INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: August 6, 2010

RE: Wolf Lake Terminals, Inc. / 089-28673-00230

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval – Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204.

For an **initial Title V Operating Permit**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **thirty (30)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(b).

For a **Title V Operating Permit renewal**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **fifteen (15)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(a).

The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

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(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of an initial Title V operating permit, permit renewal, or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impractible to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency
401 M Street
Washington, D.C. 20406

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNTVOP.dot12/3/07

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Part 70 Operating Permit with New Source Review
OFFICE OF AIR QUALITY

Wolf Lake Terminals, Inc.
3200 South Sheffield Avenue
Hammond, Indiana 46327

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. 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. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.

Operation Permit No.: T089-28673-00230	
Issued by: Donald F. Robin Donald F. Robin, P.E., Section Chief Permits Branch Office of Air Quality	Issuance Date: August 6, 2010 Expiration Date: August 6, 2015

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Certification
Emergency Occurrence Report
Quarterly Report
Quarterly Deviation and Compliance Monitoring Report

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(15)][326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary batch biodiesel production facility and storage tank facility.

Source Address:	3200 South Sheffield Avenue, Hammond, Indiana 46327
General Source Phone Number:	219-937-4460
SIC Code:	2869 & 4226
County Location:	Lake
Source Location Status:	Nonattainment for $PM_{2.5}$ standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD and Nonattainment NSR Rules Major Source, under Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

(a) One (1) Kewanee Boiler, constructed in 1994, with a maximum heat input capacity of 25.1 MMBtu/hr, burning natural gas only, and exhausting uncontrolled. Under 40 CFR 60, Subpart Dc, this is considered an affected facility. [40 CFR 60, Subpart Dc]

(b) A storage tank facility (with vertical, above ground, fixed cone roof tanks, without internal floating roofs) holding products with a vapor pressure less than 0.50 psia, consisting of the following:

(1) One (1) storage tank, constructed in 1951, identified as Tank 1, for storage of propylene glycol, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(2) One (1) storage tank, constructed in 1951, identified as Tank 2, for storage of polymer polyols, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(3) One (1) storage tank, constructed in 1951, identified as Tank 6, for storage of Infineum R693, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(4) One (1) storage tank, approved in 2010 for construction, identified as Tank 7, for storage of various products, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(5) One (1) storage tank, constructed in 1951, identified as Tank 8, for storage of Atosol 100, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(6) One (1) storage tank, constructed in 1951, identified as Tank 9, for storage of glycol, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(7) One (1) storage tank, constructed in 1951, identified as Tank 11, for storage of Low Sulfur Diesel Supreme, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(8) One (1) storage tank, constructed in 1951, identified as Tank 12, for storage of T11E tallow fatty acid, with a maximum volume of 126,000 gallons, with a maximum throughput of 3,000,000 gallons per year, and exhausting to the atmosphere;

(9) One (1) storage tank, constructed in 1951, identified as Tank 13, for storage of glycerin/water, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(10) One (1) storage tank, constructed in 1951, identified as Tank 14, for storage of Atosol 150, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(11) One (1) storage tank, constructed in 1951, identified as Tank 16, for storage of Synacto 246, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(12) One (1) storage tank, constructed in 1951, identified as Tank 17, for storage of various products, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(13) One (1) storage tank, constructed in 1951, identified as Tank 18, for storage of various products, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(14) One (1) storage tank, constructed in 1951, identified as Tank 19, for storage of glycerin/water, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(15) One (1) storage tank, constructed in 1951, identified as Tank 20, for storage of Diprop Gly/DPNB/PNB, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(16) One (1) storage tank, constructed in 1951, identified as Tank 21, for storage of Sulfonic N-95, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(17) One (1) storage tank, constructed in 1951, identified as Tank 22, for storage of RHT 240, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(18) One (1) storage tank, constructed in 1951, identified as Tank 23, for storage of RHT 70, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(19) One (1) storage tank, constructed in 1951, identified as Tank 25, for storage of REO, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(20) One (1) storage tank, constructed in 1951, identified as Tank 26, for storage of REO, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(21) One (1) storage tank, constructed in 1951, identified as Tank 27, for storage of deodorizer distillate, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(22) One (1) storage tank, constructed in 1951, identified as Tank 28, for storage of L24-7, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(23) One (1) storage tank, constructed in 1951, identified as Tank 29, for storage of various products, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(24) One (1) storage tank, constructed in 1951, identified as Tank 30, for storage of Moly Oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(25) One (1) storage tank, constructed in 1951, identified as Tank 31, for storage of On Spec Fuel Oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(26) One (1) storage tank, constructed in 1951, identified as Tank 32, for storage of RS Used Oils, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(27) One (1) storage tank, constructed in 1951, identified as Tank 33, for storage of RHT 120L, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(28) One (1) storage tank, constructed in 1951, identified as Tank 34, for storage of RHT 240, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(29) One (1) storage tank, constructed in 1951, identified as Tank 35, for storage of Hiboiler, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(30) One (1) storage tank, constructed in 1951, identified as Tank 36, for storage of various products, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(31) One (1) storage tank, constructed in 1951, identified as Tank 37, for storage of RS Used Oils, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(32) One (1) storage tank, constructed in 1951, identified as Tank 39, for storage of soy oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(33) One (1) storage tank, constructed in 1951, identified as Tank 40, for storage of soy oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(34) One (1) storage tank, constructed in 1951, identified as Tank 41, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(35) One (1) storage tank, constructed in 1951, identified as Tank 42, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(36) One (1) storage tank, constructed in 1951, identified as Tank 43, for storage of VOD, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(37) One (1) storage tank, constructed in 1951, identified as Tank 44, for storage of T-130, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(38) One (1) storage tank, constructed in 1951, identified as Tank 45, for storage of triethanolamine, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(39) One (1) storage tank, constructed in 1951, identified as Tank 46, for storage of T130 Kosher, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(40) One (1) storage tank, constructed in 1951, identified as Tank 47, for storage of vegetable oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(41) One (1) storage tank, constructed in 1951, identified as Tank 48, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(42) One (1) storage tank, constructed in 1951, identified as Tank 49, for storage of biodiesel, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(43) One (1) storage tank, constructed in 1951, identified as Tank 50, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(44) One (1) storage tank, constructed in 1951, identified as Tank 51, for storage of NPE-9, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(45) One (1) storage tank, constructed in 1951, identified as Tank 52, for storage of 1200 Pale Oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(46) One (1) storage tank, constructed in 1951, identified as Tank 53, for storage of 6NF Mineral Oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(47) One (1) storage tank, constructed in 1951, identified as Tank 54, for storage of 16 USP Mineral Oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(48) One (1) storage tank, constructed in 1951, identified as Tank 55, for storage of 50 USP Mineral Oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(49) One (1) storage tank, constructed in 1951, identified as Tank 56, for storage of glycol, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(50) One (1) storage tank, constructed in 1951, identified as Tank 57, for storage of MPG-DEG, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(51) One (1) storage tank, constructed in 1951, identified as Tank 58, for storage of 20 USP Apex Oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(52) One (1) storage tank, constructed in 1951, identified as Tank 59, for storage of Superta, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(53) One (1) storage tank, constructed in 1951, identified as Tank 60, for storage of diesel fuel, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(54) One (1) storage tank, constructed in 1951, identified as Tank 61, for storage of glycol, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(55) One (1) storage tank, constructed in 1951, identified as Tank 62, for storage of various products, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(56) One (1) storage tank, constructed in 1951, identified as Tank 63, for storage of 100 Pale Oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(57) One (1) storage tank, constructed in 1951, identified as Tank 64, for storage of Carnation, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(58) One (1) storage tank, constructed in 1951, identified as Tank 65, for storage of diethanolamine, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(59) One (1) storage tank, constructed in 1951, identified as Tank 66, for storage of biodiesel, with a maximum volume of 126,000 gallons, with a maximum throughput of 5,000,000 gallons per year, and exhausting to the atmosphere;

