

FINAL DRAFT/PROPOSED CAAPP PERMIT
Stolthaven Chicago, Inc.
I.D. No.: 031600BIY
Application No.: 95120031
September 12, 2000

Major Stationary Sources Construction and Modification. Any such terms and conditions are identified within this permit.

²

Except as provided in Condition 8.7 of this permit.

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Control: None
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Control: None
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Control: Internal Floating Roof

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1.0 SOURCE IDENTIFICATION

1.1 Source

Stolthaven Chicago Inc.
12200 South Stony Island Avenue
Chicago, Illinois 60633
773/646-8158

I.D. No.: 031600BIY
Standard Industrial Classification: 4226

1.2 Owner/Parent Company

Stolthaven Chicago Inc.
12200 South Stony Island Avenue
Chicago, Illinois 60633

1.3 Operator

Stolthaven Chicago Inc.
12200 South Stony Island Avenue
Chicago, Illinois 60633

Stanley D. Olson, Manager, Health, Safety, and Environmental
773/646-8151

1.4 General Source Description

Stolthaven Chicago Inc. is located at 12200 South Stony Island Avenue. The facility is a for hire bulk liquid storage and transfer facility. The facility operates 90 storage tanks and barge, ship, railcar, and truck loading racks. In addition, the facility operates natural gas fired boilers to provide heat to products that solidify at room temperature.

2.0 LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT

| | |
|------------------|--|
| Act | Illinois Environmental Protection Act [415 ILCS 5/1 et seq.] |
| AP-42 | Compilation of Air Pollutant Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through F), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711 |
| Btu | British thermal unit |
| CAA | Clean Air Act [42 U.S.C. Section 7401 et seq.] |
| CAAPP | Clean Air Act Permit Program |
| CFR | Code of Federal Regulations |
| HAP | Hazardous Air Pollutant |
| hr | hour |
| IAC | Illinois Administrative Code |
| I.D. No. | Identification Number of Source, assigned by Illinois EPA |
| ILCS | Illinois Compiled Statues |
| Illinois EPA | Illinois Environmental Protection Agency |
| kW | kilowatts |
| lb | pound |
| MBtu | Million British thermal units |
| NESHAP | National Emission Standards for Hazardous Air Pollutants |
| NO _x | Nitrogen Oxides |
| NSPS | New Source Performance Standards |
| PM | Particulate Matter |
| PM ₁₀ | Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns as measured by applicable test or monitoring methods |
| ppm | parts per million |
| PSD | Prevention of Significant Deterioration |
| RMP | Risk Management Plan |
| SO ₂ | Sulfur Dioxide |
| T1 | Title I - identifies Title I conditions that have been carried over from an existing permit |
| T1N | Title I New - identifies Title I conditions that are being established in this permit |
| T1R | Title I Revised - identifies Title I conditions that have been carried over from an existing permit and subsequently revised in this permit |
| USEPA | United States Environmental Protection Agency |
| VOM | Volatile Organic Material |

3.0 INSIGNIFICANT ACTIVITIES

3.1 Identification of Insignificant Activities

The following activities at the source constitute insignificant activities as specified in 35 IAC 201.210:

- 3.1.1 Activities determined by the Illinois EPA to be insignificant activities, pursuant to 35 IAC 201.210(a)(1) and 201.211, as follows:

Drum Filling Operations
Tote Filling Operations
Dryer Regeneration Operations
Blending Operation
Tank and Pipeline Cleaning Operations
Soil Remediation System

- 3.1.2 Activities that are insignificant activities based upon maximum emissions, pursuant to 35 IAC 201.210(a)(2) or (a)(3), as follows:

None

- 3.1.3 Activities that are insignificant activities based upon their type or character, pursuant to 35 IAC 201.210(a)(4) through (18), as follows:

Direct combustion units designed and used for comfort heating purposes and fuel combustion emission units as follows: (A) Units with a rated heat input capacity of less than 2.5 mmBtu/hr that fire only natural gas, propane, or liquefied petroleum gas; (B) Units with a rated heat input capacity of less than 1.0 mmBtu/hr that fire only oil or oil in combination with only natural gas, propane, or liquefied petroleum gas; and (C) Units with a rated heat input capacity of less than 200,000 Btu/hr which never burn refuse, or treated or chemically contaminated wood [35 IAC 201.210(a)(4)].

Equipment used for filling drums, pails, or other packaging containers, excluding aerosol cans, with soaps, detergents, surfactants, lubricating oils, waxes, vegetable oils, greases, animal fats, glycerin, sweeteners, corn syrup, aqueous salt solutions, or aqueous caustic solutions [35 IAC 201.210(a)(8)].

Storage tanks of any size containing exclusively soaps, detergents, surfactants, glycerin, waxes, vegetable oils, greases, animal fats, sweeteners, corn syrup, aqueous salt solutions, or aqueous caustic solutions, provided an organic solvent has not been mixed with such materials [35 IAC 201.210(a)(17)].

Loading and unloading systems for railcars, tank trucks, or watercraft that handle only the following liquid materials, provided an organic solvent has not been mixed with such materials: soaps, detergents, surfactants, lubricating oils, waxes, glycerin, vegetable oils, greases, animal fats, sweetener, corn syrup, aqueous salt solutions, or aqueous caustic solutions [35 IAC 201.210(a)(18)].

- 3.1.4 Activities that are considered insignificant activities pursuant to 35 IAC 201.210(b).

3.2 Compliance with Applicable Requirements

Insignificant activities are subject to applicable requirements notwithstanding status as insignificant activities. In particular, in addition to regulations of general applicability, such as 35 IAC 212.301 and 212.123 (Condition 5.2.2), the Permittee shall comply with the following requirements, as applicable:

- 3.2.1 For each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 215.182, 218.182, or 219.182.
- 3.2.2 For each particulate matter process emission unit, the Permittee shall comply with the applicable particulate matter emission limit of 35 IAC 212.321 or 212.322. For example, the particulate matter emissions from a process emission unit shall not exceed 0.55 pounds per hour if the emission unit's process weight rate is 100 pounds per hour or less, pursuant to 35 IAC 266.110.
- 3.2.3 For each organic material emission unit that uses organic material, e.g., a mixer or printing line, the Permittee shall comply with the applicable VOM emission limit of 35 IAC 215.301, 218.301, or 219.301, which requires that organic material emissions not exceed 8.0 pounds per hour or do not

qualify as photochemically reactive material as defined in 35 IAC 211.4690.

3.3 Addition of Insignificant Activities

- 3.3.1 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type that is identified in Condition 3.1, until the renewal application for this permit is submitted, pursuant to 35 IAC 201.212(a).
- 3.3.2 The Permittee must notify the Illinois EPA of any proposed addition of a new insignificant activity of a type addressed by 35 IAC 201.210(a) and 201.211 other than those identified in Condition 3.1, pursuant to Section 39.5(12)(b) of the Act.
- 3.3.3 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type identified in 35 IAC 201.210(b).

4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE

| Emission Unit | Description | Date Constructed | Emission Control Equipment |
|---|--|--|----------------------------|
| Storage Tanks: 1502, 1603, 1702, 2000 | Benzene Permitted Storage Tanks | 5/63, 5/77, 12/78, and 9/80, Respectively | Internal Floating Roof |
| 1109, 1209, 3103, 3106, 3109, 3110, 3203, 3206, 3209, 3210, 3303, 3306, 3309, 3310, 3403, 3410, 5000 | Fixed Roof Storage Tanks Under 40,000 Gallons | 4/63, 4/63, 5/65, 4/67, 7/64, 7/64, 5/65, 4/67, 7/64, 7/64, 5/65, 4/67, 7/64, 7/64, 4/67, 7/64, 5/86, Respectively | None |
| 1101, 1102, 1103, 1104, 1201, 1202, 1203, 1204, 1206, 1301, 1302, 1303, 1307, 1401, 1402, 1403, 1404, 1406, 2001, 2100, 2101, 2102, 2200, 2201, 2301, 2400, 2401, 3102, 3104, 3105, 3107, 3108, 3202, 3205, 3208, 3302, 3304, 3305, 3307, 3308, 3400, 3401, 3402, 3405, 3406, 3409, 3501, 3502, 3503, 3504, 3505, 3506, 3507, 3509, 3601, 5001, S1, S2, S3, S4 | Fixed Roof Storage Tanks Over 40,000 Gallons | 10/62, 10/62, 6/63, 3/64, 10/62, 10/62, 6/63, 2/64, 11/74, 5/63, 6/63, 1/64, 11/74, 5/63, 6/63, 3/71, 5/64, 11/74, 5/95, 10/64, 7/63, 5/68, 2/64, 8/71, 11/74, 1/72, 11/74, 12/63, 5/65, 7/66, 10/64, 10/64, 12/63, 7/66, 10/64, 12/63, 5/65, 7/66, 12/67, 10/64, 12/64, 11/62, 11/62, 7/65, 4/67, 10/64, 5/64, 11/62, 11/62, 7/66, 7/66, 4/67, 11/73, 5/67, 10/64, 6/91, 11/62, 11/62, 4/63, 5/64, Respectively | None |
| 1503, 3101, 3201, 3204, 3207, 3301, 3404, 3407, 3408 | Internal Floating Roof Storage tanks Over 40,000 Gallons | 5/77, 5/63, 8/63, 5/65, 10/64, 8/63, 7/68, 7/68, 7/68, Respectively | Internal Floating Roof |
| Boiler #1 and #2 | 44.8 MBtu/hr Rated Natural Gas-Fired Boilers | Both 1/62 | None |
| Ship and Barge Loading Equipment | Equipment Used for Marine Vessel Chemical Transfers | Loading Equipment Constructed 1/66, Flare Constructed 90 | Flare |

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| | | | |
|-------------------------------------|--|---|----------------------------|
| Truck and Railcar loading Equipment | Equipment Used for Truck and Railcar chemical transfers | Racks Originally Installed 1/66, Additional Racks Installed 3/74, 11/74, 2/75, 4/75, 5/75, and 8/92 | None |
| Emission Unit | Description | Date Constructed | Emission Control Equipment |
| Fugitive Emissions | Pumps, Compressors, Pressure Relief Devices, Sampling Connections, Valves, Flanges, and Other Connectors with Similar Components and Chemical Spills | ----- | None |

5.0 OVERALL SOURCE CONDITIONS

5.1 Source Description

5.1.1 This permit is issued based on the source requiring a CAAPP permit as a major source of VOM and HAP emissions.

5.2 Applicable Regulations

5.2.1 Specific emission units at this source are subject to particular regulations as set forth in Section 7 (Unit-Specific Conditions) of this permit.

5.2.2 In addition, emission units at this source are subject to the following regulations of general applicability:

- a. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 IAC 212.301 and 212.314.

Compliance with this requirement is considered to be assured by the inherent nature of operations at this source, as demonstrated by historical operation.

- b.
 - i. This source shall be operated under the provisions of an operating program prepared by the Permittee and submitted to the Illinois EPA for its review. Such operating program shall be designed to significantly reduce fugitive particulate matter emissions [35 IAC 212.309(a)].
 - ii. The operating program shall be amended from time to time by the Permittee so that the operating program is current. Such amendments shall be consistent with the requirements set forth by this Condition and shall be submitted to the Illinois EPA [35 IAC 212.312].
 - iii. All normal traffic pattern roads and parking facilities located at this source shall be paved or treated with water, oils, or chemical dust suppressants. All paved areas shall be cleaned on

a regular basis. All areas treated with water, oils, or chemical dust suppressants shall have the treatment applied on a regular basis, as needed, in accordance with the operating program [35 IAC 212.306].

- c. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122, pursuant to 35 IAC 212.123(a), except as allowed by 35 IAC 212.123(b) and 212.124.

5.2.3 The Permittee shall comply with the standards for recycling and emissions reduction of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

5.2.4 Should this stationary source, as defined in 40 CFR Section 68.3, become subject to the Accidental Release Prevention regulations in 40 CFR Part 68, then the owner or operator shall submit [40 CFR 68.215(a)(2)(i) and (ii)]:

- a. A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR 68.10(a); or
- b. A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan (RMP), as part of the annual compliance certification required by 40 CFR Part 70 or 71.

- 5.2.5 a. Should this stationary source become subject to a regulation under 40 CFR Parts 60, 61, or 63, or 35 IAC after the date issued of this permit, then the owner or operator shall, in accordance with the applicable regulation(s), comply with the applicable requirements by the date(s) specified and shall certify compliance with the applicable requirements of such regulation(s) as part of the annual compliance certification, as required by 40 CFR Part 70 or 71.
- b. No later than upon the submittal for renewal of this permit, the owner or operator shall submit, as part of an application, the necessary information to address either the non-applicability of, or demonstrate compliance with all applicable requirements of any potentially applicable regulation which was promulgated after the date issued of this permit.

5.2.6 Episode Action Plan

- a. If the source is required to have an episode action plan pursuant to 35 IAC 244.142, the Permittee shall maintain at the source and have on file with the Illinois EPA a written episode action plan (plan) for reducing the levels of emissions during yellow alerts, red alerts, and emergencies, consistent with safe operating procedures. The plan shall contain the information specified in 35 IAC 244.144.
- b. The Permittee shall immediately implement the appropriate steps described in this plan should an air pollution alert or emergency be declared.
- c. If a change occurs at the source which requires a revision of the plan (e.g., operational change, change in the source contact person), a copy of the revised plan shall be submitted to the Illinois EPA for review within 30 days of the change. Such plans shall be further revised if disapproved by the Illinois EPA.
- d. For sources required to have a plan pursuant to 35 IAC 244.142, a copy of the original plan and any subsequent revisions shall be sent to:
- i. Illinois EPA, Compliance Section; and

- ii. For sources located in Cook County and outside of the city of Chicago: Cook County Department of Environmental Control; or
- iii. For sources located within the city of Chicago: Chicago Department of Environmental Control.

5.2.7 PM₁₀ Contingency Measure Plan

Should this stationary source, as defined in 35 IAC 212.700, become subject to the requirement to prepare and submit a contingency measure plan reflecting the PM₁₀ emission reductions as set forth in 35 IAC 212.703, then the owner or operator shall submit such plan to the Illinois EPA for review and approval within ninety (90) days after the date this source becomes subject to this requirement. Such plan will be incorporated by reference into this permit and shall be implemented in accordance with 35 IAC 212.704. The source shall comply with the applicable requirements of 35 IAC Part 212, Subpart U, incorporated herein by reference.

5.3 Non-Applicability of Regulations of Concern

None

5.4 Source-Wide Operational and Production Limits and Work Practices

In addition to the source-wide requirements in the Standard Permit Conditions in Section 9, the Permittee shall fulfill the following source-wide operational and production limitations and/or work practice requirements:

None

5.5 Source-Wide Emission Limitations

5.5.1 Permitted Emissions for Fees

The annual emissions from the source, not considering insignificant activities as addressed by Section 3.0 of this permit, shall not exceed the following limitations. The overall source emissions shall be determined by adding emissions from all emission units. Compliance with these limits shall be determined on a calendar year basis. These limitations (Condition 5.5.1) are set for the purpose of establishing fees and are not federally enforceable.

Permitted Emissions of Regulated Pollutants

| Pollutant | Tons/Year |
|------------------------------------|-----------|
| Volatile Organic Material (VOM) | 81.45 |
| Sulfur Dioxide (SO ₂) | ---- |
| Particulate Matter (PM) | 0.775 |
| Nitrogen Oxides (NO _x) | 8.75 |
| HAP, not included in VOM or PM | 2.19 |
| TOTAL | 93.16 |

5.5.2 Emissions of Hazardous Air Pollutants

Source-wide emission limitations for HAPs as listed in Section 112(b) of the CAA are not set. This source is considered to be a major source of HAPs.

5.5.3 Other Source-Wide Emission Limitations

Other source-wide emission limitations are not set for this source pursuant to either the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21, Illinois EPA rules for Major Stationary Sources Construction and Modification, 35 IAC Part 203, or Section 502(b)(10) of the CAA. However, there may be unit specific emission limitations set forth in Section 7 of this permit pursuant to these rules.

5.6 General Recordkeeping Requirements

5.6.1 Emission Records

The Permittee shall maintain records of the following items for the source to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

Total annual emissions on a calendar year basis for the emission units covered by Section 7 (Unit Specific Conditions) of this permit.

5.6.2 Records for Operating Scenarios

N/A

5.6.3 Retention and Availability of Records

- a. All records and logs required by this permit shall be retained for at least five years from the date of entry (unless a longer retention period is specified by the particular recordkeeping provision herein), shall be kept at a location at the source that is readily accessible to the Illinois EPA or USEPA, and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request.
- b. The Permittee shall retrieve and print, on paper during normal source office hours, any records retained in an electronic format (e.g., computer) in response to an Illinois EPA or USEPA request for records during the course of a source inspection.

5.7 General Reporting Requirements

5.7.1 General Source-Wide Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

5.7.2 Annual Emissions Report

The annual emissions report required pursuant to Condition 9.7 shall contain emissions information for the previous calendar year.

5.8 General Operational Flexibility/Anticipated Operating Scenarios

N/A

5.9 General Compliance Procedures

5.9.1 General Procedures for Calculating Emissions

Compliance with the source-wide emission limits specified in Condition 5.5 shall be based on the recordkeeping and reporting requirements of Conditions 5.6 and 5.7, and Compliance Procedures in Section 7 (Unit Specific Conditions) of this permit.

6.0 EMISSIONS REDUCTION MARKET SYSTEM (ERMS)

6.1 Description of ERMS

The ERMS is a "cap and trade" market system for major stationary sources located in the Chicago ozone nonattainment area. It is designed to reduce VOM emissions from stationary sources to contribute to reasonable further progress toward attainment, as required by Section 182(c) of the CAA.

The ERMS addresses VOM emissions during a seasonal allotment period from May 1 through September 30. Once the ERMS begins, participating sources must hold "allotment trading units" (ATUs) for their actual seasonal VOM emissions. Each year participating sources are issued ATUs based on allotments set during initial issuance of the sources' CAAPP permits. These allotments are established from historical VOM emissions or "baseline emissions" lowered to provide the emissions reductions from stationary sources required for reasonable further progress.

