm compliance. "A surrogate may be used to regulate pollutants if it is 'reasonable' to do so. "A surrogate may attribute characteristics of a subclass of substances to an entire class of substances if doing so is scientifically reasonable"; (NRDC v. EPA, 822 F.2d 104, 125 (D.C. Cir. 1987))

A three part analysis is generally used for determining whether the use of a surrogate is reasonable: (1) "the emissions are invariably present or characterized by the surrogate (i.e., demonstrate and quantify a consistent correlation between PM stack emissions and their HAP metal content)," (2) "the control technology indiscriminately captures the target pollutant along with the surrogate or characterizes the effect on the target pollutant;" and (3) "the only means by which facilities 'achieve' reductions in the target pollutant." If these criteria are satisfied then the surrogate may be considered given the potential impact upon emissions." A surrogate is not a reasonable surrogate where other factors (for instance, the HAP content of a raw material affects HAP metal emissions.)" play a role in the reduction of emissions in the target pollutant (for instance, "PM might not be an appropriate surrogate for HAP metals if switching fuels would decrease HAP metal emissions without causing a corresponding reduction in total PM emissions.)" The use of a surrogate "eliminates the cost of performance testing to comply with numerous standards for individual species." 64 Fed. Reg. at 31,916/3.

## **Conclusions**

Where the periodic monitoring does not fall within one of the below categories for the basic periodic monitoring established in the majority of the permits, further explanation is provided in the emission unit specific section of this Statement of Basis (Project Summary). Each emission unit specific section in this Project Summary has a section that is identified as "Justification for Periodic Monitoring" that will give the basis for the type of periodic monitoring described in the tables. Based upon the information provided in the above discussion and analysis that is performed to evaluate periodic monitoring, the results generally fall into a set of specific categories as follows:

1. Work practice standards are generally assured through the use of periodic inspections and the frequency is established based on the emission unit size, capability to comply, historical compliance and margin of compliance.
2. Production limits are generally assured through the use of recordkeeping for the specific raw material or finished product.
3. Emission limits are generally assured by means of a couple different methodologies (the choice of methodology is based on the evaluation of the factors described above):
  - a. Performance testing on a set frequency based on the factors identified above,
  - b. Emission factors/engineering calculations based on specific recordkeeping requirements that are representative of the scientific units for which the emission factor/calculation is based,
  - c. Surrogate monitoring such as fuel sampling or raw material testing.

4. Control requirements are generally assured through the use of establishing operating parameters to be monitored that ensure proper functioning of the control device and are representative of the operation.

The mechanism by which the data is collected is also generally established such as a specific reference method (i.e., Method 9 or Method 311) or generally accepted test procedure such as an ASTM or ANSI test method. It also generally will identify the type of monitoring such as pressure sensor, thermocouple or flow gauge. The relevant timeframe is generally established by looking to the likelihood of an exceedance, the margin of compliance and historical capability to comply with a particular standard. These timeframes generally fall into specific slots when a CEM or COM is not available and can be hourly, daily, weekly, monthly or annual. The averaging periods are generally a rolling average commensurate with the monitoring frequency and the established limit.