(60) One (1) storage tank, constructed in 1951, identified as Tank 67, for storage of coconut oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(61) One (1) storage tank, constructed in 1951, identified as Tank 68, for storage of soy oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(62) One (1) storage tank, constructed in 1951, identified as Tank 69, for storage of glycol, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(63) One (1) storage tank, constructed in 1951, identified as Tank 70, for storage of monoethanolamine, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(64) One (1) storage tank, constructed in 1951, identified as Tank 71, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(65) One (1) storage tank, constructed in 1951, identified as Tank 72, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(66) One (1) storage tank, constructed in 1951, identified as Tank 73, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(67) One (1) storage tank, constructed in 1951, identified as Tank 74, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(68) One (1) storage tank, constructed in 1951, identified as Tank 75, for storage of glycol, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(69) One (1) storage tank, constructed in 1951, identified as Tank 76, for storage of glycol, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(70) One (1) storage tank, constructed in 1951, identified as Tank 77, for storage of mineral oil, with a maximum volume of 10,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(71) One (1) storage tank, constructed in 1951, identified as Tank 78, for storage of mineral oil, with a maximum volume of 10,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(72) One (1) storage tank, constructed in 1951, identified as Tank 79, for storage of mineral oil, with a maximum volume of 10,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(73) One (1) storage tank, constructed in 1951, identified as Tank 80, for storage of Pale Oil Blends, with a maximum volume of 10,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(74) One (1) storage tank, constructed in 1979, identified as Tank 81, for storage of mineral oil, with a maximum volume of 18,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(75) One (1) storage tank, constructed in 1980, identified as Tank 82, for storage of TPC 1285, with a maximum volume of 56,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(76) One (1) storage tank, constructed in 1980, identified as Tank 83, for storage of glycerin/water, with a maximum volume of 56,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(77) One (1) storage tank, constructed in 1980, identified as Tank 84, for storage of TPC 1160, with a maximum volume of 56,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(78) One (1) storage tank, constructed in 1994, identified as Tank 86, for storage of morpholine, with a maximum volume of 88,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(79) One (1) storage tank, constructed in 1994, identified as Tank 87, for storage of glycol, with a maximum volume of 88,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(80) One (1) storage tank, constructed in 1994, identified as Tank 89, for storage of H-1500 SPA Blending, with a maximum volume of 88,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(81) One (1) storage tank, constructed in 1994, identified as Tank 90, for storage of Riken Ser, with a maximum volume of 88,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(82) One (1) storage tank, constructed in 1994, identified as Tank 92, for storage of mineral oil, with a maximum volume of 24,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(83) One (1) storage tank, constructed in 1994, identified as Tank 93, for storage of mineral oil, with a maximum volume of 24,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(84) One (1) storage tank, constructed in 1994, identified as Tank 94, for storage of Synacto 406, with a maximum volume of 24,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(85) One (1) storage tank, constructed in 1994, identified as Tank 95, for storage of biodiesel, with a maximum volume of 20,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(86) One (1) storage tank, constructed in 1996, identified as Tank 98, for storage of Indopol L-10S, with a maximum volume of 16,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(87) One (1) storage tank, constructed in 1996, identified as Tank 100, for storage of cetane improver, with a maximum volume of 16,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(88) One (1) storage tank, constructed in 1996, identified as Tank 102, for storage of cetane improver, with a maximum volume of 16,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(89) One (1) storage tank, constructed in 1996, identified as Tank 104, for storage of Infineum F7596, with a maximum volume of 35,800 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(90) One (1) storage tank, constructed in 1966, identified as Tank 105, for storage of various products, with a maximum volume of 13,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(91) One (1) storage tank, constructed in 1966, identified as Tank 106, for storage of various products, with a maximum volume of 13,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(92) One (1) storage tank, constructed in 1999, identified as Tank 107, for storage of propylene glycol, with a maximum volume of 78,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(93) One (1) storage tank, constructed in 1999, identified as Tank 108, for storage of propylene glycol, with a maximum volume of 19,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(94) One (1) storage tank, constructed in 1999, identified as Tank 109, for storage of propylene glycol, with a maximum volume of 19,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(95) One (1) storage tank, constructed in 1999, identified as Tank 110, for storage of propylene glycol, with a maximum volume of 18,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(96) One (1) storage tank, constructed in 1999, identified as Tank 111, for storage of propylene glycol, with a maximum volume of 25,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(97) One (1) storage tank, constructed in 1999, identified as Tank 112, for storage of propylene glycol, with a maximum volume of 25,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(98) One (1) storage tank, constructed in 1999, identified as Tank 113, for storage of propylene glycol, with a maximum volume of 25,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(99) One (1) storage tank, constructed in 2000, identified as Tank 114, for storage of de-ionized water, with a maximum volume of 9,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(100) One (1) storage tank, constructed in 2000, identified as Tank 115, for storage of propylene glycol, with a maximum volume of 2,400 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(101) One (1) storage tank, constructed in 2000, identified as Tank 116, for storage of propylene glycol, with a maximum volume of 2,400 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(102) One (1) storage tank, constructed in 2003, identified as Tank 117, for storage of Genapol SSM, with a maximum volume of 30,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(103) One (1) storage tank, constructed in 2001, identified as Tank 119, for storage of Sulfonic N-100, with a maximum volume of 30,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(104) One (1) storage tank, constructed in 2001, identified as Tank 120, for storage of Sulfonic N-120, with a maximum volume of 30,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(105) One (1) storage tank, constructed in 2001, identified as Tank 121, for storage of dipropylene glycol, with a maximum volume of 30,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(106) One (1) storage tank, constructed in 2001, identified as Tank 122, for storage of Sulfonic N-60, with a maximum volume of 30,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(107) One (1) storage tank, constructed in 1997, identified as Tank 123, for storage of various products, with a maximum volume of 24,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(108) One (1) storage tank, constructed in 2003, identified as Tank 127, for storage of Max Flight Slurry, with a maximum volume of 7,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(109) One (1) storage tank, constructed in 2003, identified as Tank 128, for storage of Max Flight Slurry, with a maximum volume of 7,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere; and

(110) One (1) storage tank, constructed in 2003, identified as Tank 129, for storage of Max Flight Slurry, with a maximum volume of 7,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere.