By December 31 of each year, the end of the reconciliation period following the seasonal allotment period, each source should have sufficient ATUs in its transaction account to cover its actual VOM emissions during the preceding season. A transaction account's balance as of December 31 will include any valid ATU transfer agreements entered into as of December 31 of the given year, provided such agreements are promptly submitted to the Illinois EPA for entry into the transaction account database. The Illinois EPA will then retire ATUs in sources' transaction accounts in amounts equivalent to their seasonal emissions. When a source does not appear to have sufficient ATUs in its transaction account, the Illinois EPA will issue a notice to the source to begin the process for Emissions Excursion Compensation.

In addition to receiving ATUs pursuant to their allotments, participating sources may also obtain ATUs from the market, including ATUs bought from other participating sources and general participants in the ERMS that hold ATUs (35 IAC 205.630) and ATUs issued by the Illinois EPA as a consequence of VOM emissions reductions from an Emissions Reduction Generator or an Intersector Transaction (35 IAC 205.500 and 35 IAC 205.510). During the reconciliation period, sources may also buy ATUs from a secondary reserve of ATUs managed by the Illinois EPA, the "Alternative Compliance Market Account" (ACMA) (35 IAC 205.710). Sources may also transfer or sell the ATUs that they hold to other sources or participants (35 IAC 205.630).

6.2 Applicability

Emissions of VOM from the source during the seasonal allotment period from May 1 through September 30 of each year shall not exceed 15 tons, not including VOM emissions from insignificant emission units and activities as identified in Section 3 of this permit. This limitation is established at the request of the source to exempt it from the requirements of 35 IAC Part 205, Emissions Reduction Market System (ERMS), pursuant to 35 IAC 205.205.

6.3 Recordkeeping and Reporting

- a. The Permittee shall maintain the following records to determine compliance with the above limitation:
 - i. Records of operating data and other information for each individual emission unit or group of related emission units at the source, as specified in Sections 5 and 7 of this permit, as appropriate, to determine actual VOM emissions during the seasonal allotment period;
 - ii. Records of the VOM emissions, in tons, during the seasonal allotment period, with supporting calculations, for each individual emission unit or group of related emission units at the source, determined in accordance with the procedures specified in Sections 5 and 7 of this permit; and
 - iii. Total VOM emissions from the source, in tons, during each seasonal allotment period.
- b. The Permittee shall submit the seasonal emissions component of the Annual Emissions Report by November 30 of each year, reporting actual emissions of VOM during the seasonal allotment period, in accordance with 35 IAC 205.205(b) and 35 IAC 205.300.
- c. In the event that the source's VOM emissions during the seasonal allotment period exceed 15 tons, the source shall no longer be exempt from the ERMS and beginning with the following seasonal allotment period, shall comply with 35 IAC Part 205, by holding allotment trading units (ATUs) for its VOM emissions during each seasonal allotment period.

6.4 Federal Enforceability

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Section 6.0 becomes federally enforceable upon approval of the ERMS
by USEPA as part of Illinois' State Implementation Plan.

7.0 UNIT SPECIFIC CONDITIONS

7.1 Benzene Storage Tanks controlled by Internal Floating Roof

7.1.1 Description

The Permittee operates 4 storage tanks over 10,000 gallons which store benzene. These storage tanks are subject to 40 CFR 61, Subpart Y, National Emission Standard for Benzene Emissions from Benzene Storage Tanks. The Permittee uses an internal floating roof to control emissions of Benzene.

7.1.2 List of Emission Units and Air Pollution Control Equipment

| Emission Unit | Description | Emission Control Equipment |
|---|-----------------------|----------------------------|
| Storage Tanks: 1502, 1603, 1702, 2000 | Benzene Storage Tanks | Internal Floating Roof |

7.1.3 Applicability Provisions and Applicable Regulations

- a. The "affected benzene storage tanks" for the purpose of these unit-specific conditions, are the storage tanks described in Conditions 7.1.1 and 7.1.2.
- b. Each affected benzene storage tank is subject to the emission limits identified in Condition 5.2.2.
- c. The affected benzene storage tanks are subject to the requirements of 40 CFR 61 Subpart Y, National Emission Standard for Benzene Emissions from Benzene Storage Tanks. These provisions require that the affected benzene storage tanks be equipped with a fixed roof in combination with an internal floating roof meeting the following requirements [40 CFR 61.271(a)]:
 - i. An internal floating roof means a cover that rests on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a permanently affixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg

supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible [40 CFR 61.271(a)(1)].

- ii. Each internal floating roof shall be equipped with one of the closure devices listed in paragraphs (c)(ii)(A), (B), or (C) of this Condition between the wall of the storage vessel and the edge of the internal floating roof. This requirement does not apply to each existing storage vessel for which construction of an internal floating roof equipped with a continuous seal commenced on or before July 28, 1988. A continuous seal means a seal that forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof [40 CFR 61.271(a)(2)].
 - A. A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the vessel [40 CFR 61.271(a)(2)(i)].
 - B. Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous [40 CFR 61.271(a)(2)(ii)].
 - C. A metallic shoe seal. A metallic shoe seal (also referred to as a mechanical shoe seal) is, but is not limited to, a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof [40 CFR 61.271(a)(2)(iii)].

- iii. Automatic bleeder vents are to be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports [40 CFR 61.271(a)(3)].
- iv. Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface [40 CFR 61.271(a)(4)].
- v. Each internal floating roof shall meet the specifications listed below. If an existing storage vessel had an internal floating roof with a continuous seal as of July 28, 1988, the requirements listed below do not have to be met until the first time after September 14, 1989, the vessel is emptied and degassed or September 14, 1999, whichever occurs first [40 CFR 61.271(a)(5)],
 - A. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted [40 CFR 61.271(a)(5)(i)].
 - B. Each penetration of the internal floating roof for the purposes of sampling shall be a sample well. Each sample well shall have a slit fabric cover that covers at least 90 percent of the opening [40 CFR 61.271(a)(5)(ii)].
 - C. Each automatic bleeder vent shall be gasketed [40 CFR 61.271(a)(5)(iii)].
 - D. Rim space vents shall be equipped with a gasket [40 CFR 61.271(a)(5)(iv)].
 - E. Each penetration of the internal floating roof that allows for passage of a ladder

shall have a gasketed sliding cover [40 CFR 61.271(a)(5)(v)].

- F. Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover [40 CFR 61.271(a)(5)(vi)].
- vi. Each cover or lid on any opening in the internal floating roof shall be closed (i.e., no visible gaps), except when a device is in actual use. Covers on each access hatch and each automatic gauge float well which are equipped with bolts shall be bolted when they are not in use. Rim space vents are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting [40 CFR 61.271(a)(6)].
- d. Each affected storage tank is shielded from compliance with 35 IAC 218.121, 123, and 124. This shield is issued to streamline the applicable requirements for the source, based on the Illinois EPA's finding that compliance with the control requirements 40 CFR 61 Subpart Y assures compliance with 35 IAC 218.121, 123, and 124.
- e. Each affected storage tank is subject to 35 IAC 218.122 which provides that:
 - i. The Permittee shall not discharge more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere during the loading of any organic material from the aggregate loading pipes of any loading area having through-put of greater than 151 cubic meters per day (40,000 gal/day) into any railroad tank car, tank truck or trailer unless such loading area is equipped with submerged loading pipes or a device that is equally effective in controlling emissions and is approved by the Illinois EPA according to the provisions of 35 IAC 201, and further processed consistent with 35 IAC 218.108 [35 IAC 218.122(a)].
 - ii. The Permittee shall not load any organic material into any stationary tank having a storage capacity

of greater than 946 l (250 gal), unless such tank is equipped with a permanent submerged loading pipe or an equivalent device approved by the Illinois EPA according to the provisions of 35 IAC 201, and further processed consistent with 35 IAC 218.108 unless such tank is a pressure tank as described in 35 IAC 218.121(a) or is fitted with a recovery system as described in 35 IAC 218.121(b)(2) [35 IAC 218.122(b)].

- iii. Exception: If no odor nuisance exists the limitations of Conditions 7.1.3(e)(i) and (ii) shall only apply to the loading of VOL with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3°K (70°F) [35 IAC 218.122(c)].

7.1.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected benzene storage tanks not being subject to the New Source Performance Standards (NSPS) for Volatile Organic Liquid Storage Vessels, 40 CFR Part 60, Subpart Kb, because the affected benzene storage tanks were constructed before July 23, 1984.
- b. This permit is issued based on the affected benzene storage tanks not being subject to the New Source Performance Standards (NSPS) for Storage Vessels for Petroleum Liquids, 40 CFR Part 60, Subparts K and Ka, because, pursuant to 40 CFR 61.270(f), a source subject to the provisions of 40 CFR 61, Subpart Y that is also subject to 40 CFR 60 subparts K, Ka, and Kb shall be required to comply with the subpart that contains the most stringent requirements.
- c. This permit is issued based on the affected storage tanks not being subject to 35 IAC 218.120, because the affected storage tanks contain petroleum liquids.

7.1.5 Operational and Production Limits and Work Practices

- a. Benzene shall only be stored in an affected benzene storage tank.

7.1.6 Emission Limitations

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In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected benzene storage tanks are subject to the following:

Emissions from the affected benzene storage tanks shall not exceed the following limits:

Benzene Emissions
(Ton/year)

1.35

These limits are based on the maximum throughput of benzene and calculations using the TANKS computer software.

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

The above limitations were established in Permit 89080074, pursuant to 35 IAC Part 203. These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203 [T1].

7.1.7 Operating Requirements

None

7.1.8 Inspection Requirements

The affected benzene storage tanks are subject to 40 CFR 61 Subpart Y, which requires the Permittee to fulfill the following inspection and procedural requirements:

- a. After installing the control equipment required to comply with Condition 7.1.3(c) (40 CFR 61.271(a)), visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with benzene. If there are holes, tears or other openings in the primary seal, the secondary seal, or the seal fabric, or defects in the internal floating roof, the Permittee shall repair the items before filling the storage vessel [40 CFR 61.272(a)(1)].
- b. Visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill, or at least once every 12 months after September 14, 1989, except as provided in Condition 7.1.8(d)(i) (40 CFR 61.272(a)(4)(i)). If the internal floating roof is not resting on the surface of the benzene liquid inside the storage vessel, or there is liquid on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the Permittee shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, an extension of up to 30 additional days may be requested from the Administrator in the inspection report required in Condition 7.1.10(a) (40 CFR 61.275(a)). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as possible [40 CFR 61.272(a)(2)].
- c. Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. In no event shall inspections conducted in accordance with this provision

occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspections as specified in paragraph (b) of this Condition and at intervals greater than 5 years in the case of vessels specified in paragraph (d)(i) of this Condition [40 CFR 61.272(a)(3)].

- i. For all the inspections required by paragraphs (a) and (c) of this Condition, the Permittee shall notify the Administrator in writing at least 30 days prior to the refilling of each storage vessel to afford the Illinois EPA the opportunity to have an observer present. If the inspection required by paragraph (c) of this Condition is not planned and the Permittee could not have known about the inspection 30 days in advance of refilling the vessel, the Permittee shall notify the Illinois EPA at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, the notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to refilling [40 CFR 61.272(a)(3)(i)].
 - ii. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the Permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with benzene [40 CFR 61.272(a)(3)(ii)].
- d. For vessels equipped with a double-seal system as specified in 7.1.3(c)(ii)(B) [40 CFR 61.272(a)(4)]:
- i. Visually inspect the vessel as specified in paragraph (b) of this Condition at least every 5 years [40 CFR 61.272(a)(4)(i)]; or

- ii. Visually inspect the vessel annually as specified in paragraph (b) of this Condition, and at least every 10 years as specified in paragraph (c) of this Condition [40 CFR 61.272(a)(4)(ii)].

7.1.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected benzene storage tank to demonstrate compliance with Conditions 5.5.1 and 7.1.3, pursuant to Section 39.5(7)(b) of the Act:

- a. The Permittee shall keep copies of all reports and records required by Conditions 7.1.8 (40 CFR 61.272(a)) and 7.1.10 (40 CFR 61.275(a)).
- b. The Permittee shall maintain records of the following items to demonstrate compliance with Condition 7.1.3(e):
 - i. The vapor pressure of each VOL at 70°F in each affected benzene storage tank.
 - ii. Design information for the tank showing the presence of a permanent submerged loading pipe.
 - iii. Maintenance and repair records for the tank, as related to the repair or replacement of a loading pipe.
- c. The Permittee shall maintain records of the following items to show compliance with Condition 7.1.6:
 - i. Monthly records of the throughput of benzene through the affected benzene storage tanks.
 - ii. Monthly records of benzene emissions from the affected benzene storage tanks as calculated by the procedure in Condition 7.1.12(d), tons/month and tons/year.
- d. The Permittee shall maintain records of the following items for each exceedance of the limits in Conditions 7.1.3, 7.1.5, or 7.1.6, which shall include:

- i. Identification of the limit that may have been exceeded.
- ii. Duration of the possible exceedance.
- iii. An estimate of the amount of emissions in excess of the applicable standard.
- iv. A description of the cause of the possible exceedance.
- v. When compliance was reestablished.

7.1.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of an affected benzene storage tank with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

- a. The affected benzene storage tanks are subject to 40 CFR 61 Subpart Y, which requires the Permittee to fulfill the following reporting requirements:
 - i. The Permittee shall submit a report describing the results of each inspection conducted in accordance with Condition 7.1.8 (40 CFR 61.272(a)). For vessels for which annual inspections are required under Condition 7.1.8(b) (40 CFR 61.272(a)(2)), each report is to be submitted within 60 days of each annual inspection [40 CFR 61.275(a)].
 - A. Each report shall include the date of the inspection of each storage vessel and identify each storage vessel in which [40 CFR 61.275(a)(1)]:
 1. The internal floating roof is not resting on the surface of the benzene liquid inside the storage vessel, or there is liquid on the roof, or the seal is detached from the internal floating roof, or there are holes, tears or other openings in the seal or

seal fabric [40 CFR 61.275(a)(1)(i)];
or

2. There are visible gaps between the seal and the wall of the storage vessel [40 CFR 61.275(a)(1)(ii)].
- B. Where an annual report identifies any condition in paragraph (a)(i) of this Condition the annual report shall describe the nature of the defect, the date the storage vessel was emptied, and the nature of and date the repair was made, except as provided in paragraph (a)(iii) of this section [40 CFR 61.275(a)(2)].
 - C. If an extension is requested in an annual periodic report in accordance with Condition 7.1.8(b) (40 CFR 61.272(a)(2)), a supplemental periodic report shall be submitted within 15 days of repair. The supplemental periodic report shall identify the vessel and describe the date the storage vessel was emptied and the nature of and date the repair was made [40 CFR 61.275(a)(3)].
- ii. The owner or operator of each storage vessel to which this subpart applies after installing control equipment in accordance with Condition 7.1.3(c) (40 CFR 61.271(a)) (fixed roof and internal floating roof) shall submit a report describing the results of each inspection conducted in accordance with Condition 7.1.8(c) or (d) (40 CFR 61.272(a)(3) and (4)) [40 CFR 61.275(b)].
 - A. The report is to be submitted within 60 days of conducting each inspection required by Condition 7.1.8(c) or (d) (40 CFR 61.272(a)(3) and (4)) [40 CFR 61.275(b)(1)].
 - B. Each report shall identify each storage vessel in which the owner or operator finds that the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or

the secondary seal (if one has been installed) has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area. The report shall also describe the nature of the defect, the date the storage vessel was emptied, and the nature of and date the repair was made [40 CFR 61.275(b)(2)].

- iii. Any owner or operator of an existing storage vessel which had an internal floating roof with a continuous seal as of July 28, 1988, and which seeks to comply with the requirements of Condition 7.1.3(c)(v) (40 CFR 61.271(a)(5)) during the first time after September 14, 1989, when the vessel is emptied and degassed but no later than 10 years from September 14, 1989, shall notify the Illinois EPA 30 days prior to the completion of the installation of such controls and the date of refilling of the vessel so the Illinois EPA has an opportunity to have an observer present to inspect the storage vessel before it is refilled. This report can be combined with the one required by paragraph (b)(ii) of this Condition [40 CFR 61.275(c)].

- b. The Permittee shall notify the Illinois EPA within 30 days of exceedance of the limits in Conditions 7.1.3, 7.1.5, or 7.1.6. The notification shall include:
 - i. Identification of the limit that may have been exceeded.
 - ii. Duration of the possible exceedance.
 - iii. An estimate of the amount of emissions in excess of the applicable standard.
 - iv. A description of the cause of the possible exceedance.
 - v. When compliance was reestablished.

- c. The Permittee shall submit the following information along with its annual emission report;
 - i. The annual emissions of benzene from the affected benzene storage tanks for each month of the previous calendar year, to demonstrate compliance with Condition 7.1.6, (tons/month and tons/year, e.g., for the month of January, the emissions from February, of the preceding calendar year through January, for the month of February, the emissions from March of the preceding calendar year through February, 12 months in all).
 - ii. A summary of exceedances of the limits in Conditions 7.1.3, 7.1.5, or 7.1.6, if any, which required notification to the Compliance Section in accordance with Condition 7.1.10(b).

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to affected storage tanks without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

None

7.1.12 Compliance Procedures

- a. Compliance with Condition 7.1.3(c) (40 CFR 61.271(a)) shall be determined by the monitoring requirements in Condition 7.1.8 (40 CFR 61.272(a)) and the recordkeeping requirements in Condition 7.1.9(a).
- b. Compliance with the requirements of Condition 7.1.3(e) shall be determined by the following procedure:
 - i. Qualification for the exemption from the control requirements and emission limits of Condition 7.1.3(e) in 7.1.3(e)(iii) shall be determined by the recordkeeping requirements in Condition 7.1.9(d).

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- ii. For affected storage tanks containing VOL with a vapor pressure of 2.5 psia or greater, compliance with the permanent submerged loading pipe requirements in Condition 7.1.3(e) shall be determined by the recordkeeping requirements in Condition 7.1.9(b) and (c).

- c. Compliance with Condition 7.1.6 shall be determined by the recordkeeping requirements in Condition 7.1.9(c) and the compliance procedure in Condition 7.1.12(d).

- d. Emissions from the affected benzene storage tanks shall be determined using the latest version of the TANKS computer software.

7.2 Fixed Roof Storage Tanks Less than 40,000 Gallons

7.2.1 Description

The Permittee operates fixed roof storage tanks, each with a capacity less than 40,000 gallons which store various chemical products.

7.2.2 List of Emission Units and Air Pollution Control Equipment

| Emission Unit | Description | Emission Control Equipment |
|---|--|----------------------------|
| Storage Tanks: 1109, 1209, 3103, 3106, 3109, 3110, 3203, 3206, 3209, 3210, 3303, 3306, 3309, 3310, 3403, 3410, 5000 | Fixed Roof Storage Tanks Under 40,000 Gallons | None |

7.2.3 Applicability Provisions and Applicable Regulations

- a. The "affected storage tanks" for the purpose of these unit-specific conditions, are the storage tanks described in Conditions 7.2.1 and 7.2.2.
- b. Each affected storage tank is subject to the emission limits identified in Condition 5.2.2.
- c. Each affected storage tank is subject to 35 IAC 218.122 which provides that:
 - i. The Permittee shall not discharge more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere during the loading of any organic material from the aggregate loading pipes of any loading area having through-put of greater than 151 cubic meters per day (40,000 gal/day) into any railroad tank car, tank truck or trailer unless such loading area is equipped with submerged loading pipes or a device that is equally effective in controlling emissions and is approved by the Illinois EPA according to the provisions of 35 IAC 201, and further processed consistent with 35 IAC 218.108 [35 IAC 218.122(a)].

- ii. The Permittee shall not load any organic material into any stationary tank having a storage capacity of greater than 946 l (250 gal), unless such tank is equipped with a permanent submerged loading pipe or an equivalent device approved by the Illinois EPA according to the provisions of 35 IAC 201, and further processed consistent with 35 IAC 218.108 unless such tank is a pressure tank as described in 35 IAC 218.121(a) or is fitted with a recovery system as described in 35 IAC 218.121(b)(2) [35 IAC 218.122(b)].
- iii. Exception: If no odor nuisance exists the limitations of Conditions 7.2.3(c)(i) and (ii) shall only apply to the loading of VOL with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3°K (70°F) [35 IAC 218.122(c)].

7.2.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected storage tanks not being subject to the New Source Performance Standards (NSPS) for Storage Vessels for Petroleum Liquids, 40 CFR Part 60, Subpart K and Ka because no affected storage tank has a capacity greater than 40,000 gallons.
- b. This permit is issued based on the affected storage tanks not being subject to the New Source Performance Standards (NSPS) for Volatile Organic Liquid Storage Vessels, 40 CFR Part 60, Subpart Kb because no affected storage tank has a capacity greater than 40,000 and no affected storage tank constructed after July 23, 1984 with a capacity greater than 20,000 gallons stores a liquid with a maximum true vapor pressure greater than 2.17 psia.
- c. This permit is issued based on the affected storage tanks not being subject to 35 IAC 218.120 pursuant to 35 IAC 218.119, because each affected storage tank has a capacity less than 40,000 gallons

7.2.5 Operational and Production Limit and Work Practices

- a. No affected storage tank constructed after July 23, 1984 with a capacity greater than 20,000 gallons shall store a liquid with a maximum true vapor pressure greater than 2.17 psia. This limit is to ensure that no affected

storage tank is subject to the requirements of 40 CFR 60,
Subpart Kb.

7.2.6 Emission Limitations

There are no specific emission limitations for these units,
however, there are source wide emission limitations in
Condition 5.5 that include this unit.

7.2.7 Operating Requirements

None

7.2.8 Inspection Requirements

None

7.2.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected storage tank to demonstrate compliance with Conditions 5.5.1, 7.2.3, 7.2.5, and 7.2.6 pursuant to Section 39.5(7)(b) of the Act:

- a. The Permittee shall maintain records of the following items to demonstrate compliance with Condition 7.2.3(c):
 - i. The vapor pressure of each VOL at 70°F in each affected storage tank.
 - ii. Design information for the tank showing the presence of a permanent submerged loading pipe.
 - iii. Maintenance and repair records for the tank, as related to the repair or replacement of a loading pipe.
- b. The Permittee shall maintain records of the maximum true vapor pressure of each liquid stored in each affected tank to show compliance with Condition 7.2.5(a).
- c. Pursuant to 40 CFR 60.116b(b), the Permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel for each affected storage tank with a capacity greater than greater than 20,000 gallons and constructed after July 23, 1984.
- d. The Permittee shall maintain records of the following items for each exceedance of the limits in Conditions 7.2.3, 7.2.5, or 7.2.6, which shall include:
 - i. Identification of the limit that may have been exceeded.
 - ii. Duration of the possible exceedance.

- iii. An estimate of the amount of emissions in excess of the applicable standard.
- iv. A description of the cause of the possible exceedance.
- v. When compliance was reestablished.

7.2.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of an affected storage tank with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

- a. The Permittee shall notify the Illinois EPA within 30 days of exceedance of the limits in Conditions 7.2.3, 7.2.5, or 7.2.6. The notification shall include:
 - i. Identification of the limit that may have been exceeded.
 - ii. Duration of the possible exceedance.
 - iii. An estimate of the amount of emissions in excess of the applicable standard.
 - iv. A description of the cause of the possible exceedance.
 - v. When compliance was reestablished.
- b. The Permittee shall submit the following information along with its annual emission report;
 - i. A summary of exceedances of the limits in Conditions 7.2.3, 7.2.5, or 7.2.6, if any, which required notification to the Compliance Section in accordance with Condition 7.2.10(a).

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to affected storage tanks

without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

Changes in the material stored in a tank, provided the tank continues to comply with the Conditions in Section 7.2 of this permit.

7.2.12 Compliance Procedures

- a. Compliance with the requirements of Condition 7.2.3(c) shall be determined by the following procedure:
 - i. Qualification for the exemption from the control requirements and emission limits of Condition 7.2.3(c) in 7.2.3(c)(iii) shall be determined by the recordkeeping requirements in Condition 7.2.9(a)(i).
 - ii. For affected storage tanks containing VOL with a vapor pressure of 2.5 psia or greater, compliance with the permanent submerged loading pipe requirements in Condition 7.2.3(c) shall be determined by the recordkeeping requirements in Condition 7.2.9(a)(ii) and (iii).
- b. Compliance with the requirements of Condition 7.2.5(a) shall be determined by the recordkeeping requirements in Condition 7.2.9(b).
- c. Emissions from the affected storage tanks shall be determined using the latest version of the TANKS computer software.

7.3 Fixed Roof Storage Tanks Greater Than 40,000 Gallons

7.3.1 Description

The Permittee operates fixed roof storage tanks, each with a capacity greater than 40,000 gallons which store various chemical products with a maximum true vapor pressure less than 0.75 psia.

7.3.2 List of Emission Units and Air Pollution Control Equipment

| Emission Unit | Description | Emission Control Equipment |
|---|---|----------------------------|
| Storage Tank Nos.: 1101, 1102, 1103, 1104, 1201, 1202, 1203, 1204, 1206, 1301, 1302, 1303, 1307, 1401, 1402, 1403, 1404, 1406, 2001, 2100, 2101, 2102, 2200, 2201, 2301, 2400, 2401, 3102, 3104, 3105, 3107, 3108, 3202, 3205, 3208, 3302, 3304, 3305, 3307, 3308, 3400, 3401, 3402, 3405, 3406, 3409, 3501, 3502, 3503, 3504, 3505, 3506, 3507, 3509, 3601, 5001, S1, S2, S3, S4 | Fixed Roof Storage Tanks Over 40,000 Gallons | None |

7.3.3 Applicability Provisions and Applicable Regulations

- a. The "affected storage tanks" for the purpose of these unit-specific conditions, are the storage tanks described in Conditions 7.3.1 and 7.3.2.
- b. Each affected storage tank is subject to the emission limits identified in Condition 5.2.2.

7.3.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected storage tanks not being subject to the New Source Performance Standards (NSPS) for Storage Vessels for Petroleum Liquids, 40 CFR Part 60, Subpart K and Ka because no affected storage tank contains a petroleum liquid with a maximum true vapor pressure greater than 1.5 psia.
- b. This permit is issued based on the affected storage tanks not being subject to the New Source Performance Standards (NSPS) for Volatile Organic Liquid Storage Vessels, 40 CFR Part 60, Subpart Kb because no affected storage tank constructed after July 23, 1984 contains a VOL with a maximum true vapor pressure greater than 0.5 psia.
- c. This permit is issued based on the affected storage tanks not being subject to 35 IAC 218.120 pursuant to 35 IAC 218.119, because no affected storage tank contains a VOL with a maximum true vapor pressure greater than 0.75 psia.
- d. This permit is issued based on the affected storage tanks not being subject to 35 IAC 218.122, because no affected storage tank contains a VOL with a vapor pressure greater than 2.5 psia at 70° F.
- e. This permit is issued based on the affected storage tanks not being subject to 35 IAC 218.121 because no affected storage tank contains a VOL with a vapor pressure greater than 1.5 psia at 70° F.

7.3.5 Operational and Production Limits and Work Practices

- a. No affected storage tank shall store a VOL with a maximum true vapor pressure greater than 0.75 psia. This limit is to ensure that no affected storage tank is subject to the requirements of 40 CFR 60, Subpart K and Ka, and 35 IAC 218.120, 121, and 122.
- b. No affected storage tank constructed after July 23, 1984 shall store a VOL with a maximum true vapor pressure greater than 0.5 psia. This limit is to ensure that no affected storage tank is subject to the requirements of 40 CFR 60, Subpart Kb.

7.3.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected storage tanks are subject to the following:

Emissions and operations of the below listed affected storage tank shall not exceed the following limits:

| Tank Designation | Emissions of VOM | |
|------------------|------------------|-----------------|
| | <u>(lb/hr)</u> | <u>(ton/yr)</u> |
| 2001 | 0.05 | 0.22 |
| 5001 | 0.1 | 0.44 |

These limits are based on the maximum annual throughput of the tank and calculations using TANKS computer software.

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

The above limitations were established in Permits 94070083 and 91010075, pursuant to 35 IAC Part 203. These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203 [T1].

7.3.7 Testing Requirements

None

7.3.8 Monitoring Requirements

None

7.3.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected storage tank to demonstrate compliance with Conditions 5.5.1 and 7.3.5 pursuant to Section 39.5(7)(b) of the Act:

- a. The Permittee shall maintain records of the maximum true vapor pressure of each liquid stored in each affected tank to show compliance with Condition 7.3.5(a) and (b).
- b. The Permittee shall maintain records of the following items to show compliance with Condition 7.3.6:
 - i. Monthly records of the throughput of tank #2001 and #5001, tons/month and tons/year.
 - ii. Monthly records of VOM emissions from tank #2001 and #5001 as calculated by the procedure in Condition 7.3.12(b), tons/month and tons/year.
- c. The Permittee shall maintain records of the following items for each exceedance of the limits in Conditions 7.3.3, 7.3.5, or 7.3.6, which shall include:
 - i. Identification of the limit that may have been exceeded.
 - ii. Duration of the possible exceedance.
 - iii. An estimate of the amount of emissions in excess of the applicable standard.
 - iv. A description of the cause of the possible exceedance.
 - v. When compliance was reestablished.

7.3.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of an affected storage tank with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

- a. The Permittee shall notify the Illinois EPA within 30 days of exceedance of the limits in Conditions 7.3.3, 7.3.5, or 7.3.6. The notification shall include:
 - i. Identification of the limit that may have been exceeded.

- ii. Duration of the possible exceedance.
 - iii. An estimate of the amount of emissions in excess of the applicable standard.
 - iv. A description of the cause of the possible exceedance.
 - v. When compliance was reestablished.
- b. The Permittee shall submit the following information along with its annual emission report;
- i. The annual emissions of VOM from tank #2001 and #5001 for each month of the previous calendar year, to demonstrate compliance with Condition 7.3.6, (tons/month and tons/year, e.g., for the month of January, the emissions from February, of the preceding calendar year through January, for the month of February, the emissions from March of the preceding calendar year through February, 12 months in all).
 - ii. A summary of exceedances of the limits in Conditions 7.3.3, 7.3.5, or 7.3.6, if any, which required notification to the Compliance Section in accordance with Condition 7.3.10(a).

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to affected storage tanks without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

Changes in the material stored in a tank, provided the tank continues to comply with the Conditions in Section 7.3 of this permit.

7.3.12 Compliance Procedures

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- a. Compliance with the requirements of Conditions 7.3.5(a) and (b) shall be determined by the recordkeeping requirements in Condition 7.3.9(a).
- b. Compliance with the emission limits in Condition 7.3.6 shall be demonstrated by the recordkeeping requirements in Condition 7.3.9(b) and the compliance procedures described in Condition 7.3.12(c).
- c. Emissions from the affected storage tanks shall be determined using the latest version of the TANKS computer software.

7.4 Storage Tanks Controlled by Internal Floating Roof Constructed Before July 23, 1984

7.4.1 Description

The Permittee operates internal floating roof storage tanks constructed before July 23, 1984, each with a capacity greater than 40,000 gallons which store various chemical products with a maximum true vapor pressure above 0.75 psia. The storage tanks are equipped with an internal floating roof to control emissions of VOM.

7.4.2 List of Emission Units and Air Pollution Control Equipment

| Emission Unit | Description | Emission Control Equipment |
|--|--|----------------------------|
| Storage Tank Nos.: 1503, 3101, 3201, 3204, 3207, 3301, 3404, 3407, 3408 | Internal Floating Roof Storage Tanks | Internal Floating Roof |

7.4.3 Applicability Provisions and Applicable Regulations

- a. The "affected storage tanks" for the purpose of these unit-specific conditions, are the storage tanks described in Conditions 7.4.1 and 7.4.2.
- b. Each affected storage tank is subject to the emission limits identified in Condition 5.2.2.
- c. Each affected storage tank is subject to 35 IAC 218.122 which provides that:
 - i. The Permittee shall not discharge more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere during the loading of any organic material from the aggregate loading pipes of any loading area having through-put of greater than 151 cubic meters per day (40,000 gal/day) into any railroad tank car, tank truck or trailer unless such loading area is equipped with submerged loading pipes or a device that is equally effective in controlling emissions and is approved by the Illinois EPA according to the provisions of 35 IAC 201, and further processed consistent with 35 IAC 218.108 [35 IAC 218.122(a)].

- ii. The Permittee shall not load any organic material into any stationary tank having a storage capacity of greater than 946 l (250 gal), unless such tank is equipped with a permanent submerged loading pipe or an equivalent device approved by the Illinois EPA according to the provisions of 35 IAC 201, and further processed consistent with 35 IAC 218.108 unless such tank is a pressure tank as described in 35 IAC 218.121(a) or is fitted with a recovery system as described in 35 IAC 218.121(b)(2) [35 IAC 218.122(b)].
 - iii. Exception: If no odor nuisance exists the limitations of Conditions 7.4.3(c)(i) and (ii) shall only apply to the loading of VOL with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3°K (70°F) [35 IAC 218.122(c)].
- d. Each affected storage tank is subject to the requirements of 35 IAC 218.120(a)(1) which provides that:

Each vessel storing VOL that has a volume of 40,000 gallons or greater with a maximum true vapor pressure equal to 0.75 psia but less than 11.1 psia shall reduce VOM emissions from storage tanks, reservoirs, or other containers by equipping each fixed roof tank with an internal floating roof that meets the following specifications:

- i. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied and subsequently refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible [35 IAC 218.120 (a)(1)(A)].
- ii. Each internal floating roof shall be equipped with one of the following closure devices between the

wall of the storage vessel and the edge of the internal floating roof [35 IAC 218.120(a)(1)(B)]:

- A. A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank [35 IAC 218.120(a)(1)(B)(i)];
 - B. Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous [35 IAC 218.120(a)(1)(B)(ii)]; or
 - C. A mechanical shoe seal, which is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof [35 IAC 218.120(a)(1)(B)(iii)].
- iii. Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface [35 IAC 218.120(a)(1)(C)].
 - iv. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use [35 IAC 218.120(a)(1)(D)].

- v. Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports [35 IAC 218.120(a)(1)(E)].
- vi. Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting [35 IAC 218.120(a)(1)(F)].
- vii. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening [35 IAC 218.120(a)(1)(G)].
- viii. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover [35 IAC 218.120(a)(1)(H)].

7.4.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected storage tanks not being subject to the New Source Performance Standards (NSPS) for Storage Vessels for Volatile Organic Liquid Storage Vessels, 40 CFR Part 60, Subpart Kb, because the affected storage tanks were constructed prior to July 23, 1984.
- b. This permit is issued based on each affected storage tank not being subject to 35 IAC 218.121 and 35 IAC 218.123, because the affected storage tanks do not contain VPL, as defined in 35 IAC 211.7170.
- c. This permit is issued based on the affected storage tanks not being subject to the New Source Performance Standards (NSPS) for Storage Vessels for Petroleum Liquids, 40 CFR Part 60, Subparts K and Ka, because the affected storage tanks do not contain petroleum liquids.

7.4.5 Operational and Production Limits and Work Practices

- a. The Permittee shall not store any VOL with a maximum true vapor pressure equal to or greater than 11.1 psia in an affected storage tank. This limit ensures that no affected storage tank is subject to the requirements of 35 IAC 218.120(b).
- b. The Permittee shall not store any material designated as a petroleum liquid, as defined in 35 IAC 211.4610, in an affected storage tank. These limits ensure that no affected storage tank is subject to the requirements of 40 CFR Part 60, Subparts K and Ka, 35 IAC 218.121, and 35 IAC 218.123.

7.4.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected storage tanks are subject to the following:

- a. Emissions and operations of the below listed affected storage tank shall not exceed the following limits:

| <u>Tank Designation</u> | <u>Annual Throughput (gal/year)</u> | <u>Emissions of VOM (ton/year)</u> |
|-------------------------|---|--|
| #3301 | 600,000 | 0.48 |

These limits are based on the maximum annual throughput of the tank and calculations using TANKS computer software.