(c) A biodiesel production facility, with a maximum production rate of 800 gallons per hour, modified in 2006 for use as a single process unit, modified in 2009, approved in 2010 for modification, consisting of the following:

Under 40 CFR 60, Subpart VVa, these are considered affected facilities. Under 40 CFR 63, Subpart FFFF, these are considered affected facilities. [40 CFR 60, Subpart VVa] [40 CFR 63, Subpart FFFF]

(1) One (1) feedstock storage tank, constructed in 1951, modified in 2006, identified as T-24, for storage of soy oil, with a maximum volume of 420,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(2) One (1) feedstock storage tank, constructed in 1996, modified in 2006, identified as T-99, for storage of methanol, with a maximum volume of 16,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(3) Two (2) feedstock storage tanks, constructed in 1996, approved in 2010 for modification, identified as T-101 and T-103, for storage of methanol, each with a maximum volume of 16,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(4) One (1) feedstock storage tank, constructed in 1996, modified in 2006, identified as T-97, for storage of 30% sodium methylate catalyst, with a maximum volume of 6,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(5) One (1) feedstock storage tank, constructed in 1996, approved in 2010 for modification, identified as T-96, for storage of 30% sodium methylate catalyst, with a maximum volume of 6,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(6) One (1) reactor, constructed in 1994, modified in 2006, identified as T-88, with a maximum volume of 88,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(7) One (1) by-product storage tank, constructed in 1951, modified in 2006, approved in 2010 for modification, identified as T-3, for storage of crude glycerin, with a maximum volume of 126,000 gallons, using the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(8) One (1) by-product storage tank, constructed in 1980, approved in 2010 for modification, identified as T-85, for storage of crude glycerin, with a maximum volume of 56,000 gallons, using the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(9) One (1) process tank, constructed in 2003, approved in 2010 for modification, identified as T-118, with a maximum volume of 30,500 gallons, using reflux condenser V-5 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. This process tank will also be used for stripping methanol from glycerol brought in from outside sources;

(10) One (1) washing and drying tank, constructed in 1994, modified in 2009, identified as T-91, with a maximum volume of 88,000 gallons, using reflux condenser V-4 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(11) One (1) by-product storage tank, constructed in 1951, modified in 2006, identified as T-4, for storage of spent wash water, with a maximum volume of 126,000 gallons, using reflux condenser V-4 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(12) One (1) product storage tank, constructed in 1951, modified in 2009, approved in 2010 for modification, identified as T-5, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(13) One (1) product storage tank, constructed in 1951, modified in 2006, identified as T-10, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX; and

(14) One (1) product storage tank, constructed in 1951, modified in 2006, identified as T-15, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) One (1) Cleaver Brooks Boiler, constructed in 1970, with a maximum heat input capacity of 9.0 MMBtu/hr, burning natural gas only, and exhausting uncontrolled. [326 IAC 6.8-1-2]

(b) One (1) Johnson Boiler, approved in 2010 for construction, with a maximum heat input capacity of 3.5 MMBtu/hr, burning natural gas only, and exhausting uncontrolled. [326 IAC 6.8-1-2]

(c) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4] [326 IAC 6.8-10]

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5] [326 IAC 2-7-4(a)(1)(D)] [IC 13-15-3-6(a)]

(a) This permit, T089-28673-00230, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ 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 IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(34), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) A "responsible official" is defined at 326 IAC 2-7-1(34).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM,

OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, or Northwest Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Northwest Regional Office phone: (219) 757-0265; fax: (219) 757-0267.

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

B.12 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a

compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

(d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5] [326 IAC 2-7-10.5]

(a) All terms and conditions of permits established prior to T089-28673-00230 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised under 326 IAC 2-7-10.5, or

(3) deleted under 326 IAC 2-7-10.5.

(b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

B.14 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source’s existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) A timely renewal application is one that is:

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the

document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]

(a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b),(c), or (e) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b),(c), or (e). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official”, as defined by 326 IAC 2-7-1(34).

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.21 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.2 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.3 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.4 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.5 Fugitive Particulate Matter Emissions [326 IAC 6.8-10-3]

Pursuant to 326 IAC 6.8-10-3 (formerly 326 IAC 6-1-11.1) (Lake County Fugitive Particulate Matter Control Requirements), the particulate matter emissions from source wide activities shall meet the following requirements:

(a) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).

(b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).

(c) The opacity of fugitive particulate emissions from exposed areas shall not exceed ten percent (10%) on a six (6) minute average.

(d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.

(e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.

(f) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.

(g) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).

(h) Material processing facilities shall include the following:

(1) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.

(2) The PM_{10} emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.

(3) The PM_{10} stack emissions from a material processing facility shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.

(4) The opacity of fugitive particulate emissions from the material processing facilities, except a crusher at which a capture system is not used, shall not exceed ten percent (10%) opacity.

(i) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).

(j) Material transfer limits shall be as follows:

(1) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).

(2) Where adequate wetting of the material for fugitive particulate emissions control is prohibitive to further processing or reuse of the material, the opacity shall not exceed ten percent (10%), three (3) minute average.

(k) Any facility or operation not specified in 326 IAC 6.8-10-3 shall meet a twenty percent (20%), three (3) minute average opacity standard.

The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the attached Fugitive Dust Control Plan (included as Attachment A of this permit).

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of

326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official”, as defined by 326 IAC 2-7-1(34).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.8 Performance Testing [326 IAC 3-6]

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official", as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official", as defined by 326 IAC 2-7-1(34).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.12 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.13 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.15 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

(a) In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), the Permittee shall submit by July 1 an emission statement covering the previous calendar year as follows:

(1) starting in 2010 and every three (3) years thereafter, and

(2) any year not already required under (1) if the source emits volatile organic compounds or oxides of nitrogen into the ambient air at levels equal to or greater than twenty-five (25) tons during the previous calendar year.

(b) The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

C.16 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(d) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.18 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

SECTION D.0 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] - Entire Source

The Permittee owns and operates a stationary batch biodiesel production facility and storage tank facility, consisting of:

Combustion (Section D.1),

Liquid Storage (Section D.2), and

Biodiesel Production (Section D.3).

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.0.1 Volatile Organic Compounds (VOC) Minor Limit [326 IAC 2-2] [326 IAC 8-19-3]

The VOC emissions from the storage tank facility, biodiesel production, and methanol stripping processes combined shall be less than 99 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the above limit, combined with the limits in Condition D.3.1 and the potential to emit VOC from other emission units at the source, shall limit the VOC emissions from the entire source to less than 100 tons per twelve (12) consecutive month period for VOC. This shall render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 8-19-3 (Control Requirements for VOC Emissions from Process Vents) not applicable.