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

The above limitations were established in Permit 96010047, pursuant to 35 IAC Part 203. These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203 [T1].

- b. Emissions and operations of the below listed affected storage tank shall not exceed the following limits:

| <u>Tank Designation</u> | <u>Emissions of VOM</u> | |
|-------------------------|-------------------------|-----------------|
| | <u>(lb/hr)</u> | <u>(ton/yr)</u> |
| #3101 | 0.1 | 0.44 |

These limits are based on the maximum annual throughput of the tank and calculations using TANKS computer software.

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

The above limitations were established in Permit 96110068, pursuant to 35 IAC Part 203. These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203 [T1].

7.4.7 Testing Requirements

None

7.4.8 Monitoring Requirements

The Permittee shall fulfill the applicable monitoring and procedural requirements of 35 IAC 218.127(a) for each affected tank as follows:

- a. Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service) prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the Permittee shall repair the items before filling the storage vessel [35 IAC 218.127(a)(1)].
- b. For vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the

fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or if there is liquid accumulated on the roof, or if the seal is detached, or if there are holes or tears in the seal fabric, the Permittee shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this subsection cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, the Permittee may request a 30-day extension from the Illinois EPA in the inspection report required in Condition 7.4.10(a)(i) (35 IAC 218.129(a)(3)). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the Permittee will take that will assure that the control equipment will be repaired or the vessel will be emptied within 30 days [35 IAC 218.127(a)(2)].

- c. For vessels equipped with both primary and secondary seals [35 IAC 218.127(a)(3)]:
 - i. Visually inspect the vessel as specified paragraph (d) of this Condition at least every 5 years [35 IAC 218.127(a)(3)(A)]; or
 - ii. Visually inspect the vessel as specified in paragraph (b) of this Condition [35 IAC 218.127(a)(3)(B)].
- d. Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes, and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal, or if the seal fabric or the secondary seal has holes, tears, or other openings in the seal, or if the seal fabric or the gaskets no longer close off the liquid surfaces from the atmosphere, or if the slotted membrane has more than 10 percent open area, the Permittee shall repair the items as necessary so that none of the conditions specified in this subsection exists before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting

the annual visual inspection as specified in paragraphs (b) and (c)(ii) of this Condition and at intervals no greater than 5 years in the case of vessels specified in paragraph (c)(i) of this Condition [35 IAC 218.127(a)(4)].

- e. Notify the Illinois EPA in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs (a) and (d) of this Condition to afford the Illinois EPA the opportunity to have an observer present. If the inspection required by paragraph (d) of this Condition is not planned and the Permittee could not have known about the inspection 30 days in advance of refilling the tank, the Permittee shall notify the Illinois EPA at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Illinois EPA at least 7 days prior to the refilling [35 IAC 218.127(a)(5)].

7.4.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected storage tank to demonstrate compliance with Conditions 5.5.1, 7.4.3, 7.4.5, and 7.4.6 pursuant to Section 39.5(7)(b) of the Act:

- a. The Permittee shall maintain records of the following items to demonstrate compliance with Condition 7.4.3(c):
 - i. The vapor pressure of each VOL at 70°F in each affected storage tank.
 - ii. Design information for the tank showing the presence of a permanent submerged loading pipe.
 - iii. Maintenance and repair records for the tank, as related to the repair or replacement of a loading pipe.

- b. The Permittee shall fulfill the applicable recordkeeping requirements of 35 IAC 218.129(a) for each effected storage tank as follows:
 - i. Furnish the Illinois EPA with a report that describes the control equipment and certifies that the control equipment meets the specifications of Conditions 7.4.3(d) (35 IAC 218.120(a)(1)) and 7.4.8(a) (35 IAC 218.127(a)(1)) [35 IAC 218.129(a)(1)].
 - ii. Keep a record of each inspection performed as required by Condition 7.4.8 (35 IAC 218.127(a)). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings) [35 IAC 218.129(a)(2)].
- c. The Permittee shall maintain records of the following items to demonstrate compliance with Condition 7.4.5(a) and (b):
 - i. The maximum true vapor pressure of each material stored in each affected storage tank.
 - ii. The chemical name of each material stored in each affected storage tank.
- d. The Permittee shall maintain records of the following items to show compliance with Condition 7.4.6:
 - i. Monthly records of the throughput of tank #3101 and #3301, tons/month and tons/year.
 - ii. Monthly records of VOM emissions from tank #3101 and #3301 as calculated by the procedure in Condition 7.4.12(e), tons/month and tons/year.
- e. The Permittee shall maintain records of the following items for each exceedance of the limits in Conditions 7.4.3, 7.4.5, or 7.4.6, which shall include:
 - i. Identification of the limit that may have been exceeded.

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- ii. Duration of the possible exceedance.
- iii. An estimate of the amount of emissions in excess of the applicable standard.
- iv. A description of the cause of the possible exceedance.
- v. When compliance was reestablished.

7.4.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of an affected storage tank with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

- a. The Permittee shall fulfill the applicable reporting requirements of 35 IAC 218.129(a) for each affected storage tank as follows:
 - i. If any of the conditions described in Condition 7.4.8(b) (35 IAC 218.127(a)(2)) are detected during the annual visual inspection required by Condition 7.4.8(b) (35 IAC 218.127(a)(2)), report to the Illinois EPA within 30 days after the inspection the identity of the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made [[35 IAC 218.129(a)(3)]; and
 - ii. After each inspection required by Condition 7.4.8(c) (35 IAC 218.127(a)(3)) where 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) (35 IAC 218.127(a)(3)(B)) are discovered, report to the Illinois EPA within 30 days after the inspection the identity of the storage vessel and the reason it did not meet the specifications of Conditions 7.4.3(d) (35 IAC 218.120(a)(1)) or 7.4.8 (35 IAC 218.127(a)), and list each repair made [35 IAC 218.129(a)(4)].
- b. The Permittee shall notify the Illinois EPA within 30 days of exceedance of the limits in Conditions 7.4.3, 7.4.5, or 7.4.6. The notification shall include:
 - i. Identification of the limit that may have been exceeded.
 - ii. Duration of the possible exceedance.

- iii. An estimate of the amount of emissions in excess of the applicable standard.
 - iv. A description of the cause of the possible exceedance.
 - v. When compliance was reestablished.
- c. The Permittee shall submit the following information along with its annual emission report;
- i. The annual emissions of VOM from tank #3101 and #3301 for each month of the previous calendar year, to demonstrate compliance with Condition 7.4.6, (tons/month and tons/year, e.g., for the month of January, the emissions from February, of the preceding calendar year through January, for the month of February, the emissions from March of the preceding calendar year through February, 12 months in all).
 - ii. A summary of exceedances of the limits in Conditions 7.4.3, 7.4.5, or 7.4.6, if any, which required notification to the Compliance Section in accordance with Condition 7.4.10(b).

7.4.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to affected storage tanks without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

Changes in the material stored in a tank, provided the tank continues to comply with the Conditions in Section 7.4 of this permit.

7.4.12 Compliance Procedures

- a. Compliance with the requirements of Condition 7.4.3(c) shall be determined by the following procedure:

- i. Qualification for the exemption from the control requirements and emission limits of Condition 7.4.3(c) in 7.4.3(c)(iii) shall be determined by the recordkeeping requirements in Condition 7.4.9(a)(i).
- ii. For affected storage tanks containing VOL with a vapor pressure of 2.5 psia or greater, compliance with the permanent submerged loading pipe requirements in Condition 7.4.3(c) shall be determined by the recordkeeping requirements in Condition 7.4.9(a)(ii) and (iii).
- b. Compliance with the requirements of Condition 7.4.3(d) (35 IAC 218.120(a)(1)) shall be demonstrated by the monitoring requirements in Condition 7.4.8 (35 IAC 218.127(a)) and the recordkeeping requirements in Condition 7.4.9(b) (35 IAC 218.129(a)).
- c. Compliance with the requirements of Condition 7.4.5(a) and (b) shall be demonstrated the recordkeeping requirements in Condition 7.4.9(c).
- d. Compliance with the emission limits in Condition 7.4.6 shall be demonstrated by the recordkeeping requirements in Condition 7.4.9(d) and the compliance procedures described in Condition 7.4.12(e).
- e. Emissions from the affected storage tanks shall be determined using the latest version of the TANKS computer software.

7.5 Steam Generation Boilers

7.5.1 Description

Two natural gas-fired boilers are used to produce steam at the source.

7.5.2 List of Emission Units and Air Pollution Control Equipment

| Emission Unit | Description | Emission Control Equipment |
|---------------|---|----------------------------|
| Boiler #1 | Maximum Firing Rate: 44.8 MBtu/hr Natural Gas Fired | None |
| Boiler #2 | Maximum Firing Rate: 44.8 MBtu/hr Natural Gas Fired | None |

7.5.3 Applicability Provisions and Applicable Regulations

- a. An "affected boiler" for the purpose of these unit-specific conditions, are the equipment described in Conditions 7.5.1 and 7.5.2.
- b. Each affected boiler is subject to the emission limits identified in Condition 5.2.2.
- c. Each affected boiler is subject to 35 IAC 216.121, which provides:

No person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hr) to exceed 200 ppm, corrected to 50 percent excess air.

7.5.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on each affected boiler not being subject to 40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units because each affected boiler was constructed before June 9, 1989.
- b. Each affected boiler is not subject to 35 IAC 217.141, emissions of NO_x from existing fuel combustion emission

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units in major metropolitan areas, because the actual
heat input of each affected boiler is less than 73.2 MW
(250 MBtu/hr).

- c. Pursuant to 35 IAC 218.303, fuel combustion emission units are not subject to 35 IAC 218.301, Use of Organic Material.

7.5.5 Operational and Production Limits and Work Practices

- a. The affected boilers shall only be operated with natural gas as the fuel.

7.5.6 Emission Limitations

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.5.7 Testing Requirements

None

7.5.8 Monitoring Requirements

None

7.5.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected boiler to demonstrate compliance with condition 5.5.1, 7.5.3 and 7.5.5, pursuant to Section 39.5(7)(b) of the Act:

- a. Total natural gas usage for the affected boilers (mmscf/year);
- b. The Permittee shall maintain records of the following items for each exceedance of the limits in Conditions 7.5.3, 7.5.5, or 7.5.6, which shall include:
 - i. Identification of the limit that may have been exceeded.
 - ii. Duration of the possible exceedance.
 - iii. An estimate of the amount of emissions in excess of the applicable standard.

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- iv. A description of the cause of the possible exceedance.
- v. When compliance was reestablished.

7.5.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of an affected boiler with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

- a. The Permittee shall notify the Illinois EPA within 30 days of exceedance of the limits in Conditions 7.5.3, 7.5.5, or 7.5.6. The notification shall include:
 - i. Identification of the limit that may have been exceeded.
 - ii. Duration of the possible exceedance.
 - iii. An estimate of the amount of emissions in excess of the applicable standard.
 - iv. A description of the cause of the possible exceedance.
 - v. When compliance was reestablished.
- b. The Permittee shall submit the following information along with its annual emission report;
 - i. A summary of exceedances of the limits in Conditions 7.5.3, 7.5.5, or 7.5.6, if any, which required notification to the Compliance Section in accordance with Condition 7.5.10(a).

7.5.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.5.12 Compliance Procedures

- a. Compliance with Conditions 7.5.3(c) is demonstrated under inherent operating conditions of the affected boilers, so that no compliance procedures are set in this permit addressing this requirement.
- b. Emissions from the affected boilers shall be determined

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based on the recordkeeping requirements in Condition
7.5.9 and the emission factors and formulas listed below:

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Emissions resulting from natural gas combustion shall be calculated based on the following emission factors:

| <u>Pollutant</u> | <u>Emission Factor</u> (lb/mmscf) |
|------------------|--------------------------------------|
| PM | 7.5 |
| NO _x | 100 |
| SO ₂ | 0.6 |
| VOM | 5.5 |

These are the AP-42 emission factors for uncontrolled natural gas combustion in small industrial boilers, chapter 1.4.

$$E_{ng} = ngc \times \frac{ef}{2,000}$$

Where:

- E_{ng} = Emissions from natural gas combustion (tons/year)
- ngc = Natural gas usage (mmscf/year)
- ef = Emission factor listed above (lb/mmscf)

7.6 Truck, Railcar, Ship, and Barge Transfer equipment controlled by Vapor Balance System and Flare

7.6.1 Description

The Permittee operates truck racks, railcar racks, and marine docks for transferring chemicals. The loading racks are used to fill transport vessels with various chemical products. Due to the loading of benzene, this equipment is subject to 40 CFR 61, Subpart BB, National Emission Standards for Benzene Emissions from Benzene Transfer Operations. The Permittee uses a vapor balance system and a flare to control emissions of VOM and HAPs.

7.6.2 List of Emission Units and Air Pollution Control Equipment

| Emission Unit | Description | Emission Control Equipment |
|--------------------------------------|---|--------------------------------|
| Truck and Railcar Transfer Equipment | Equipment Used for Truck and Railcar Chemical Transfers | None |
| Ship and Barge Transfer Equipment | Equipment Used for Marine Vessel Chemical Transfers | Vapor Balance System and Flare |

7.6.3 Applicability Provisions and Applicable Regulations

- a. The "affected transfer equipment" for the purpose of these unit-specific conditions, is the transfer equipment described in Conditions 7.6.1 and 7.6.2.
- b. The affected transfer equipment is subject to the emission limits identified in Condition 5.2.2.
- c. The affected transfer equipment is subject to 35 IAC 218.122 which provides that:
 - i. The Permittee shall not discharge more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere during the loading of any organic material from the aggregate loading pipes of any loading area having through-put of greater than 151 cubic meters per day (40,000 gal/day) into any railroad tank car, tank truck or trailer unless such loading area is equipped with submerged loading pipes or a device that is equally

effective in controlling emissions and is approved by the Illinois EPA according to the provisions of 35 IAC 201, and further processed consistent with 35 IAC 218.108 [35 IAC 218.122(a)].

- ii. The Permittee shall not load any organic material into any stationary tank having a storage capacity of greater than 946 l (250 gal), unless such tank is equipped with a permanent submerged loading pipe or an equivalent device approved by the Illinois EPA according to the provisions of 35 IAC 201, and further processed consistent with 35 IAC 218.108 unless such tank is a pressure tank as described in 35 IAC 218.121(a) or is fitted with a recovery system as described in 35 IAC 218.121(b)(2) [35 IAC 218.122(b)].
 - iii. Exception: If no odor nuisance exists the limitations of Conditions 7.6.3(c)(i) and (ii) shall only apply to the loading of VOL with a vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3°K (70°F) [35 IAC 218.122(c)].
- d. The affected transfer equipment is subject to 40 CFR 61, Subpart BB, National Emission Standards for Benzene Emissions from Benzene Transfer Operations. Pursuant to this Subpart, the affected transfer equipment shall comply with the control requirements in 40 CFR 61.302. These requirements are as follows:
- i. The Permittee shall equip each loading rack with a vapor collection system that is [40 CFR 61.302(a)]:
 - A. Designed to collect all benzene vapors displaced from tank trucks, railcars, or marine vessels during loading [40 CFR 61.302(a)(1)], and
 - B. Designed to prevent any benzene vapors collected at one loading rack from passing through another loading rack to the atmosphere [40 CFR 61.302(a)(2)].
 - ii. The Permittee shall install a control device and reduce benzene emissions routed to the atmosphere

through the control device by 98 weight percent [40 CFR 61.302(b)].

- iii. The Permittee shall operate any flare used to comply with paragraph (d)(ii) of this Condition in accordance with the requirements of 40 CFR 60.18(b) through (f) [40 CFR 61.302(c)].
- iv. The Permittee shall limit loading of benzene into vapor-tight tank trucks and vapor-tight railcars using the following procedures [40 CFR 61.302(d)]:
 - A. The owner or operator shall obtain the vapor-tightness documentation described in Condition 7.6.9(b)(vii) (40 CFR 61.305(h)) for each tank truck or railcar loaded at the affected facility. The test date in the documentation must be within the preceding 12 months. The vapor-tightness test to be used for tank trucks and railcars is method 27 of 40 CFR 60, appendix A [40 CFR 61.302(d)(1)].
 - B. The owner or operator shall cross-check the identification number for each tank truck or railcar to be loaded with the file of vapor-tightness documentation before the corresponding tank truck or railcar is loaded. If no documentation is on file, the owner or operator shall obtain a copy of the information from the tank truck or railcar operator before the tank truck or railcar is loaded [40 CFR 61.302(d)(2)].
 - C. Alternate procedures to those described in paragraphs (d)(iv)(A) and (d)(iv)(B) of this Condition may be used upon application to, and approval by, the Administrator [40 CFR 61.302(d)(3)].
- v. The Permittee shall limit the loading of marine vessels to those vessels that are vapor tight as determined by either paragraph (d)(v)(A), (d)(v)(B), (d)(v)(C), or (d)(v)(D) of this Condition [40 CFR 61.302(e)].

- A. The Permittee shall ensure that each marine vessel is loaded with the benzene product tank below atmospheric pressure (i.e., at negative pressure). If the pressure is measured at the interface between the shoreside vapor collection pipe and the marine vessel vapor line, the pressure measured according to the procedures in Condition 7.6.8(b) (40 CFR 61.303(f)) must be below atmospheric pressure [40 CFR 61.302(e)(1)].

- B. The Permittee shall use the following procedure to obtain the vapor-tightness documentation described in Condition 7.6.9(b)(vii) (40 CFR 61.305(h)). The vapor-tightness test for marine vessels is method 21 of 40 CFR 60, appendix A, and shall be applied to any potential sources of vapor leaks. A reading of 10,000 ppmv or greater as methane shall constitute a leak [40 CFR 61.302(e)(2)].
 - 1. The Permittee shall obtain the leak test documentation described in Condition 7.6.9(b)(vii) (40 CFR 61.305(h)) for each marine vessel prior to loading, if available. The date of the test listed in the documentation must be within the 12 preceding months [40 CFR 61.302(e)(2)(i)].

 - 2. If there is no documentation of a successful leak test conducted on the marine vessel in the preceding 12 months, the Permittee shall require that a leak test of the marine vessel be conducted during the final 20 percent of loading of the marine vessel or shall not load the vessel. The test shall be conducted when the marine vessel is being loaded at the maximum allowable loading rate [40 CFR 61.302(e)(2)(ii)].

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- a. If no leak is detected, the Permittee shall require that the documentation described in Condition 7.6.9(b)(vii) (40 CFR 61.305(h)) is completed prior to departure of the vessel. The owner or operator of the affected facility shall retain a copy of the vapor-tightness documentation on file [40 CFR 61.302(e)(2)(ii)(A)].
 - b. If any leak is detected, the Permittee shall require that the vapor-tightness failure be documented for the marine vessel owner or operator prior to departure of the vessel. The owner or operator of the affected facility shall retain a copy of the vapor-tightness documentation on file. Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without dry-docking the vessel. This equipment will be excluded from future method 21 tests until repairs are effected. Repair of this equipment shall occur the next time the vessel is dry-docked [40 CFR 61.302(e)(2)(ii)(B)].
3. If the marine vessel has failed its most recent vapor-tightness test as described in paragraph (d)(v)(B)(2) of this Condition the Permittee shall require that the owner or operator of the nonvapor-tight marine vessel provide documentation that the leaks detected during the previous vapor-tightness test have been repaired, or proof that repair is technically infeasible without dry-docking the vessel. Once the repair documentation

has been provided, the Permittee may load the marine vessel. The Permittee shall require that the vapor-tightness test described in paragraph (d)(v)(B)(2) of this Condition be conducted during loading, and shall retain a copy of the vapor-tightness documentation on file [40 CFR 61.302(e)(2)(iii)].

- C. The Permittee shall obtain a copy of the marine vessel's vapor-tightness documentation described in Condition 7.6.9(b)(vii) (40 CFR 61.305(h)) for a test conducted within the preceding 12 months in accordance with Condition 7.6.7(e) (40 CFR 61.304(f)) [40 CFR 61.302(e)(3)].
- D. Alternate procedures to those described in paragraph (d)(v)(A), (d)(v)(B), (d)(v)(C), or (d)(v)(D) of this Condition may be used upon application to, and approval by, the Illinois EPA [40 CFR 61.302(e)(4)].
- vi. The Permittee shall limit loading of benzene to tank trucks, railcars, and marine vessels equipped with vapor collection equipment that is compatible with the affected facility's vapor collection system [40 CFR 61.302(f)].
- vii. The Permittee shall limit loading of tank trucks, railcars, and marine vessels to tank trucks, railcars, and marine vessels whose collection systems are connected to the affected facility's vapor collection systems [40 CFR 61.302(g)].
- viii. The Permittee shall ensure that the vapor collection and benzene loading equipment of tank trucks and railcars shall be designed and operated to prevent gauge pressure in the tank truck or railcar tank from exceeding, during loading, the initial pressure the tank was pressured up to and shown to be vapor tight at during the most recent vapor-tightness test using method 27 of 40 CFR 60, appendix A. This vapor-tightness test pressure is not to be exceeded when measured by the procedures

specified in Condition 7.6.7(b) (40 CFR 61.304(c))
[40 CFR 61.302(h)].

- ix. The Permittee shall ensure that no pressure-vacuum vent in the affected facility's vapor collection system for tank trucks and railcars shall begin to open at a system pressure less than the maximum pressure at which the tank truck or railcar is operated [40 CFR 61.302(i)].
- x. The Permittee shall ensure that the maximum normal operating pressure of the marine vessel's vapor collection equipment shall not exceed 0.8 times the relief set pressure of the pressure-vacuum vents. This level is not to be exceeded when measured by the procedures specified in Condition 7.6.7(c) (40 CFR 61.304(d)) [40 CFR 61.302(j)].
- xi. The Permittee shall inspect the vapor collection system and the control device for detectable emissions, and shall repair any leaks detected, in accordance with Conditions 7.7.3(n)(v) and (iv) (40 CFR 61.242-11(e) and (f)). This inspection of the vapor collection system and control device shall be done during the loading of tank trucks, railcars, or marine vessels [40 CFR 61.302(k)].
- xii. Vent systems that contain valves that could divert a vent stream from a control device shall have car-sealed opened all valves in the vent system from the emission source to the control device, and car-sealed closed all valves in the vent system that would lead the vent stream to the atmosphere, either directly or indirectly, bypassing the control device [40 CFR 61.302(l)].

7.6.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected transfer equipment not being subject to 40 CFR Part 63 Subpart Y, National Emission Standards for Marine Tank Vessel Tank Loading Operations. The affected transfer equipment is exempted from this subpart because it is subject to 40 CFR Part 61, Subpart BB.

- b. This permit is issued based on the affected transfer equipment not being subject to 35 IAC 218 Subpart GG, because the affected transfer equipment does not load gasoline or crude oil into marine vessels, pursuant to 218.760.

7.6.5 Operational and Production Limits and Work Practices

- a. The affected transfer equipment shall not be used to load crude oil or gasoline. This limit is to ensure that the affected transfer equipment is not subject to the requirements of 35 IAC 218 Subpart GG.

7.6.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected transfer equipment is subject to the following:

- a. Annual throughput of benzene shall not exceed 90,000,000 gallons/year.
- b. Emissions from the affected transfer equipment shall not exceed the following limits:

Benzene Emissions
(Ton/year)

0.62

This limit is based on the maximum throughput of benzene.

Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total) [T1].

The above limitations were established in Permit 89080074, pursuant to 35 IAC Part 203. These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically 35 IAC Part 203 [T1].

7.6.7 Testing Requirements

Pursuant to 40 CFR 61 Subpart BB, the affected transfer equipment shall comply with the applicable testing requirements in 40 CFR 61.304. These requirements are as follows:

- a. A performance test according to method 22 of 40 CFR 60, appendix A, shall be performed on the flare to determine visible emissions. The observation period shall be at least 2 hours and shall be conducted according to method 22. Performance testing shall be conducted during at least three complete loading cycles with a separate test run for each loading cycle. The observation period for detecting visible emissions shall encompass each loading cycle. Integrated sampling to measure process vent stream flow rate shall be performed continuously during each loading cycle [40 CFR 61.304(b)].
- b. For the purpose of determining compliance with Condition 7.6.3(d)(viii) (40 CFR 61.302(h)), the following procedures shall be used [40 CFR 61.304(d)]:
 - i. Calibrate and install a pressure measurement device (liquid manometer, magnehelic gauge, or equivalent instrument), which has a precision of ± 2.5 mm H₂O in the range that the tank truck or railcar was initially pressured to during the most recent vapor-tightness test [40 CFR 61.304(c)(1)].
 - ii. Connect the pressure measurement device to a pressure tap in the affected facility's vapor collection system, located as close as possible to the connection with the tank truck or railcar [40 CFR 61.304(c)(2)].
 - iii. During the performance test, record the pressure every 5 minutes while a tank truck or railcar is being loaded, and record the highest instantaneous pressure that occurs during each loading cycle. Every loading rack shall be tested at least once during the performance test [40 CFR 61.304(c)(3)].
 - iv. If more than one loading rack is used simultaneously, then the performance test shall be conducted simultaneously to represent the maximum capacity [40 CFR 61.304(c)(4)].

- c. For the purpose of determining compliance with Condition 7.6.3(d)(x) (40 CFR 61.302(j)), the following procedure shall be used [40 CFR 61.304(d)]:
- i. Calibrate and install a pressure measurement device (liquid manometer, magnehelic gauge, or equivalent instrument), capable of measuring up to the relief set pressure of the pressure-vacuum vents [40 CFR 61.304(d)(1)].
 - ii. Connect the pressure measurement device to a pressure tap in the affected facility's vapor collection system, located as close as possible to the connection with the marine vessel [40 CFR 61.304(d)(2)].
 - iii. During the performance test, record the pressure every 5 minutes while a marine vessel is being loaded, and record the highest instantaneous pressure that occurs during each loading cycle [40 CFR 61.304(d)(3)].
- d. Immediately prior to a performance test required for determination of compliance with Condition 7.6.3(d)(ii) (40 CFR 61.302(b)), all potential sources of vapor leakage in the affected transfer equipment's vapor collections system equipment shall be inspected for detectable emissions as required in Condition 7.6.3(d)(xi) (40 CFR 61.302(k)). The monitoring shall be conducted only while a vapor-tight tank truck, railcar, or marine vessel is being loaded. All identified leaks in the terminal's vapor collection system shall be repaired prior to conducting the performance test [40 CFR 61.304(e)].
- e. The following test method shall be used to comply with the marine vessel vapor-tightness requirements of Condition 7.6.3(d)(v)(C) (40 CFR 61.302(e)(3)) [40 CFR 61.304(f)]:
- i. Each benzene product tank shall be pressurized with dry air or inert gas to not less than 1.0 psig and not more than the pressure of the lowest relief valve setting [40 CFR 61.304(f)(1)].

- ii. Once the pressure is obtained, the dry air or inert gas source shall be shut off [40 CFR 61.304(f)(2)].
- iii. At the end of one-half hour, the pressure in the benzene product tank and piping shall be measured. The change in pressure shall be calculated using the following formula:

$$DP = P_i - P_f$$

Where:

DP = Change in pressure, inches of water.

P_i = Pressure in tank when air/gas source is shut off, inches of water.

P_f = Pressure in tank at the end of one-half hour after air/gas source is shut off, inches of water [40 CFR 61.304(f)(3)].

- iv. The change in pressure, DP, shall be compared to the pressure drop calculated using the following formula:

$$DPM = 0.861 P_{ia} L/V$$

Where:

DPM = Maximum allowable pressure change, inches of water.

P_{ia} = Pressure in tank when air/gas source is shut off, pounds per square inch, absolute (psia).

L = Maximum permitted loading rate of vessel, barrels per hour.

V = Total volume of product tank, barrels [40 CFR 61.304(f)(4)].

- v. If DP < DPM, the vessel is vapor tight [40 CFR 61.304(f)(5)].

- vi. If $DP > DPM$, the vessel is not vapor tight and the source of the leak must be identified and repaired prior to retesting [40 CFR 61.304(f)(6)].

7.6.8 Monitoring Requirements

Pursuant to 40 CFR 61 Subpart BB, the affected transfer equipment shall comply with the applicable monitoring and inspection requirements in 40 CFR 61.303. These requirements are as follows:

- a. The Permittee shall install, calibrate, maintain, and operate according to manufacturer's specifications a heat-sensing device on the flare, such as an ultraviolet beam sensor or thermocouple, at the pilot light to indicate the presence of a flame during the entire loading cycle [40 CFR 61.303(b)].
- b. If the Permittee chooses to comply with Condition 7.6.3(d)(v)(A) (40 CFR 61.302(e)(1)), the Permittee shall install, calibrate, maintain, and operate a recording pressure measurement device (magnehelic gauge or equivalent device) and an audible and visible alarm system that is activated when the pressure vacuum specified in Condition 7.6.3(d)(v)(A) (40 CFR 61.302(e)(1)) is not attained. The Permittee shall place the alarm system so that it can be seen and heard where cargo transfer is controlled and on the open deck [40 CFR 61.303(f)].
- c. If a vent system is present that contains valves that could divert a vent stream from a control device used to comply with Condition 7.6.3(d) (40 CFR 61.302), the Permittee shall do one or a combination of the following [40 CFR 61.303(g)]:
 - i. Install a flow indicator immediately downstream of each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere. The flow indicator shall be capable of recording flow at least once every 15 minutes [40 CFR 61.303(g)(1)].
 - ii. Monitor the valves once a month, checking the position of the valves and the condition of the

car seal, and identify all times when the car seals have been broken and the valve position has been changed (i.e., from opened to closed for valves in the vent piping to the control device and from closed to open for valves that allow the stream to be vented directly or indirectly to the atmosphere) [40 CFR 61.303(g)(2)].

7.6.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected transfer equipment to demonstrate compliance with conditions 5.5.1, 7.6.3 and 7.6.6, pursuant to Section 39.5(7)(b) of the Act:

- a. The Permittee shall maintain records of the following items to demonstrate compliance with Condition 7.6.3(c):
 - i. Design information for the loading area showing the presence of a permanent submerged loading pipe.
 - ii. Maintenance and repair records for the loading area, as related to the repair or replacement of a loading pipe.
- b. Pursuant to 40 CFR 61 Subpart BB, the Permittee shall fulfill the applicable recordkeeping requirements of 40 CFR 61.305 for the affected transfer equipment as follows:
 - i. The Permittee shall keep an up-to-date, readily accessible record of the following data measured during each performance test, and also include the following data in the report of the initial performance test required under 40 CFR 61.13 [40 CFR 61.305(a)]:
 - A. When the Permittee is complying with Condition 7.6.3(d)(ii) and (iii) (40 CFR 61.302(b) and (c)) through use of a smokeless flare or other flare design (i.e., steam-assisted, air-assisted or nonassisted), all visible emission readings, heat content determination, flow rate measurements,

maximum permitted velocity calculations, and exit velocity determinations made during the performance test, continuous records of the flare pilot flame monitoring measured continuously during the loading cycle, duration of all loading cycles and records of all loading cycles during which the pilot flame is absent for each vent stream [40 CFR 61.305(a)(1)].

- B. The Permittee shall submit with the initial performance test an engineering report describing in detail the vent system used to vent each affected vent stream to a control device. This report shall include all valves and vent pipes that could vent the stream to the atmosphere, thereby bypassing the control device, and identify which valves are car-sealed opened and which valves are car-sealed closed [40 CFR 61.305(a)(5)].
- ii. The Permittee shall keep up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored under Condition 7.6.8(b) (40 CFR 61.303(f)) as well as up-to-date, readily accessible records of periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. The Illinois EPA may at any time require a report of these data [40 CFR 61.305(b)].
- iii. If a vent system containing valves that could divert the emission stream away from the control device is used, the Permittee shall keep for at least 2 years up-to-date, readily accessible continuous records of [40 CFR 61.305(c)]:
 - A. All periods when flow is indicated if flow indicators are installed under Condition 7.6.8(c)(i) (40 CFR 61.303(g)(1)) [40 CFR 61.305(c)(1)].
 - B. All times when maintenance is performed on car-sealed valves, when the car seal is broken, and when the valve position is

changed (i.e., from open to closed for valves in the vent piping to the control device and from closed to open for valves that vent the stream directly or indirectly to the atmosphere bypassing the control device) if valves are monitored under Condition 7.6.8(c)(ii) (40 CFR 61.303(g)(2)) [40 CFR 61.305(c)(2)].

- iv. The Permittee shall keep up-to-date, readily accessible records of the flare pilot flame monitoring specified under Condition 7.6.8(a) (40 CFR 61.303(b)), as well as up-to-date, readily accessible records of any absence of the pilot flame during a loading cycle [40 CFR 61.305(e)].
- v. The Permittee shall submit to the Illinois EPA quarterly reports of the following information. The owner or operator shall submit the initial report within 90 days after the effective date of this subpart or 90 days after startup for a source that has an initial startup date after the effective date [40 CFR 61.305(f)].
 - A. Periods of operation where there were exceedances of monitored parameters recorded under Condition 7.6.9(b)(ii) (40 CFR 61.305(b)) [40 CFR 61.305(f)(1)].
 - B. All periods recorded under Condition 7.6.9(b)(iii)(A) (40 CFR 61.305(c)(1)) when the vent stream is diverted from the control device [40 CFR 61.305(f)(2)].
 - C. All periods recorded under 7.6.9(b)(iv) (40 CFR 61.305(e)) in which the pilot flame of the flare was absent [40 CFR 61.305(f)(4)].
 - D. All times recorded under Condition 7.6.9(b)(iii)(B) (40 CFR 61.305(c)(2)) when maintenance is performed on car-sealed valves, when the car seal is broken, and when the valve position is changed [40 CFR 61.305(f)(5)].

- vi. The Permittee shall keep the vapor-tightness documentation required under Condition 7.6.3(d)(iv) and (v) (40 CFR 61.302(d) and (e)) on file at the affected facility in a permanent form available for inspection [40 CFR 61.305(g)].
- vii. The Permittee shall update the documentation file required under Condition 7.6.3(d)(iv) and (v) (40 CFR 61.302(d) and (e)) for each tank truck, railcar, or marine vessel at least once per year to reflect current test results as determined by the appropriate method. The Permittee shall include, as a minimum, the following information in this documentation [40 CFR 61.305(h)]:
 - A. Test title [40 CFR 61.305(h)(1)].
 - B. Tank truck, railcar, or marine vessel owner and address [40 CFR 61.305(h)(2)].
 - C. Tank truck, railcar, or marine vessel identification number [40 CFR 61.305(h)(3)].
 - D. Testing location [40 CFR 61.305(h)(4)].
 - E. Date of test [40 CFR 61.305(h)(5)].
 - F. Tester name and signature [40 CFR 61.305(h)(6)].
 - G. Witnessing inspector: name, signature, and affiliation [40 CFR 61.305(h)(7)].
 - H. Test results, including, for railcars and tank trucks, the initial pressure up to which the tank was pressured at the start of the test [40 CFR 61.305(h)(8)].
- c. The Permittee shall maintain records of the following items to demonstrate compliance with Condition 7.6.6:
 - i. Monthly records of the throughput of each material that loaded into trucks, railcars, and marine vessels by the affected transfer equipment (gallons/month and gallons/year).

- ii. A record of the true vapor pressure of each material loaded by the affected barge loading racks, psia.
 - iii. A record of the temperature of each material that is loaded by the affected barge loading racks, °F.
 - iv. A record of the chemical name of each material that is loaded into trucks, railcars, and marine vessels by the affected transfer equipment.
 - v. Monthly records of the emissions of benzene from the affected transfer equipment, as calculated by the procedure described in Condition 7.6.12(c).
- d. The Permittee shall maintain records of the following items for each exceedance of the limits in Conditions 7.6.3, 7.6.5, or 7.6.6, which shall include:
- i. Identification of the limit that may have been exceeded.
 - ii. Duration of the possible exceedance.
 - iii. An estimate of the amount of emissions in excess of the applicable standard.
 - iv. A description of the cause of the possible exceedance.
 - v. When compliance was reestablished.