Compliance Determination Requirements

D.0.2 Volatile Organic Compounds (VOC)

In order to determine compliance with the VOC emissions limit in Condition D.0.1, the combined VOC emissions from the storage tank facility, biodiesel production, and methanol stripping processes shall be calculated using the following formula:

$E_{TOTAL} = E_{STOR} + E_{LEAKS} + [(EF_{HX} * HO_{HX})] * 2000$, where:

E_{TOTAL} = combined total tons of VOC emissions per month
E_{STOR} = total tons of VOC emissions (both working losses and breathing losses) per month from storage tank facility, as determined pursuant to Condition D.2.1
E_{LEAKS} = total tons of VOC emissions per month from biodiesel production equipment leaks = 3.40 tons per year ÷ 12 months/yr = 0.28 tons per month
EF_{HX} = VOC testing result for condenser operation HX (lb/hr), as determined pursuant to Condition D.3.5(a)
HO_{HX} = hours of operation per month for condenser operation HX
2000 = lbs/ton

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.0.3 Record Keeping Requirements

(a) To document the compliance status with Condition D.0.1, the Permittee shall keep records of chemical inventories, Material Safety Data Sheets (MSDS), and throughput for each transfer and storage operation (input and output data of TANKS program). Records

necessary to demonstrate compliance shall be available no later than 30 days of the end of each compliance period and shall include, but are not limited to:

(1) the number of gallons of each liquid stored;

(2) the molecular weight of each liquid;

(3) the vapor pressure of each liquid;

(4) the composition of each liquid (VOC content);

(5) the type of operation used for each liquid (e.g., tank storage or tank filling);

(6) the date of the transfer.

(b) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

D.0.4 Reporting Requirements

A quarterly report of the combined VOC emissions to document the compliance status with Condition D.0.1 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] - Combustion

(a) One (1) Kewanee Boiler, constructed in 1994, with a maximum heat input capacity of 25.1 MMBtu/hr, burning natural gas only, and exhausting uncontrolled. Under 40 CFR 60, Subpart Dc, this is considered an affected facility. [40 CFR 60, Subpart Dc]

Specifically Regulated Insignificant Activities

(a) One (1) Cleaver Brooks Boiler, constructed in 1970, with a maximum heat input capacity of 9.0 MMBtu/hr, burning natural gas only, and exhausting uncontrolled. [326 IAC 6.8-1-2]

(b) One (1) Johnson Boiler, approved in 2010 for construction, with a maximum heat input capacity of 3.5 MMBtu/hr, burning natural gas only, and exhausting uncontrolled. [326 IAC 6.8-1-2]

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6.8-1-2]

Pursuant to 326 IAC 326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County), particulate emissions from the natural gas fired-boilers (Kewanee Boiler, Cleaver Brooks Boiler, and Johnson Boiler) shall not exceed 0.01 grains per dry standard cubic foot of particulate matter (PM), each.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] - Liquid Storage

(b) A storage tank facility (with vertical, above ground, fixed cone roof tanks, without internal floating roofs) holding products with a vapor pressure less than 0.50 psia, consisting of the following:

(1) One (1) storage tank, constructed in 1951, identified as Tank 1, for storage of propylene glycol, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(2) One (1) storage tank, constructed in 1951, identified as Tank 2, for storage of polymer polyols, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(3) One (1) storage tank, constructed in 1951, identified as Tank 6, for storage of Infineum R693, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(4) One (1) storage tank, approved in 2010 for construction, identified as Tank 7, for storage of various products, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(5) One (1) storage tank, constructed in 1951, identified as Tank 8, for storage of Atosol 100, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(6) One (1) storage tank, constructed in 1951, identified as Tank 9, for storage of glycol, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(7) One (1) storage tank, constructed in 1951, identified as Tank 11, for storage of Low Sulfur Diesel Supreme, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(8) One (1) storage tank, constructed in 1951, identified as Tank 12, for storage of T11E tallow fatty acid, with a maximum volume of 126,000 gallons, with a maximum throughput of 3,000,000 gallons per year, and exhausting to the atmosphere;

(9) One (1) storage tank, constructed in 1951, identified as Tank 13, for storage of glycerin/water, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(10) One (1) storage tank, constructed in 1951, identified as Tank 14, for storage of Atosol 150, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(11) One (1) storage tank, constructed in 1951, identified as Tank 16, for storage of Synacto 246, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(12) One (1) storage tank, constructed in 1951, identified as Tank 17, for storage of various products, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(13) One (1) storage tank, constructed in 1951, identified as Tank 18, for storage of various products, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(14) One (1) storage tank, constructed in 1951, identified as Tank 19, for storage of glycerin/water, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(15) One (1) storage tank, constructed in 1951, identified as Tank 20, for storage of Diprop Gly/DPNB/PNB, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(16) One (1) storage tank, constructed in 1951, identified as Tank 21, for storage of Sulfonic N-95, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(17) One (1) storage tank, constructed in 1951, identified as Tank 22, for storage of RHT 240, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(18) One (1) storage tank, constructed in 1951, identified as Tank 23, for storage of RHT 70, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(19) One (1) storage tank, constructed in 1951, identified as Tank 25, for storage of REO, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(20) One (1) storage tank, constructed in 1951, identified as Tank 26, for storage of REO, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(21) One (1) storage tank, constructed in 1951, identified as Tank 27, for storage of deodorizer distillate, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(22) One (1) storage tank, constructed in 1951, identified as Tank 28, for storage of L24-7, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(23) One (1) storage tank, constructed in 1951, identified as Tank 29, for storage of various products, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(24) One (1) storage tank, constructed in 1951, identified as Tank 30, for storage of Moly Oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(25) One (1) storage tank, constructed in 1951, identified as Tank 31, for storage of On Spec Fuel Oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(26) One (1) storage tank, constructed in 1951, identified as Tank 32, for storage of RS Used Oils, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(27) One (1) storage tank, constructed in 1951, identified as Tank 33, for storage of RHT 120L, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(28) One (1) storage tank, constructed in 1951, identified as Tank 34, for storage of RHT 240, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(29) One (1) storage tank, constructed in 1951, identified as Tank 35, for storage of Hiboiler, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(30) One (1) storage tank, constructed in 1951, identified as Tank 36, for storage of various products, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(31) One (1) storage tank, constructed in 1951, identified as Tank 37, for storage of RS Used Oils, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(32) One (1) storage tank, constructed in 1951, identified as Tank 39, for storage of soy oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(33) One (1) storage tank, constructed in 1951, identified as Tank 40, for storage of soy oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(34) One (1) storage tank, constructed in 1951, identified as Tank 41, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(35) One (1) storage tank, constructed in 1951, identified as Tank 42, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(36) One (1) storage tank, constructed in 1951, identified as Tank 43, for storage of VOD, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(37) One (1) storage tank, constructed in 1951, identified as Tank 44, for storage of T-130, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(38) One (1) storage tank, constructed in 1951, identified as Tank 45, for storage of triethanolamine, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(39) One (1) storage tank, constructed in 1951, identified as Tank 46, for storage of T130 Kosher, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(40) One (1) storage tank, constructed in 1951, identified as Tank 47, for storage of vegetable oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(41) One (1) storage tank, constructed in 1951, identified as Tank 48, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(42) One (1) storage tank, constructed in 1951, identified as Tank 49, for storage of biodiesel, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(43) One (1) storage tank, constructed in 1951, identified as Tank 50, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(44) One (1) storage tank, constructed in 1951, identified as Tank 51, for storage of NPE-9, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(45) One (1) storage tank, constructed in 1951, identified as Tank 52, for storage of 1200 Pale Oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(46) One (1) storage tank, constructed in 1951, identified as Tank 53, for storage of 6NF Mineral Oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(47) One (1) storage tank, constructed in 1951, identified as Tank 54, for storage of 16 USP Mineral Oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(48) One (1) storage tank, constructed in 1951, identified as Tank 55, for storage of 50 USP Mineral Oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(49) One (1) storage tank, constructed in 1951, identified as Tank 56, for storage of glycol, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(50) One (1) storage tank, constructed in 1951, identified as Tank 57, for storage of MPG-DEG, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(51) One (1) storage tank, constructed in 1951, identified as Tank 58, for storage of 20 USP Apex Oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(52) One (1) storage tank, constructed in 1951, identified as Tank 59, for storage of Superta, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(53) One (1) storage tank, constructed in 1951, identified as Tank 60, for storage of diesel fuel, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(54) One (1) storage tank, constructed in 1951, identified as Tank 61, for storage of glycol, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(55) One (1) storage tank, constructed in 1951, identified as Tank 62, for storage of various products, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(56) One (1) storage tank, constructed in 1951, identified as Tank 63, for storage of 100 Pale Oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(57) One (1) storage tank, constructed in 1951, identified as Tank 64, for storage of Carnation, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(58) One (1) storage tank, constructed in 1951, identified as Tank 65, for storage of diethanolamine, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(59) One (1) storage tank, constructed in 1951, identified as Tank 66, for storage of biodiesel, with a maximum volume of 126,000 gallons, with a maximum throughput of 5,000,000 gallons per year, and exhausting to the atmosphere;