7.6.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected transfer equipment with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

- a. The Permittee shall fulfill the following reporting requirements pursuant to 40 CFR 61.305(f):

The Permittee shall submit to the Illinois EPA quarterly reports of the following information. The owner or

operator shall submit the initial report within 90 days after the effective date of this subpart or 90 days after startup for a source that has an initial startup date after the effective date [40 CFR 61.305(f)].

- i. Periods of operation where there were exceedances of monitored parameters recorded under Condition 7.6.9(b)(ii) [40 CFR 61.305(f)(1)].
 - ii. All periods recorded under Condition 7.6.9(b)(iii)(A) when the vent stream is diverted from the control device [40 CFR 61.305(f)(2)].
 - iii. All periods recorded under 7.6.9(b)(iv) in which the pilot flame of the flare was absent [40 CFR 61.305(f)(4)].
 - iv. All times recorded under Condition 7.6.9(iii)(B) when maintenance is performed on car-sealed valves, when the car seal is broken, and when the valve position is changed [40 CFR 61.305(f)(5)].
- b. The Permittee shall notify the Illinois EPA within 30 days of exceedance of the limits in Conditions 7.6.3, 7.6.5, or 7.6.6. The notification shall include:
- i. Identification of the limit that may have been exceeded.
 - ii. Duration of the possible exceedance.
 - iii. An estimate of the amount of emissions in excess of the applicable standard.
 - iv. A description of the cause of the possible exceedance.
 - v. When compliance was reestablished.
- c. The Permittee shall submit the following information along with its annual emission report;
- i. The annual emissions of benzene from the affected transfer equipment for each month of the previous calendar year, to demonstrate compliance with Condition 7.6.6, (tons/month and tons/year, e.g.,

for the month of January, the emissions from February, of the preceding calendar year through January, for the month of February, the emissions from March of the preceding calendar year through February, 12 months in all).

- ii. A summary of exceedances of the limits in Conditions 7.6.3, 7.6.5, or 7.6.6, if any, which required notification to the Compliance Section in accordance with Condition 7.6.10(b).

7.6.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the affected transfer equipment without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

Changes in the material that is transferred at trucks, railcars, or marine vessels by the affected transfer equipment provided they continue to comply with the provisions of Section 7.6.

7.6.12 Compliance Procedures

- a. Compliance with the requirements of Condition 7.6.3(c) shall be determined by the following procedure:
 - i. Qualification for the exemption from the control requirements and emission limits of Condition 7.6.3(c) (35 IAC 218.122) in 7.6.3(c)(iii) shall be determined by the recordkeeping requirements in Condition 7.6.9(a)(i).
 - ii. When VOL with a vapor pressure of 2.5 psia or greater is loaded, compliance with the permanent submerged loading pipe requirements in Condition 7.6.3(c) shall be determined by the recordkeeping requirements in Condition 7.6.9(a)(ii) and (iii).
- b. Compliance with the requirements of Condition 7.6.3(d) (40 CFR 61.302) shall be determined by the testing

requirements in Condition 7.6.7 (40 CFR 61.304(b) through (f)), the monitoring requirements in Condition 7.6.8 (40 CFR 61.303(b), (f), and (g)), and the recordkeeping requirements in Condition 7.6.9(b) (40 CFR 61.305).

- c. Compliance with the emission limits in Condition 7.6.6 shall be determined by the recordkeeping requirements in Condition 7.6.9(c) and the procedures described in Condition 7.6.12(d).
- d. To determine the emissions from the loading racks, the following formula shall be used:

$$E_L = L_L \times T_m$$

Where:

- E_L = Emissions of VOM (lb)
- L_L = AP-42 Emission factor, Chapter 5.2, as calculated in equation below (lb/10³ gallons)
- T_m = Loading racks throughput (10³ gallons)

To calculate the AP-42 emission factor for L_L , the following formula shall be used:

$$L_L = \frac{12.46SMP *}{T}$$

Where:

- S = Saturation Factor (0.5 for dedicated normal service)
- M = Molecular weight of vapors (lb/lb-mol)
- P^* = True vapor pressure of liquid (psia)
- T = Temperature of liquid loaded (°R)

7.7 Fugitives Emissions/Equipment Leaks

7.7.1 Description

The Permittee operates pumps, compressors, pressure relief devices, sampling connections, valves, flanges, and other connectors with similar components in VOM service. Leaks from this equipment, along with chemical spills, may causes fugitive emissions of VOM and HAPs.

7.7.2 List of Emission Units and Pollution Control Equipment

| Emission Unit | Description | Emission Control Equipment |
|--------------------|--|----------------------------|
| Fugitive Emissions | Pumps, Compressors, Pressure Relief Devices, Sampling Connections, Valves, Flanges, And Other Connectors With Similar Components And Chemical Spills | None |

7.7.3 Applicability Provisions and Applicable Regulations

- a. The "affected equipment" for the purpose of these unit-specific conditions, is the equipment described in Conditions 7.7.1 and 7.7.2.
- b. The affected equipment is subject to the emission limits identified in Condition 5.2.2.
- c. Pursuant to 35 IAC 218.142, no person shall cause or allow the discharge of more than 32.8 ml (2 cu in) of VOL with vapor pressure of 17.24 kPa (2.5 psia) or greater at 294.3°K (70°F) into the atmosphere from any pump or compressor in any 15 minute period at standard conditions.

The affected equipment that is considered in volatile hazardous air pollutant (VHAP) service, as defined in 40 CFR 61.241, is subject to the requirements of 40 CFR 61 Subpart J and V: National Emission Standard for Equipment Leaks (Fugitive Emission Sources). Pursuant to these Subparts, the owner or operator shall comply with

the component specific requirements of 40 CFR 61.242-1 through 11. These requirements are as follows:

- d. Standards: General.
- i. Each owner or operator subject to the provisions of 40 CFR 61 Subpart V shall demonstrate compliance with the requirements of Conditions 7.7.3(d) through (n) (40 CFR 61.242-1 to 61.242-11) for each new and existing source as required in 40 CFR 61.05, except as provided in 40 CFR 61.243 and 61.244 [40 CFR 61.242-1(a)].
 - ii. Compliance with this subpart will be determined by review of records, review of performance test results, and inspection using the methods and procedures specified in Condition 7.7.7 (40 CFR 61.245) [40 CFR 61.242-1(b)].
 - iii. A. An owner or operator may request a determination of alternative means of emission limitation to the requirements of paragraphs (e), (f), (h), (i), (j), (k), (l) and (n) of this Condition (40 CFR 61.242-2, 61.242-3, 61.242-5, 61.242-6, 61.242-7, 61.242-8, 61.242-9 and 61.242-11) as provided in 40 CFR 61.244 [40 CFR 61.242-1(c)(1)].

B. If the Administrator makes a determination that a means of emission limitation is at least a permissible alternative to the requirements of paragraphs (e), (f), (h), (i), (j), (k), (l) and (n) of this Condition (40 CFR 61.242-2, 61.242-3, 61.242-5, 61.242-6, 61.242-7, 61.242-8, 61.242-9 or 61.242-11), an owner or operator shall comply with the requirements of that determination [40 CFR 61.242-1(c)(2)].
 - iv. Each piece of equipment to which 40 CFR 61 Subpart V applies shall be marked in such a manner that it can be distinguished readily from other pieces of equipment [40 CFR 61.242-1(d)].
 - v. Equipment that is in vacuum service is excluded from the requirements of paragraph (e) through (n)

of this Condition if it is identified as required in Condition 7.7.9(d)(v) (40 CFR 61.246(e)(5)) [40 CFR 61.242-1(e)].

e. Standards: Pumps.

- i. A. Each pump shall be monitored monthly to detect leaks by the methods specified in Condition 7.7.7(a) (40 CFR 61.245(b)), except as provided in paragraphs (d)(ii), (e)(iv), (e)(v), and (e)(vi) of this Condition [40 CFR 61.242-2(a)(1)].
B. Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal [40 CFR 61.242-2(a)(2)].
- ii. A. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected [40 CFR 61.242-2(b)].
B. If there are indications of liquids dripping from the pump seal, a leak is detected [40 CFR 61.242-2(b)(2)].
- iii. A. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in paragraph (m) of this Condition [40 CFR 61.242-2(c)].
B. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected [40 CFR 61.242-2(c)(2)].
- iv. Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraphs (e)(i) and (ii) of this Condition, provided the following requirements are met [40 CFR 61.242-2(d)]:
A. Each dual mechanical seal system is [40 CFR 61.242-2(d)(1)]:

1. Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure [40 CFR 61.242-2(d)(1)(i)]; or
 2. Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of paragraph (n) of this Condition [40 CFR 61.242-2(d)(1)(ii)]; or
 3. Equipped with a system that purges the barrier fluid into a process stream with zero VHAP emissions to atmosphere [40 CFR 61.242-2(d)(1)(iii)].
- B. The barrier fluid is not in VHAP service and, if the pump is covered by standards under 40 CFR part 60, is not in VOC service [40 CFR 61.242-2(d)(2)].
- C. Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both [40 CFR 61.242-2(d)(3)].
- D. Each pump is checked by visual inspection each calendar week for indications of liquids dripping from the pump seal [40 CFR 61.242-2(d)(4)].
1. If there are indications of liquid dripping from the pump seal at the time of the weekly inspection, the pump shall be monitored as specified in Condition 7.7.7 (40 CFR 61.245) to determine the presence of VOC and VHAP in the barrier fluid [40 CFR 61.242-2(d)(4)(i)].
 2. If the monitor reading (taking into account any background readings) indicates the presence of VHAP, a leak is detected. For the purpose of this paragraph, the monitor may be

calibrated with VHAP, or may employ a gas chromatography column to limit the response of the monitor to VHAP, at the option of the owner or operator [40 CFR 61.242-2(d)(4)(ii)].

3. If an instrument reading of 10,000 ppm or greater (total VOC) is measured, a leak is detected [40 CFR 61.242-2(d)(4)(iii)].

E. Each sensor as described in paragraph (e)(iv)(C) of this Condition is checked daily or is equipped with an audible alarm [40 CFR 61.242-2(d)(5)].

F. 1. The owner or operator determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicates failure of the seal system, the barrier fluid system, or both [40 CFR 61.242-2(d)(6)(i)].

2. If indications of liquids dripping from the pump seal exceed the criteria established in paragraph (e)(iv)(F)(1) of this Condition, or if, based on the criteria established in paragraph (e)(iv)(F)(1) of this Condition, the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected [40 CFR 61.242-2(d)(6)(ii)].

3. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in paragraph (m) of this Condition [40 CFR 61.242-2(d)(6)(iii)].

4. A first attempt at repair shall be made no later than five calendar days after

each leak is detected [40 CFR 61.242-2(d)(6)(iv)].

- v. Any pump that is designated, as described in Condition 7.7.9(d)(ii) (40 CFR 61.246(e)(2)), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (e)(i), (iii), and (iv) of this Condition if the pump [40 CFR 61.242-2(e)]:
 - A. Has no externally actuated shaft penetrating the pump housing [40 CFR 61.242-2(e)(1)],
 - B. Is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Condition 7.7.7(b) (40 CFR 61.245(c)) [40 CFR 61.242-2(e)(2)], and
 - C. Is tested for compliance with paragraph (e)(v)(B) of this Condition initially upon designation, annually, and at other times requested by the Administrator [40 CFR 61.242-2(e)(3)].
- vi. If any pump is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of paragraph (n) of this Condition, it is exempt from the requirements of paragraphs (e)(i) through (v) of this Condition [40 CFR 61.242-2(f)].
- vii. Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (e)(i)(B) and (e)(iv)(D) of this Condition, and the daily requirements of paragraph (e)(iv)(D)(1) of this Condition, provided that each pump is visually inspected as often as practicable and at least monthly [40 CFR 61.242-2(g)].
- f. Standards: Compressors.

- i. Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to atmosphere, except as provided in paragraph (d)(iii), (f)(viii) and (f)(ix) of this Condition [40 CFR 61.242-3(a)].
- ii. Each compressor seal system as required in paragraph (f)(i) shall be [40 CFR 61.242-3(b)]:
 - A. Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure [40 CFR 61.242-3(b)(1)]; or
 - B. Equipped with a barrier fluid system that is connected by a closed-vent system to a control device that complies with the requirements of paragraph (n) of this Condition [40 CFR 61.242-3(b)(2)]; or
 - C. Equipped with a system that purges the barrier fluid into a process stream with zero VHAP emissions to atmosphere [40 CFR 61.242-3(b)(3)].
- iii. The barrier fluid shall not be in VHAP service and, if the compressor is covered by standards under 40 CFR part 60, shall not be in VOC service [40 CFR 61.242-3(c)].
- iv. Each barrier fluid system as described in paragraphs (f)(i) through (iii) of this Condition shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both [40 CFR 61.242-3(d)].
- v.
 - A. Each sensor as required in paragraph (f)(iv) of this Condition shall be checked daily or shall be equipped with an audible alarm unless the compressor is located within the boundary of an unmanned plant site [40 CFR 61.242-3(e)].
 - B. The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates

failure of the seal system, the barrier fluid system, or both [40 CFR 61.242-3(e)(2)].

- vi. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under paragraph (f)(v)(B) of this Condition, a leak is detected [40 CFR 61.242-3(f)].
- vii. A. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in paragraph (m) of this Condition [40 CFR 61.242-3(g)].
B. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected [40 CFR 61.242-3(g)(2)].
- viii. A compressor is exempt from the requirements of paragraphs (f)(i) and (ii) of this Condition if it is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal to a control device that complies with the requirements of paragraph (n) of this Condition, except as provided in paragraph (f)(ix) of this Condition [40 CFR 61.242-3(h)].
- ix. Any Compressor that is designated, as described in Condition 7.7.9(d)(ii) (40 CFR 61.246(e)(2)), for no detectable emission as indicated by an instrument reading of less than 500 ppm above background is exempt from the requirements of paragraphs (f)(i) through (viii) if the compressor [40 CFR 61.242-3(i)]:
 - A. Is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Condition 7.7.7(b) (40 CFR 61.245(c)) [40 CFR 61.242-3(i)(1)]; and
 - B. Is tested for compliance with paragraph (f)(ix)(A) of this Condition initially upon designation, annually, and at other times

requested by the Administrator [40 CFR
61.242-3(i)(2)].

- g. Standards: Pressure relief devices in gas/vapor service.
- i. Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Condition 7.7.7(b) (40 CFR 61.245(c)) [40 CFR 61.242-4(a)].
 - ii. A. After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in paragraph (m) of this Condition [40 CFR 61.242-4(b)].

B. No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Condition 7.7.7(b) (40 CFR 61.245(c)) [40 CFR 61.242-4(b)(2)].
 - iii. Any pressure relief device that is equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in paragraph (n) of this Condition is exempt from the requirements of paragraphs (g)(i) and (ii) of this Condition [40 CFR 61.242-4(c)].
- h. Standards: Sampling connecting systems.
- i. Each sampling connection system shall be equipped with a closed-purge system or closed vent system, except as provided in paragraph (d)(iii) of this Condition [40 CFR 61.242-5(a)].

- ii. Each closed-purge system or closed-vent system as required in paragraph (a) shall [40 CFR 61.242-5(b)]:
 - A. Return the purged process fluid directly to the process line with zero VHAP emissions to atmosphere [40 CFR 61.242-5(b)(1)]; or
 - B. Collect and recycle the purged process fluid with zero VHAP emissions to atmosphere [40 CFR 61.242-5(b)(2)]; or
 - C. Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of paragraph (n) of this Condition [40 CFR 61.242-5(b)(3)].
 - iii. In-situ sampling systems are exempt from the requirements of paragraphs (h)(i) and (ii) of this Condition [40 CFR 61.242-5(c)].
- i. Standards: Open-ended valves or lines.
- i. A. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in paragraph (d)(iii) of this Condition [40 CFR 61.242-6(a)(1)].
 - B. The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line [40 CFR 61.242-6(a)(2)].
 - ii. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed [40 CFR 61.242-6(b)].
 - iii. When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line

between the block valves but shall comply with paragraph (i)(i) of this Condition at all other times [40 CFR 61.242-6(c)].

j. Standards: Valves.

- i. Each valve shall be monitored monthly to detect leaks by the method specified in Condition 7.7.7(a) (40 CFR 61.245(b)) and shall comply with paragraphs (j)(ii) through (v) of this Condition, except as provided in paragraphs (d)(iii), (j)(iv), (j)(vii), and (j)(viii) of this Condition and 40 CFR 61.243-1 or 61.243-2 [40 CFR 61.242-7(a)].
- ii. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected [40 CFR 61.242-7(b)].
- iii.
 - A. Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected [40 CFR 61.242-7(c)(1)].
 - B. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months [40 CFR 61.242-7(c)(2)].
- iv.
 - A. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in paragraph (m) of this Condition [40 CFR 61.242-7(d)(1)].
 - B. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected [40 CFR 61.242-7(d)(2)].
- v. First attempts at repair include, but are not limited to, the following best practices where practicable [40 CFR 61.242-7(e)]:
 - A. Tightening of bonnet bolts [40 CFR 61.242-7(e)(1)];

- B. Replacement of bonnet bolts [40 CFR 61.242-7(e)(2)];
 - C. Tightening of packing gland nuts [40 CFR 61.242-7(e)(3)]; and
 - D. Injection of lubricant into lubricated packing [40 CFR 61.242-7(e)(4)].
- vi. Any valve that is designated, as described in Condition 7.7.9(d)(ii) (40 CFR 61.246(e)(2)), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph (j)(i) of this Condition if the valve [40 CFR 61.242-7(f)]:
- A. Has no external actuating mechanism in contact with the process fluid [40 CFR 61.242-7(f)(1)];
 - B. Is operated with emissions less than 500 ppm above background, as measured by the method specified in Condition 7.7.7(b) (40 CFR 61.245(c)) [40 CFR 61.242-7(f)(2)]; and
 - C. Is tested for compliance with paragraph (j)(vi)(B) of this Condition initially upon designation, annually, and at other times requested by the Administrator [40 CFR 61.242-7(f)(3)].
- vii. Any valve that is designated, as described in Condition 7.7.9(e)(i) (40 CFR 61.246(f)(1)), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (j)(i) of this Condition if [40 CFR 61.242-7(g)]:
- A. The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (j)(i) of this Condition [40 CFR 61.242-7(g)(1)]; and

- B. The owner or operator of the valve has a written plan that requires monitoring of the valve as frequent as practicable during safe-to-monitor times [40 CFR 61.242-7(g)(2)].