(60) One (1) storage tank, constructed in 1951, identified as Tank 67, for storage of coconut oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(61) One (1) storage tank, constructed in 1951, identified as Tank 68, for storage of soy oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(62) One (1) storage tank, constructed in 1951, identified as Tank 69, for storage of glycol, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(63) One (1) storage tank, constructed in 1951, identified as Tank 70, for storage of monoethanolamine, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(64) One (1) storage tank, constructed in 1951, identified as Tank 71, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(65) One (1) storage tank, constructed in 1951, identified as Tank 72, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(66) One (1) storage tank, constructed in 1951, identified as Tank 73, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(67) One (1) storage tank, constructed in 1951, identified as Tank 74, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(68) One (1) storage tank, constructed in 1951, identified as Tank 75, for storage of glycol, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(69) One (1) storage tank, constructed in 1951, identified as Tank 76, for storage of glycol, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(70) One (1) storage tank, constructed in 1951, identified as Tank 77, for storage of mineral oil, with a maximum volume of 10,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(71) One (1) storage tank, constructed in 1951, identified as Tank 78, for storage of mineral oil, with a maximum volume of 10,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(72) One (1) storage tank, constructed in 1951, identified as Tank 79, for storage of mineral oil, with a maximum volume of 10,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(73) One (1) storage tank, constructed in 1951, identified as Tank 80, for storage of Pale Oil Blends, with a maximum volume of 10,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(74) One (1) storage tank, constructed in 1979, identified as Tank 81, for storage of mineral oil, with a maximum volume of 18,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(75) One (1) storage tank, constructed in 1980, identified as Tank 82, for storage of TPC 1285, with a maximum volume of 56,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(76) One (1) storage tank, constructed in 1980, identified as Tank 83, for storage of glycerin/water, with a maximum volume of 56,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(77) One (1) storage tank, constructed in 1980, identified as Tank 84, for storage of TPC 1160, with a maximum volume of 56,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(78) One (1) storage tank, constructed in 1994, identified as Tank 86, for storage of morpholine, with a maximum volume of 88,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(79) One (1) storage tank, constructed in 1994, identified as Tank 87, for storage of glycol, with a maximum volume of 88,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(80) One (1) storage tank, constructed in 1994, identified as Tank 89, for storage of H-1500 SPA Blending, with a maximum volume of 88,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(81) One (1) storage tank, constructed in 1994, identified as Tank 90, for storage of Riken Ser, with a maximum volume of 88,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(82) One (1) storage tank, constructed in 1994, identified as Tank 92, for storage of mineral oil, with a maximum volume of 24,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(83) One (1) storage tank, constructed in 1994, identified as Tank 93, for storage of mineral oil, with a maximum volume of 24,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(84) One (1) storage tank, constructed in 1994, identified as Tank 94, for storage of Synacto 406, with a maximum volume of 24,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(85) One (1) storage tank, constructed in 1994, identified as Tank 95, for storage of biodiesel, with a maximum volume of 20,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(86) One (1) storage tank, constructed in 1996, identified as Tank 98, for storage of Indopol L-10S, with a maximum volume of 16,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(87) One (1) storage tank, constructed in 1996, identified as Tank 100, for storage of cetane improver, with a maximum volume of 16,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(88) One (1) storage tank, constructed in 1996, identified as Tank 102, for storage of cetane improver, with a maximum volume of 16,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(89) One (1) storage tank, constructed in 1996, identified as Tank 104, for storage of Infineum F7596, with a maximum volume of 35,800 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(90) One (1) storage tank, constructed in 1966, identified as Tank 105, for storage of various products, with a maximum volume of 13,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(91) One (1) storage tank, constructed in 1966, identified as Tank 106, for storage of various products, with a maximum volume of 13,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(92) One (1) storage tank, constructed in 1999, identified as Tank 107, for storage of propylene glycol, with a maximum volume of 78,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(93) One (1) storage tank, constructed in 1999, identified as Tank 108, for storage of propylene glycol, with a maximum volume of 19,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(94) One (1) storage tank, constructed in 1999, identified as Tank 109, for storage of propylene glycol, with a maximum volume of 19,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(95) One (1) storage tank, constructed in 1999, identified as Tank 110, for storage of propylene glycol, with a maximum volume of 18,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(96) One (1) storage tank, constructed in 1999, identified as Tank 111, for storage of propylene glycol, with a maximum volume of 25,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(97) One (1) storage tank, constructed in 1999, identified as Tank 112, for storage of propylene glycol, with a maximum volume of 25,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(98) One (1) storage tank, constructed in 1999, identified as Tank 113, for storage of propylene glycol, with a maximum volume of 25,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(99) One (1) storage tank, constructed in 2000, identified as Tank 114, for storage of de-ionized water, with a maximum volume of 9,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(100) One (1) storage tank, constructed in 2000, identified as Tank 115, for storage of propylene glycol, with a maximum volume of 2,400 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(101) One (1) storage tank, constructed in 2000, identified as Tank 116, for storage of propylene glycol, with a maximum volume of 2,400 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(102) One (1) storage tank, constructed in 2003, identified as Tank 117, for storage of Genapol SSM, with a maximum volume of 30,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(103) One (1) storage tank, constructed in 2001, identified as Tank 119, for storage of Sulfonic N-100, with a maximum volume of 30,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(104) One (1) storage tank, constructed in 2001, identified as Tank 120, for storage of Sulfonic N-120, with a maximum volume of 30,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(105) One (1) storage tank, constructed in 2001, identified as Tank 121, for storage of dipropylene glycol, with a maximum volume of 30,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(106) One (1) storage tank, constructed in 2001, identified as Tank 122, for storage of Sulfonic N-60, with a maximum volume of 30,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(107) One (1) storage tank, constructed in 1997, identified as Tank 123, for storage of various products, with a maximum volume of 24,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(108) One (1) storage tank, constructed in 2003, identified as Tank 127, for storage of Max Flight Slurry, with a maximum volume of 7,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(109) One (1) storage tank, constructed in 2003, identified as Tank 128, for storage of Max Flight Slurry, with a maximum volume of 7,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere; and