- viii. Any valve that is designated, as described in Condition 7.7.9(e)(ii) (40 CFR 61.246(f)(2)), as a difficult-to-monitor valve is exempt from the requirements of paragraph (j)(i) of this Condition if [40 CFR 61.242-7(h)]:
 - A. The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface [40 CFR 61.242-7(h)(1)];
 - B. The process unit within which the valve is located is an existing process unit [40 CFR 61.242-7(h)(2)]; and
 - C. The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year [40 CFR 61.242-7(h)(3)].

- k. Standards: Pressure relief devices in liquid service and flanges and other connectors.
 - i. Pressure relief devices in liquid service and flanges and other connectors shall be monitored within 5 days by the method specified in Condition 7.7.7(a) (40 CFR 61.245(b)) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method, except as provided in paragraph (d)(iii) of this Condition [40 CFR 61.242-8(a)].
 - ii. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected [40 CFR 61.242-8(b)].
 - iii. A. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as

provided in paragraph (m) of this Condition [40 CFR 61.242-8(c)].

- B. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected [40 CFR 61.242-8(c)(2)].
- iv. First attempts at repair include, but are not limited to, the best practices described under paragraph (j)(v) of this Condition [40 CFR 61.242-8(d)].
- 1. Standards: Product accumulator vessels.
 - i. Each product accumulator vessel shall be equipped with a closed-vent system capable of capturing and transporting any leakage from the vessel to a control device as described in paragraph (n) of this Condition, except as provided in paragraph (d)(iii) [40 CFR 61.242-9].
- m. Standards: Delay of repair.
 - i. Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. [40 CFR 61.242-10(a)]
 - ii. Delay of repair of equipment for which leaks have been detected will be allowed for equipment that is isolated from the process and that does not remain in VHAP service [40 CFR 61.242-10(b)].
 - iii. Delay of repair for valves will be allowed if [40 CFR 61.242-10(c)]:
 - A. The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair [40 CFR 61.242-10(c)(1)], and
 - B. When repair procedures are effected, the purged material is collected and destroyed or

recovered in a control device complying with paragraph (n) of this Condition [40 CFR 61.242-10(c)(2)].

- iv. Delay of repair for pumps will be allowed if [40 CFR 61.242-10(d)]:
 - A. Repair requires the use of a dual mechanical seal system that includes a barrier fluid system [40 CFR 61.242-10(d)(1)], and
 - B. Repair is completed as soon as practicable, but not later than 6 months after the leak was detected [40 CFR 61.242-10(d)(2)].
- v. Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown [40 CFR 61.242-10(e)].
- n. Standards: Closed-vent systems and control devices.
 - i. Owners or operators of closed-vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section, except as provided in paragraph (d)(iii) of this Condition [40 CFR 61.242-11(a)].
 - ii. Vapor recovery systems (for example, condensers and adsorbers) shall be designed and operated to recover the organic vapors vented to them with an efficiency of 95 percent or greater [40 CFR 61.242-11(b)].
 - iii. Enclosed combustion devices shall be designed and operated to reduce the VHAP emissions vented to them with an efficiency of 95 percent or greater or to provide a minimum residence time of 0.50

seconds at a minimum temperature of 760°C [40 CFR 61.242-11(c)].

- iv. Flares shall used to comply with this subpart shall comply with the requirements of 40 CFR 60.18 [40 CFR 61.242-11(d)].
- v. Owners or operators of control devices that are used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their design [40 CFR 61.242-11(e)].
- vi.
 - A. Closed-vent systems shall be designed for and operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background and by visual inspections, as determined by the methods specified as Condition 7.7.7(b) (40 CFR 61.245(c)) [40 CFR 61.242-11(f)].
 - B. Closed-event systems shall be monitored to determine compliance with this section initially in accordance with 40 CFR 61.05, annually, and at other times requested by the administrator [40 CFR 61.242-11(f)(2)].
 - C. Leaks, as indicated by an instrument reading greater than 500 ppm and visual inspections, shall be repaired as soon as practicable, but not later than 15 calendar days after the leak is detected [40 CFR 61.242-11(f)(3)].
 - D. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected [40 CFR 61.242-11(f)(4)].
- vii. Closed-vent systems and control devices use to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them [40 CFR 61.242-11(g)].

7.7.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected equipment not being subject to the requirements of 40 CFR 63 Subpart H,

National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks. This is because this source is not subject to provisions of a specific subpart in 40 CFR part 63.

7.7.5 Operational and Production Limits and Work Practices

None

7.7.6 Emission Limitations

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.7.7 Testing Requirements

The Permittee shall fulfill the applicable testing in 40 CFR 61.245 for the affected equipment in VHAP service. These requirements are as follows:

- a. Monitoring, as required in Conditions 7.7.3(d) through (n) (40 CFR 61.242), 40 CFR 61.243, and 40 CFR 61.244 shall comply with the following requirements [40 CFR 61.245(b)]:
 - i. Monitoring shall comply with Method 21 of Appendix A of 40 CFR part 60 [40 CFR 61.245(b)(1)].
 - ii. The detection instrument shall meet the performance criteria of Reference Method 21 [40 CFR 61.245(b)(2)].
 - iii. The instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21 [40 CFR 61.245(b)(3)].
 - iv. Calibration gases shall be [40 CFR 61.245(b)(4)]:
 - A. Zero air (less than 10 ppm of hydrocarbon in air) [40 CFR 61.245(b)(4)(i)]; and
 - B. A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane [40 CFR 61.245(b)(4)(ii)].

- v. The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21 [40 CFR 61.245(b)(5)].

- b. When equipment is tested for compliance with or monitored for no detectable emissions, the owner or operator shall comply with the following requirements [40 CFR 61.245(c)]:
 - i. The requirements of paragraphs (a)(i) through (iv) of this Condition shall apply [40 CFR 61.245(c)(1)].
 - ii. The background level shall be determined, as set forth in Reference Method 21 [40 CFR 61.245(c)(2)].
 - iii. The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21 [40 CFR 61.245(c)(3)].
 - iv. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance [40 CFR 61.245(c)(4)].

- c. i. Each piece of equipment within a process unit that can conceivably contain equipment in VHAP service is presumed to be in VHAP service unless an owner or operator demonstrates that the piece of equipment is not in VHAP service. For a piece of equipment to be considered not in VHAP service, it must be determined that the percent VHAP content can be reasonably expected never to exceed 10 percent by weight. For purposes of determining the percent VHAP content of the process fluid that is contained in or contacts equipment, procedures that conform to the methods described in ASTM Method D-2267 shall be used [40 CFR 61.245(d)(1)].

- ii. A. An owner or operator may use engineering judgment rather than the procedures in paragraph (c)(i) of this Condition to

demonstrate that the percent VHAP content does not exceed 10 percent by weight, provided that the engineering judgment demonstrates that the VHAP content clearly does not exceed 10 percent by weight. When an owner or operator and the Administrator do not agree on whether a piece of equipment is not in VHAP service, however, the procedures in paragraph (c)(i) of this Condition shall be used to resolve the disagreement [40 CFR 61.245(d)(2)(i)].

- B. If an owner or operator determines that a piece of equipment is in VHAP service, the determination can be revised only after following the procedures in paragraph (c)(i) of this Condition [40 CFR 61.245(d)(2)(ii)].
- iii. Samples used in determining the percent VHAP content shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare [40 CFR 61.245(d)(3)].
- d. i. Method 22 of Appendix A of 40 CFR part 60 shall be used to determine compliance of flares with the visible emission provisions of this subpart [40 CFR 61.245(e)(1)].
- ii. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame [40 CFR 61.245(e)(2)].
- iii. The net heating value of the gas being combusted in a flare shall be calculated using the following equation [40 CFR 61.245(e)(3)]:

$$H_T = K \left(\sum_{i=1}^n C_i H_i \right)$$

Where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole

of off gas is based on combustion at 25°C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20°C.

K = Constant, 1.74×10^{-7} (1/ppm) (g mole/scm) (MJ/kcal) where standard temperature for (g mole/scm) is 20°C

C_i = Concentration of sample component i in ppm, as measured by Reference Method 18 of Appendix A of 40 CFR part 60 and ASTM D2504-67.

H_i = Net heat of combustion of sample component i , kcal/g mole. The heats of combustion may be determined using ASTM D2382-76 if published values are not available or cannot be calculated.

- iv. The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Reference Method 2, 2A, 2C, or 2D, as appropriate, by the unobstructed (free) cross section area of the flare tip [40 CFR 61.245(e)(4)].
- v. The maximum permitted velocity, V_{Max} , for air-assisted flares shall be determined by the following equation [40 CFR 61.245(e)(5)]:

$$V_{Max} = 8.76 + 0.7084(H_T)$$

Where:

V_{Max} = Maximum permitted velocity, m/sec

8.706 = Constant.

0.7084 = Constant.

H_T = The net heating value as determined in paragraph (d)(iii) of this Condition.

7.7.8 Monitoring Requirements

None

7.7.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected equipment to demonstrate compliance with Conditions 5.5.1, 7.7.3, 7.7.5, and 7.7.6, pursuant to Section 39.5(7)(b) of the Act:

The Permittee shall fulfill the applicable recordkeeping requirements of 40 CFR 61.246 for the affected equipment in VHAP service. These requirements are as follows:

- a. When each leak is detected as specified in Conditions 7.7.3(e), (f), (j), and (k) (40 CFR 61.242-2, 61.242-3, 61.242-7, and 61.242-8) the following requirements apply [40 CFR 61.246(b)]:
 - i. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment [40 CFR 61.246(b)(1)].
 - ii. The identification on a valve may be removed after it has been monitored for 2 successive months as specified in Condition 7.7.3(j)(iii) (40 CFR 61.242-7(c)) and no leak has been detected during those 2 months [40 CFR 61.246(b)(2)].
 - iii. The identification on equipment, except on a valve, may be removed after it has been repaired [40 CFR 61.246(b)(3)].
- b. When each leak is detected as specified in Condition 7.7.3(e), (f), (j), and (k) (40 CFR 61.242-2, 61.242-3, 61.242-7, 61.242-8) the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location [40 CFR 61.246(c)]:
 - i. The instrument and operator identification numbers and the equipment identification number [40 CFR 61.246(c)(1)].

- ii. The date the leak was detected and the dates of each attempt to repair the leak [40 CFR 61.246(c)(2)].
 - iii. Repair methods applied in each attempt to repair the leak [40 CFR 61.246(c)(3)].
 - iv. "Above 10,000" if the maximum instrument reading measured by the methods specified in Condition 7.7.7) (40 CFR 61.245) after each repair attempt is equal to or greater than 10,000 ppm [40 CFR 61.246(c)(4)].
 - v. "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak [40 CFR 61.246(c)(5)].
 - vi. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown [40 CFR 61.246(c)(6)].
 - vii. The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days unrepaired [40 CFR 61.246(c)(7)].
 - viii. Dates of process unit shutdowns that occur while the equipment is unrepaired [40 CFR 61.246(c)(8)].
 - ix. The date of successful repair of the leak [40 CFR 61.246(c)(9)].
- c. The following information pertaining to the design requirements for closed-vent systems and control devices described in Condition 7.7.3(n) (40 CFR 61.242-11) shall be recorded and kept in a readily accessible location [40 CFR 61.246(d)]:
- i. Detailed schematics, design specifications, and piping and instrumentation diagrams [40 CFR 61.246(d)(1)].
 - ii. The dates and descriptions of any changes in the design specifications [40 CFR 61.246(d)(2)].

- iii. A description of the parameter or parameters monitored, as required in Condition 7.7.3(n)(v) (40 CFR 61.242-11(e)), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring [40 CFR 61.246(d)(3)].
 - iv. Periods when the closed-vent systems and control devices required in Condition 7.7.3(e), (f), (g), (h), and (l) (40 CFR 61.242-2, 61.242-3, 61.242-4, 61.242-5 and 61.242-9) are not operated as designed, including periods when a flare pilot light does not have a flame [40 CFR 61.246(d)(4)].
 - v. Dates of startups and shutdowns of the closed-vent systems and control devices required in 7.7.3(e), (f), (g), (h), and (l) (40 CFR 61.242-2, 61.242-3, 61.242-4, 61.242-5 and 61.242-9) [40 CFR 61.246(d)(5)].
- d. The following information pertaining to all equipment to which a standard applies shall be recorded in a log that is kept in a readily accessible location [40 CFR 61.246(e)]:
- i. A list of identification numbers for equipment (except welded fittings) subject to the requirements of this subpart [40 CFR 61.246(e)(1)].
 - ii. A. A list of identification numbers for equipment that the owner or operator elects to designate for no detectable emissions as indicated by an instrument reading of less than 500 ppm above background [40 CFR 61.246(e)(2)(i)].
B. The designation of this equipment for no detectable emissions shall be signed by the owner or operator [40 CFR 61.246(e)(2)(ii)].
 - iii. A list of equipment identification numbers for pressure relief devices required to comply with Condition 7.7.3(g)(i) (40 CFR 61.242-4(a)) [40 CFR 61.246(e)(3)].

- iv. A. The dates of each compliance test required in Conditions 7.7.3(e)(ii), (f)(ix), (g), and (j)(vi) (40 CFR 61.242-2(e), 61.242-3(i), 61.242-4, and 61.242-7(f)) [40 CFR 61.246(e)(4)(i)].
 - B. The background level measured during each compliance test [40 CFR 61.246(e)(4)(ii)].
 - C. The maximum instrument reading measured at the equipment during each compliance test [40 CFR 61.246(e)(4)(iii)].
- v. A list of identification numbers for equipment in vacuum service [40 CFR 61.246(e)(5)].
- e. The following information pertaining to all valves subject to the requirements of Conditions 7.7.3(j)(vii) and (viii) (40 CFR 61.242-7(g) and (h)) shall be recorded in a log that is kept in a readily accessible location [40 CFR 61.246(f)]:
 - i. A list of identification numbers for valves that are designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe to monitor, and the plan for monitoring each valve [40 CFR 61.246(f)(1)].
 - ii. A list of identification numbers for valves that are designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the planned schedule for monitoring each valve [40 CFR 61.246(f)(2)].
- f. The following information shall be recorded for valves complying with 40 CFR 61.243-2 [40 CFR 61.246(g)]:
 - i. A schedule of monitoring [40 CFR 61.246(g)(1)].
 - ii. The percent of valves found leaking during each monitoring period [40 CFR 61.246(g)(2)].
- g. The following information shall be recorded in a log that is kept in a readily accessible location [40 CFR 61.246(h)]:

- i. Design criterion required in Conditions 7.7.3(e)(iv)(E) and 7.7.3(f)(v)(B) (40 CFR 61.242-2(d)(5) and 61.242-3(e)(2)) and an explanation of the design criterion [40 CFR 61.246(h)(1)]; and
 - ii. Any changes to this criterion and the reasons for the changes [40 CFR 61.246(h)(2)].
- h. The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in 40 CFR 61.240 [40 CFR 61.246(i)]:
- i. An analysis demonstrating the design capacity of the process unit [40 CFR 61.246(i)(1)], and
 - ii. An analysis demonstrating that equipment is not in VHAP service [40 CFR 61.246(i)(2)].
- i. Information and data used to demonstrate that a piece of equipment is not in VHAP service shall be recorded in a log that is kept in a readily accessible location [40 CFR 61.246(j)].

In addition, the Permittee shall fulfill the following recordkeeping requirements:

- j. The Permittee shall maintain records of the following items for each exceedance of the limits in Conditions 7.7.3, 7.7.5, or 7.7.6, which shall include:
 - i. Identification of the limit that may have been exceeded.
 - ii. Duration of the possible exceedance.
 - iii. An estimate of the amount of emissions in excess of the applicable standard.
 - iv. A description of the cause of the possible exceedance.
 - v. When compliance was reestablished.

7.7.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of any affected equipment with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

The Permittee shall fulfill the applicable reporting requirements of 40 CFR 61.247 for the affected equipment in VHAP service. These requirements are as follows:

- a. A report shall be submitted to the Administrator semiannually starting 6 months after the initial report required in 40 CFR 61.247(a), that includes the following information [40 CFR 61.247(b)]:
 - i. Process unit identification [40 CFR 61.247(b)(1)].
 - ii. For each month during the semiannual reporting period [40 CFR 61.247(b)(2)],
 - A. Number of valves for which leaks were detected as described in Condition 7.7.3(j)(ii) (40 CFR 61.242-7(b) [40 CFR 61.247(b)(2)(i)]).
 - B. Number of valves for which leaks were not repaired as required in Condition 7.7.3(j)(iv) (40 CFR 61.242-7(d)) [40 CFR 61.247(b)(2)(ii)].
 - C. Number of pumps for which leaks were detected as described in Condition 7.7.3(e)(ii) and (e)(iv)(F) (40 CFR 61.242-2 (b) and (d)(6)) [40 CFR 61.247(b)(2)(iii)].
 - D. Number of pumps for which leaks were not repaired as required in Condition 7.7.3(e)(iii) and (e)(iv)(F) (40 CFR 61.242-2 (c) and (d)(6)) [40 CFR 61.247(b)(2)(iv)].
 - E. Number of compressors for which leaks were detected as described in Condition

7.7.1(f)(vi) (40 CFR 61.242-3(f)) [40 CFR 61.247(b)(2)(v)].

- F. Number of compressors for which leaks were not repaired as required in Condition 7.7.3(f)(vii) (40 CFR 61.242-3(g)) [40 CFR 61.247(b)(2)(vi)].
 - G. The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible [40 CFR 61.247(b)(2)(vii)].
- iii. Dates of process unit shutdowns which occurred within the semiannual reporting period [40 CFR 61.247(b)(3)].
 - iv. Revisions to items reported according to this Condition if changes have occurred since the initial report or subsequent revisions to the initial report [40 CFR 61.247(b)(4)].
 - v. The results of all performance tests and monitoring to determine compliance with no detectable emissions and with 40 CFR 61.243-1 and 61.243-2 conducted within the semiannual reporting period [40 CFR 61.247(b)(5)].
- b. An application for approval of construction or modification, 40 CFR 61.05(a) and 61.07, will not be required if [40 CFR 61.247(e)]:
 - i. The new source complies with the standard, §61.242 [40 CFR 61.247(e)(1)];
 - ii. The new source is not part of the construction of a process unit [40 CFR 61.247(e)(2)]; and
 - iii. In the next semiannual report required by paragraph (a) of this Condition, the information in 40 CFR 61.247(a)(4) is reported [40 CFR 61.247(e)(3)].

In addition, the Permittee shall fulfill the following reporting requirements:

- c. The Permittee shall notify the Illinois EPA within 30 days of an exceedance of the limits in Conditions 7.7.3, 7.7.5, or 7.7.6. The notification shall include:
 - i. Identification of the limit that may have been exceeded.
 - ii. Duration of the possible exceedance.
 - iii. An estimate of the amount of emissions in excess of the applicable standard.
 - iv. A description of the cause of the possible exceedance.
 - v. When compliance was reestablished.
- d. The Permittee shall submit the following information along with its annual emission report:
 - i. A summary of exceedances of the limits in Conditions 7.7.3, 7.7.5, or 7.7.6, if any, which required notification to the Compliance Section in accordance with Condition 7.7.10(c).

7.7.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to any affected equipment without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

- a. Replacement and/or relocation of components, including pumps, compressors, pressure relief devices, sampling connections, valves, flanges, and other connectors with like kind or similar components at emission units included in this permit, provided the replacement and/or relocation of the component does not cause a realized or potential increase in emissions from the emission unit or other emission unit at the facility.

7.7.12 Compliance Procedures

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- a. Compliance of the affected equipment with the requirements of Condition 7.7.3(c) (35 IAC 218.142) is assured as long as the affected equipment is in Compliance with Condition 7.7.3(e) (40 CFR 61.242-2) and 7.7.3(f) (40 CFR 61.242-3).

- b. Compliance of the affected equipment with the requirements of Conditions 7.7.3(d) through (n) (40 CFR 61.242-1 through 61.242-11) is demonstrated by the testing requirements in Condition 7.7.7 (40 CFR 61.245(b) through (e)) and the recordkeeping requirements in Condition 7.7.9(a) through (i) (40 CFR 61.246(b) through (j)).

8.0 GENERAL PERMIT CONDITIONS

8.1 Permit Shield

Pursuant to Section 39.5(7)(j) of the Act, the Permittee has requested and has been granted a permit shield. This permit shield provides that compliance with the conditions of this permit shall be deemed compliance with applicable requirements which were applicable as of the date the proposed permit for this source was issued, provided that either the applicable requirements are specifically identified within this permit, or the Illinois EPA, in acting on this permit application, has determined that other requirements specifically identified are not applicable to this source and this determination (or a concise summary thereof) is included in this permit.

This permit shield does not extend to applicable requirements which are promulgated after _____{insert public notice start date} (the date of issuance of the draft permit) unless this permit has been modified to reflect such new requirements.

8.2 Applicability of Title IV Requirements (Acid Deposition Control)

This source is not an affected source under Title IV of the CAA and is not subject to requirements pursuant to Title IV of the CAA.

8.3 Emissions Trading Programs

No permit revision shall be required for increases in emissions allowed under any USEPA approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for elsewhere in this permit and that are authorized by the applicable requirement [Section 39.5(7)(o)(vii) of the Act].

8.4 Operational Flexibility/Anticipated Operating Scenarios

8.4.1 Changes Specifically Addressed by Permit

Physical or operational changes specifically addressed by the Conditions of this permit that have been identified as not requiring Illinois EPA notification may be implemented without prior notice to the Illinois EPA.

8.4.2 Changes Requiring Prior Notification

The Permittee is authorized to make physical or operational changes that contravene express permit terms without applying for or obtaining an amendment to this permit, provided that [Section 39.5(12)(a)(i) of the Act]:

- a. The changes do not violate applicable requirements;
- b. The changes do not contravene federally enforceable permit terms or conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements;
- c. The changes do not constitute a modification under Title I of the CAA;
- d. Emissions will not exceed the emissions allowed under this permit following implementation of the physical or operational change; and
- e. The Permittee provides written notice to the Illinois EPA, Division of Air Pollution Control, Permit Section, at least 7 days before commencement of the change. This notice shall:
 - i. Describe the physical or operational change;
 - ii. Identify the schedule for implementing the physical or operational change;
 - iii. Provide a statement of whether or not any New Source Performance Standard (NSPS) is applicable to the physical or operational change and the reason why the NSPS does or does not apply;
 - iv. Provide emission calculations which demonstrate that the physical or operational change will not result in a modification; and
 - v. Provide a certification that the physical or operational change will not result in emissions greater than authorized under the Conditions of this permit.

8.5 Testing Procedures

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Tests conducted to measure composition of materials, efficiency of pollution control devices, emissions from process or control equipment, or other parameters shall be conducted using standard test methods. Documentation of the test date, conditions, methodologies, calculations, and test results shall be retained pursuant to the recordkeeping procedures of this permit. Reports of any tests conducted as required by this permit or as the result of a request by the Illinois EPA shall be submitted as specified in Condition 8.6.

8.6 Reporting Requirements

8.6.1 Monitoring Reports

A report summarizing required monitoring as specified in the conditions of this permit shall be submitted to the Air Compliance Section of the Illinois EPA every six months as follows [Section 39.5(7)(f) of the Act]:

| <u>Monitoring Period</u> | <u>Report Due Date</u> |
|--------------------------|------------------------|
| January - June | September 1 |
| July - December | March 1 |

All instances of deviations from permit requirements must be clearly identified in such reports. All such reports shall be certified in accordance with Condition 9.9.

8.6.2 Test Notifications

Unless otherwise specified elsewhere in this permit, a written test plan for any test required by this permit shall be submitted to the Illinois EPA for review at least 60 days prior to the testing pursuant to Section 39.5(7)(a) of the Act. The notification shall include at a minimum:

- a. The name and identification of the affected unit(s);
- b. The person(s) who will be performing sampling and analysis and their experience with similar tests;
- c. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the source and any control equipment will be determined;
- d. The specific determination of emissions and operation which are intended to be made, including sampling and monitoring locations;
- e. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods;

- f. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification; and
- g. Any proposed use of an alternative test method, with detailed justification.

8.6.3 Test Reports

Unless otherwise specified elsewhere in this permit, the results of any test required by this permit shall be submitted to the Illinois EPA within 60 days of completion of the testing. The test report shall include at a minimum [Section 39.5(7)(e)(i) of the Act]:

- a. The name and identification of the affected unit(s);
- b. The date and time of the sampling or measurements;
- c. The date any analyses were performed;
- d. The name of the company that performed the tests and/or analyses;
- e. The test and analytical methodologies used;
- f. The results of the tests including raw data, and/or analyses including sample calculations;
- g. The operating conditions at the time of the sampling or measurements; and
- h. The name of any relevant observers present including the testing company's representatives, any Illinois EPA or USEPA representatives, and the representatives of the source.

8.6.4 Reporting Addresses

- a. The following addresses should be utilized for the submittal of reports, notifications, and renewals:

- i. Illinois EPA - Air Compliance Section

- Illinois Environmental Protection Agency (MC 40)
Bureau of Air

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Compliance Section
P.O. Box 19276
Springfield, Illinois 62794-9276

ii. Illinois EPA - Air Regional Field Office

Illinois Environmental Protection Agency
Division of Air Pollution Control
Eisenhower Tower
1701 South First Avenue
Maywood, Illinois 60153

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iii. Illinois EPA - Air Permit Section (MC 11)

Illinois Environmental Protection Agency
Division of Air Pollution Control
Permit Section
P.O. Box 19506
Springfield, Illinois 62794-9506

iv. USEPA Region 5 - Air Branch

USEPA (AR - 17J)
Air & Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604

- b. Unless otherwise specified in the particular provision of this permit, reports shall be sent to the Illinois EPA - Air Compliance Section with a copy sent to the Illinois EPA - Air Regional Field Office.

8.7 Obligation to Comply with Title I Requirements

Any term, condition, or requirement identified in this permit by T1, T1R, or T1N is established or revised pursuant to 35 IAC Part 203 or 40 CFR 52.21 ("Title I provisions") and incorporated into this permit pursuant to both Section 39.5 and Title I provisions. Notwithstanding the expiration date on the first page of this permit, the Title I conditions remain in effect pursuant to Title I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

9.0 STANDARD PERMIT CONDITIONS

9.1 Effect of Permit

9.1.1 The issuance of this permit does not release the Permittee from compliance with State and Federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statutes and regulations of the United States or the State of Illinois or applicable ordinances, except as specifically stated in this permit and as allowed by law and rule [Section 39.5(7)(j)(iv) of the Act].

9.1.2 In particular, this permit does not alter or affect the following:

- a. The provisions of Section 303 (emergency powers) of the CAA, including USEPA's authority under that Section;
- b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
- c. The applicable requirements of the acid rain program consistent with Section 408(a) of the CAA; and
- d. The ability of USEPA to obtain information from a source pursuant to Section 114 (inspections, monitoring, and entry) of the CAA.

9.1.3 Notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

9.2 General Obligations of Permittee

9.2.1 Duty to Comply

The Permittee must comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the CAA and the Act, and is grounds for any or all of the following: enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application [Section 39.5(7)(o)(i) of the Act].

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The Permittee shall meet applicable requirements that become effective during the permit term in a timely manner unless an alternate schedule for compliance with the applicable requirement is established.

9.2.2 Duty to Maintain Equipment

The Permittee shall maintain all equipment covered under this permit in such a manner that the performance or operation of such equipment shall not cause a violation of applicable requirements.

9.2.3 Duty to Cease Operation

No person shall cause, threaten or allow the continued operation of any emission unit during malfunction or breakdown of the emission unit or related air pollution control equipment if such operation would cause a violation of an applicable emission standard, regulatory requirement, ambient air quality standard or permit limitation unless such malfunction or breakdown is allowed by a permit condition [Section 39.5(6)(c) of the Act].

9.2.4 Disposal Operations

The source shall be operated in such a manner that the disposal of air contaminants collected by the equipment operations, or activities shall not cause a violation of the Act or regulations promulgated thereunder.

9.2.5 Duty to Pay Fees

The Permittee must pay fees to the Illinois EPA consistent with the fee schedule approved pursuant to Section 39.5(18) of the Act, and submit any information relevant thereto [Section 39.5(7)(o)(vi) of the Act]. The check should be payable to "Treasurer, State of Illinois" and sent to: Fiscal Services Section, Illinois Environmental Protection Agency, P.O. Box 19276, Springfield, Illinois 62794-9276.

9.3 Obligation to Allow Illinois EPA Surveillance

Upon presentation of proper credentials and other documents, the Permittee shall allow the Illinois EPA, or an authorized representative to perform the following [Section 39.5(7)(a) and (p)(ii) of the Act and 415 ILCS 5/4]:

- a. Enter upon the Permittee's premises where an actual or potential emission unit is located; where any regulated equipment, operation, or activity is located or where records must be kept under the conditions of this permit;

- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect during hours of operation any sources, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- d. Sample or monitor any substances or parameters at any location:
 - i. At reasonable times, for the purposes of assuring permit compliance; or
 - ii. As otherwise authorized by the CAA, or the Act.
- e. Obtain and remove samples of any discharge or emission of pollutants authorized by this permit; and
- f. Enter and utilize any photographic, recording, testing, monitoring, or other equipment for the purposes of preserving, testing, monitoring, or recording any activity, discharge or emission at the source authorized by this permit.

9.4 Obligation to Comply With Other Requirements

The issuance of this permit does not release the Permittee from applicable State and Federal laws and regulations, and applicable local ordinances addressing subjects other than air pollution control.

9.5 Liability

9.5.1 Title

This permit shall not be considered as in any manner affecting the title of the premises upon which the permitted source is located.

9.5.2 Liability of Permittee

This permit does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the sources.

9.5.3 Structural Stability

This permit does not take into consideration or attest to the structural stability of any unit or part of the source.

9.5.4 Illinois EPA Liability

This permit in no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the source.

9.5.5 Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege [Section 39.5(7)(o)(iv) of the Act].

9.6 Recordkeeping

9.6.1 Control Equipment Maintenance Records

A maintenance record shall be kept on the premises for each item of air pollution control equipment. As a minimum, this record shall show the dates of performance and nature of preventative maintenance activities.

9.6.2 Records of Changes in Operation

A record shall be kept describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes [Section 39.5(12)(b)(iv) of the Act].

9.6.3 Retention of Records

a. Records of all monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit [Section 39.5(7)(e)(ii) of the Act].

b. Other records required by this permit shall be retained for a period of at least 5 years from the date of entry unless a longer period is specified by a particular permit provision.

9.7 Annual Emissions Report

The Permittee shall submit an annual emissions report to the Illinois EPA, Compliance Section no later than May 1 of the following year, as required by 35 IAC Part 254.

9.8 Requirements for Compliance Certification

Pursuant to Section 39.5(7)(p)(v) of the Act, the Permittee shall submit annual compliance certifications. The compliance certifications shall be submitted no later than May 1 or more frequently as specified in the applicable requirements or by permit condition. The compliance certifications shall be submitted to the Air Compliance Section, Air Regional Field Office, and USEPA Region 5 - Air Branch. The addresses for the submittal of the compliance certifications are provided in Condition 8.6.4 of this permit.

- a. The certification shall include the identification of each term or condition of this permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, both currently and over the reporting period consistent with the conditions of this permit.
- b. All compliance certifications shall be submitted to USEPA Region 5 in Chicago as well as to the Illinois EPA.
- c. All compliance reports required to be submitted shall include a certification in accordance with Condition 9.9.

9.9 Certification

Any document (including reports) required to be submitted by this permit shall contain a certification by a responsible official of the Permittee that meets the requirements of Section 39.5(5) of the Act [Section 39.5(7)(p)(i) of the Act]. An example Certification by a Responsible Official is included as an attachment to this permit.

9.10 Defense to Enforcement Actions

9.10.1 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit [Section 39.5(7)(o)(ii) of the Act].

9.10.2 Emergency Provision

- a. An emergency shall be an affirmative defense to an action brought for noncompliance with the technology-based

emission limitations under this permit if the following conditions are met through properly signed, contemporaneous operating logs, or other relevant evidence:

- i. An emergency occurred as provided in Section 39.5(7)(k) of the Act and the Permittee can identify the cause(s) of the emergency. Normally, an act of God such as lightning or flood is considered an emergency;
 - ii. The permitted source was at the time being properly operated;
 - iii. The Permittee submitted notice of the emergency to the Illinois EPA within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and
 - iv. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission limitations, standards, or regulations in this permit.
- b. This provision is in addition to any emergency or upset provision contained in any applicable requirement. This provision does not relieve a Permittee of any reporting obligations under existing federal or state laws or regulations.

9.11 Permanent Shutdown

This permit only covers emission units and control equipment while physically present at the indicated source location(s). Unless this permit specifically provides for equipment relocation, this permit is void for the operation or activity of any item of equipment on the date it is removed from the permitted location(s) or permanently shut down. This permit expires if all equipment is removed from the permitted location(s), notwithstanding the expiration date specified on this permit.

9.12 Reopening and Reissuing Permit for Cause

9.12.1 Permit Actions

This permit may be modified, reopened, and reissued, for cause pursuant to Section 39.5(15) of the Act. The filing of a request by the Permittee for a permit modification, revocation, and reissuance, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition [Section 39.5(7)(o)(iii) of the Act].

9.12.2 Reopening and Revision

This permit must be reopened and revised if any of the following occur [Section 39.5(15)(a) of the Act]:

- a. Additional requirements become applicable to the equipment covered by this permit and three or more years remain before expiration of this permit;
- b. Additional requirements become applicable to an affected source for acid deposition under the acid rain program;
- c. The Illinois EPA or USEPA determines that this permit contains a material mistake or inaccurate statement when establishing the emission standards or limitations, or other terms or conditions of this permit; and
- d. The Illinois EPA or USEPA determines that this permit must be revised to ensure compliance with the applicable requirements of the Act.

9.12.3 Inaccurate Application

The Illinois EPA has issued this permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be grounds for revocation under Section 39.5(15)(b) of the Act.

9.12.4 Duty to Provide Information

The Permittee shall furnish to the Illinois EPA, within a reasonable time specified by the Illinois EPA any information that the Illinois EPA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to the

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Illinois EPA copies of records required to be kept by this permit, or for information claimed to be confidential, the Permittee may furnish such records directly to USEPA along with a claim of confidentiality [Section 39.5(7)(o)(v) of the Act].

9.13 Severability Clause

The provisions of this permit are severable, and should any one or more be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected. The rights and obligations of the Permittee shall be construed and enforced as if this permit did not contain the particular provisions held to be invalid and the applicable requirements underlying these provisions shall remain in force [Section 39.5(7)(i) of the Act].

9.14 Permit Expiration and Renewal

The right to operate terminates on the expiration date unless the Permittee has submitted a timely and complete renewal application. For a renewal to be timely it must be submitted no later than 9 and no sooner than 12 months prior to expiration. The equipment may continue to operate during the renewal period until final action is taken by the Illinois EPA, in accordance with the original permit conditions [Section 39.5(5)(1), (n), and (o) of the Act].

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10.0 ATTACHMENTS

10.1 Attachment 1 - Example Certification by a Responsible Official

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____

Name: _____

Official Title: _____

Telephone No.: _____

Date Signed: _____

NAF:jar