(110) One (1) storage tank, constructed in 2003, identified as Tank 129, for storage of Max Flight Slurry, with a maximum volume of 7,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Compliance Determination Requirements

D.2.1 Volatile Organic Compounds (VOC)

In order to determine compliance with the VOC emissions limit in Condition D.0.1, the VOC emissions from the tank storage and tank filling of the tanks listed in Section D.2 shall be calculated using USEPA's TANKS program (version 4.0 or its updates).

D.2.2 Vapor Pressure Determination [326 IAC 8-9-6(i)]

Pursuant to 326 IAC 8-9-6(i), the maximum true vapor pressure of the liquids stored in the storage tanks shall be determined using the following methods:

Available data on the storage temperature may be used to determine the maximum true vapor pressure as follows:

(a) The maximum true vapor pressure for VOLs stored at temperatures above or below the ambient temperature shall correspond to the highest calendar-month average storage temperature. The maximum true vapor pressure for VOLs stored at the ambient temperature shall correspond to the local maximum monthly average temperature, as reported by the National Weather Service.

(b) For local crude oil or refined petroleum products, the maximum vapor pressure may be determined as follows:

(1) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 unless the department specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the samples.

(2) The maximum true vapor pressure of each type of crude oil with a Reid vapor pressure less than two (2) pounds per square inch or with physical properties that preclude determination by the recommended method shall be determined from available data and recorded if the estimated maximum true vapor pressure is greater than five-tenths (0.5) psia.

(c) For other liquids, the maximum true vapor pressure may be determined by any of the following methods:

(1) Standard reference texts.

(2) ASTM Method D2879-92.

(3) Calculated or measured by a method approved by the department.

D.2.3 Vapor Pressure Determination [326 IAC 8-9-6(j)]

Pursuant to 326 IAC 8-9-6(j), the owner or operator of each vessel storing a waste mixture of indeterminate or variable composition, prior to the initial filling of the vessel, shall have the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored determined using the methods described in Condition D.2.2.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.4 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.1, the Permittee shall keep records of chemical inventories, Material Safety Data Sheets (MSDS), and throughput for each transfer and storage operation (input and output data of TANKS program). Records necessary to demonstrate compliance shall be available no later than 30 days of the end of each compliance period and shall include, but are not limited to:

(1) the number of gallons of each liquid stored;

(2) the molecular weight of each liquid;

(3) the vapor pressure of each liquid;

(4) the composition of each liquid (VOC content);

(5) the type of operation used for each liquid (e.g., tank storage or tank filling);

(6) the date of the transfer.

(b) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

D.2.5 Record Keeping Requirements [326 IAC 8-9-6]

Storage tanks that do not store a volatile organic liquid (VOL), as defined in 326 IAC 8-9-3(10), are not subject to 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels). Any change in the liquid stored in these tanks that would be defined as a VOL shall be subject to the requirements of this condition, under 326 IAC 8-9-6.

(a) Pursuant to 326 IAC 8-9-6(a), the owner or operator of the following storage tanks shall keep all records required by 326 IAC 8-9-6 for three (3) years unless specified otherwise:

Tank 1, Tank 2, Tank 6, Tank 7, Tank 8, Tank 9, Tank 11, Tank 12, Tank 13, Tank 14, Tank 16, Tank 17, Tank 18, Tank 19, Tank 20, Tank 21, Tank 22, Tank 23, Tank 25, Tank 26, Tank 27, Tank 28, Tank 29, Tank 30, Tank 31, Tank 32, Tank 33, Tank 34, Tank 35, Tank 36, Tank 37, Tank 38, Tank 39, Tank 40, Tank 41, Tank 42, Tank 43, Tank 44, Tank 45, Tank 46, Tank 47, Tank 48, Tank 49, Tank 50, Tank 51, Tank 52, Tank 53, Tank 54, Tank 55, Tank 56, Tank 57, Tank 58, Tank 59, Tank 60, Tank 61,

Tank 62, Tank 63, Tank 64, Tank 65, Tank 66, Tank 67, Tank 68, Tank 69, Tank 70, Tank 71, Tank 72, Tank 73, Tank 74, Tank 75, Tank 76, Tank 77, Tank 78, Tank 79, Tank 80, Tank 81, Tank 82, Tank 83, Tank 84, Tank 86, Tank 87, Tank 89, Tank 90, Tank 92, Tank 93, Tank 94, Tank 95, Tank 98, Tank 100, Tank 102, Tank 104, Tank 105, Tank 106, Tank 107, Tank 108, Tank 109, Tank 110, Tank 111, Tank 112, Tank 113, Tank 114, Tank 115, Tank 116, Tank 117, Tank 119, Tank 120, Tank 121, Tank 122, Tank 123, Tank 127, Tank 128, and Tank 129.

(b) Pursuant to 326 IAC 8-9-6(b), the owner or operator of Tank 1, Tank 2, Tank 6, Tank 7, Tank 8, Tank 9, Tank 11, Tank 12, Tank 13, Tank 14, Tank 16, Tank 17, Tank 18, Tank 19, Tank 20, Tank 21, Tank 22, Tank 23, Tank 25, Tank 26, Tank 27, Tank 28, Tank 29, Tank 30, Tank 31, Tank 32, Tank 33, Tank 34, Tank 35, Tank 36, Tank 37, Tank 38, Tank 39, Tank 40, Tank 41, Tank 42, Tank 43, Tank 44, Tank 45, Tank 46, Tank 47, Tank 48, Tank 49, Tank 50, Tank 51, Tank 52, Tank 53, Tank 54, Tank 55, Tank 56, Tank 57, Tank 58, Tank 59, Tank 60, Tank 61, Tank 62, Tank 63, Tank 64, Tank 65, Tank 66, Tank 67, Tank 68, Tank 69, Tank 70, Tank 71, Tank 72, Tank 73, Tank 74, Tank 75, Tank 76, Tank 77, Tank 78, Tank 79, Tank 80, Tank 81, Tank 82, Tank 83, Tank 84, Tank 86, Tank 87, Tank 89, Tank 90, Tank 92, Tank 93, Tank 94, Tank 95, Tank 98, Tank 100, Tank 102, Tank 104, Tank 105, Tank 106, Tank 107, Tank 108, Tank 109, Tank 110, Tank 111, Tank 112, Tank 113, Tank 114, Tank 115, Tank 116, Tank 117, Tank 119, Tank 120, Tank 121, Tank 122, Tank 123, Tank 127, Tank 128, and Tank 129 shall maintain a record and submit to the department a report containing the information, as specified in (1) through (4) below, for each vessel. The records required, as specified in (1) through (4) below, shall be maintained for the life of the vessel.

(1) The vessel identification number.

(2) The vessel dimensions.

(3) The vessel capacity.

(4) A description of the emission control equipment for each vessel, or a schedule for installation of emission control equipment with a certification that the emission control equipment meets the applicable standards.

(c) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] - Biodiesel Production

(c) A biodiesel production facility, with a maximum production rate of 800 gallons per hour, modified in 2006 for use as a single process unit, modified in 2009, approved in 2010 for modification, consisting of the following:

Under 40 CFR 60, Subpart VVa, these are considered affected facilities. Under 40 CFR 63, Subpart FFFF, these are considered affected facilities. [40 CFR 60, Subpart VVa] [40 CFR 63, Subpart FFFF]

(1) One (1) feedstock storage tank, constructed in 1951, modified in 2006, identified as T-24, for storage of soy oil, with a maximum volume of 420,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(2) One (1) feedstock storage tank, constructed in 1996, modified in 2006, identified as T-99, for storage of methanol, with a maximum volume of 16,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(3) Two (2) feedstock storage tanks, constructed in 1996, approved in 2010 for modification, identified as T-101 and T-103, for storage of methanol, each with a maximum volume of 16,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(4) One (1) feedstock storage tank, constructed in 1996, modified in 2006, identified as T-97, for storage of 30% sodium methylate catalyst, with a maximum volume of 6,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(5) One (1) feedstock storage tank, constructed in 1996, approved in 2010 for modification, identified as T-96, for storage of 30% sodium methylate catalyst, with a maximum volume of 6,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(6) One (1) reactor, constructed in 1994, modified in 2006, identified as T-88, with a maximum volume of 88,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(7) One (1) by-product storage tank, constructed in 1951, modified in 2006, approved in 2010 for modification, identified as T-3, for storage of crude glycerin, with a maximum volume of 126,000 gallons, using the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(8) One (1) by-product storage tank, constructed in 1980, approved in 2010 for modification, identified as T-85, for storage of crude glycerin, with a maximum volume of 56,000 gallons, using the condenser operation HX (identified as refrigerated coolant

condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(9) One (1) process tank, constructed in 2003, approved in 2010 for modification, identified as T-118, with a maximum volume of 30,500 gallons, using reflux condenser V-5 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. This process tank will also be used for stripping methanol from glycerol brought in from outside sources;

(10) One (1) washing and drying tank, constructed in 1994, modified in 2009, identified as T-91, with a maximum volume of 88,000 gallons, using reflux condenser V-4 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(11) One (1) by-product storage tank, constructed in 1951, modified in 2006, identified as T-4, for storage of spent wash water, with a maximum volume of 126,000 gallons, using reflux condenser V-4 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(12) One (1) product storage tank, constructed in 1951, modified in 2009, approved in 2010 for modification, identified as T-5, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(13) One (1) product storage tank, constructed in 1951, modified in 2006, identified as T-10, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX; and

(14) One (1) product storage tank, constructed in 1951, modified in 2006, identified as T-15, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Volatile Organic Compounds (VOC) Minor Limit [326 IAC 2-2] [326 IAC 8-19-3]

The control measures for VOC for the biodiesel production facility shall be as follows:

(a) The VOC emissions from the reactor T-88 and tanks T-24, T-99, T-101, T-103, T-97, T-96, T-3, T-85, T-118, T-91, T-4, T-5, T-10, and T-15 shall be controlled by the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series).

(b) The VOC emissions from the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) shall be less than 13.38 lb/hr.

(c) The VOC emissions from the reactor T-88 and tanks T-24, T-99, T-101, T-103, T-97, T-96, T-5, T-10, and T-15 shall be controlled by condenser V-3.

(d) The VOC emissions from tanks T-4 and T-91 shall be controlled by condenser V-4.

(e) The VOC emissions from tank T-118 shall be controlled by condenser V-5.

(f) As stated in 40 CFR 63.983(a)(2), closed vent systems used to comply with the provisions of 40 CFR 63, Subpart SS, shall be operated at all times when emissions are vented to, or collected by, them.

(g) In the event that failure of the closed vent systems has been observed, the feed to the process shall be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit.

Compliance with the above limits, combined with the limit in Condition D.0.1 and the potential to emit VOC from other emission units at the source, shall limit the VOC emissions from the entire source to less than 100 tons per twelve (12) consecutive month period for VOC. This shall render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 8-19-3 (Control Requirements for VOC Emissions from Process Vents) not applicable.

D.3.2 Volatile Organic Liquid Storage Vessels [326 IAC 8-9-4(d)(2)]

Pursuant to 326 IAC 8-9-4(d)(2), the standards applicable to each closed vent system and control device are as follows:

The control device shall be designed and operated to reduce inlet VOC emissions by ninety-five percent (95%) or greater.

D.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.3.4 VOC Control

In order to comply with Condition D.3.1, the following requirements shall be used to control VOC emissions:

(a) Condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) shall be in operation at all times when reactor T-88 and tanks T-24, T-99, T-101, T-103, T-97, T-96, T-3, T-85, T-118, T-91, T-4, T-5, T-10, and T-15 are in operation.

(b) Condenser V-3 shall be in operation at all times when reactor T-88 and tanks T-24, T-99, T-101, T-103, T-97, T-96, T-5, T-10, and T-15 are in operation.

(c) Condenser V-4 shall be in operation at all times when tanks T-4 and T-91 are in operation.

(d) Condenser V-5 shall be in operation at all times when tank T-118 is in operation.

(e) As stated in 40 CFR 63.983(a)(2), closed vent systems used to comply with the provisions of 40 CFR 63, Subpart SS, shall be operated at all times when emissions are vented to, or collected by, them.

D.3.5 Testing Requirements [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.3.1(b) and D.3.2, the Permittee shall perform VOC testing on the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) not later than 180 days after initial startup of the condenser operation HX utilizing methods approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. The condensers shall be tested while the biodiesel production facility is operating at maximum capacity.

Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.3.6 Volatile Organic Liquid Storage Vessels [326 IAC 8-9-5(d)]

Pursuant to 326 IAC 8-9-5(d), the owner or operator of each vessel that is equipped with a closed vent system and control device shall meet the following requirements:

(a) No later than sixty (60) days after demonstrating compliance with the limits of Conditions D.3.1 and D.3.2, submit to IDEM an operating plan containing the following information:

(1) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation shall include a description of the gas stream that enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapor gases or liquid other than fuels from sources that are not subject to this rule, the efficiency demonstration shall include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device.

(2) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used to monitor the parameter or parameters.

(b) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the department in accordance with Condition D.3.6(a)(1) unless the plan was modified by the department during the review process. In this case, the modified plan applies.

D.3.7 Volatile Organic Compounds (VOC)

In order to determine compliance with the VOC emissions limits in Conditions D.0.1 and D.3.1, the VOC emissions from the reactor and process tanks shall be determined as follows:

(a) VOC emissions from the reaction process of Reactor T-88 shall be calculated using the following formula:

$E = SI * (HV_s / HV_m) * HR / 2000$, where:

E	= tons of emissions per month
SI	= steam input (lb/hr)
HV_s	= heat of vaporization (steam) = 972.1 Btu/lb
HV_m	= heat of vaporization (methanol) = 473.0 Btu/lb
HR	= hours of refluxing per month
2000	= lbs/ton

(b) VOC emissions from the stripping process of Reactor T-88 shall be calculated using the following formula:

$E = G * D / 2000$, where:

E	= tons of emissions per month
G	= gallons of methanol per month to be stripped
D	= density of methanol = 6.6 lb/gal
2000	= lbs/ton

(c) VOC emissions from the stripping process of Process Tank T-118 shall be calculated using the following formula:

$E = G * D / 2000$, where:

E	= tons of emissions per month
G	= gallons of methanol per month to be stripped
D	= density of methanol = 6.6 lb/gal
2000	= lbs/ton

D.3.8 Vapor Pressure Determination [326 IAC 8-9-6(i)]

Pursuant to 326 IAC 8-9-6(i), the maximum true vapor pressure of the liquids stored in the storage tanks shall be determined using the following methods:

Available data on the storage temperature may be used to determine the maximum true vapor pressure as follows:

(a) The maximum true vapor pressure for VOLs stored at temperatures above or below the ambient temperature shall correspond to the highest calendar-month average storage temperature. The maximum true vapor pressure for VOLs stored at the ambient temperature shall correspond to the local maximum monthly average temperature, as reported by the National Weather Service.

(b) For local crude oil or refined petroleum products, the maximum vapor pressure may be determined as follows:

(1) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar month average temperature of the stored product may be used to determine the maximum true

vapor pressure from nomographs contained in API Bulletin 2517 unless the department specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the samples.

(2) The maximum true vapor pressure of each type of crude oil with a Reid vapor pressure less than two (2) pounds per square inch or with physical properties that preclude determination by the recommended method shall be determined from available data and recorded if the estimated maximum true vapor pressure is greater than five-tenths (0.5) psia.

(c) For other liquids, the maximum true vapor pressure may be determined by any of the following methods:

(1) Standard reference texts.

(2) ASTM Method D2879-92.

(3) Calculated or measured by a method approved by the department.

D.3.9 Vapor Pressure Determination [326 IAC 8-9-6(j)]

Pursuant to 326 IAC 8-9-6(j), the owner or operator of each vessel storing a waste mixture of indeterminate or variable composition, prior to the initial filling of the vessel, shall have the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored determined using the methods described in Condition D.3.8.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

D.3.10 Condenser Monitoring

The Permittee shall comply with the following monitoring requirements for condensers HX-88A, HX-88B, V-3, V-4, and V-5:

(a) A continuous monitoring system shall be calibrated, maintained, and operated on condenser HX-88A for measuring outlet exhaust temperature. For the purposes of this condition, continuous monitoring shall mean no less often than once per minute. The output of this system shall be recorded as a 3-hour average.

(b) A continuous monitoring system shall be calibrated, maintained, and operated on condenser HX-88B for measuring outlet exhaust temperature. For the purposes of this condition, continuous monitoring shall mean no less often than once per minute. The output of this system shall be recorded as a 3-hour average.

(c) A continuous monitoring system shall be calibrated, maintained, and operated on condenser V-3 for measuring outlet exhaust temperature. For the purposes of this condition, continuous monitoring shall mean no less often than once per minute. The output of this system shall be recorded as a 3-hour average.

(d) A continuous monitoring system shall be calibrated, maintained, and operated on condenser V-4 for measuring outlet exhaust temperature. For the purposes of this condition, continuous monitoring shall mean no less often than once per minute. The output of this system shall be recorded as a 3-hour average.

(e) A continuous monitoring system shall be calibrated, maintained, and operated on condenser V-5 for measuring outlet exhaust temperature. For the purposes of this

condition, continuous monitoring shall mean no less often than once per minute. The output of this system shall be recorded as a 3-hour average.

(f) The Permittee shall determine the maximum 3-hour average temperatures that demonstrate compliance with the limits in Conditions D.3.1 and D.3.2 as approved by IDEM.

(g) Once the results from the approved stack tests are available, the Permittee shall then operate the condensers at or below the maximum 3-hour average temperature determined from the most recent compliant stack test following approval of that temperature.

(h) If any of the following operating conditions occur, the Permittee shall take reasonable response steps:

(1) When the 3-hour average temperature reading of the outlet exhaust temperature to condenser HX-88A is above the manufacturer's recommended temperature and the maximum temperature established during the latest valid stack test that demonstrates compliance for any 3-hour average.

(2) When the 3-hour average temperature reading of the outlet exhaust temperature to condenser HX-88B is above the manufacturer's recommended temperature and the maximum temperature established during the latest valid stack test that demonstrates compliance for any 3-hour average.

(3) When the 3-hour average temperature reading of the outlet exhaust temperature to condenser V-3 is above the manufacturer's recommended temperature and the maximum temperature established during the latest valid stack test that demonstrates compliance for any 3-hour average.

(4) When the 3-hour average temperature reading of the outlet exhaust temperature to condenser V-4 is above the manufacturer's recommended temperature and the maximum temperature established during the latest valid stack test that demonstrates compliance for any 3-hour average.

(5) When the 3-hour average temperature reading of the outlet exhaust temperature to condenser V-5 is above the manufacturer's recommended temperature and the maximum temperature established during the latest valid stack test that demonstrates compliance for any 3-hour average.

Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A 3-hour average temperature reading that is above the 3-hour average temperature reading is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(i) The instruments used for determining the temperature reading shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.

(j) The outlet exhaust temperature monitoring device of each condenser shall be equipped with a continuous recorder having an accuracy of plus or minus one percent (1%) of the temperature being monitored expressed in degrees Celsius or plus or minus one and eight-tenths percent (1.8%) of the temperature being measured expressed in degrees Fahrenheit.

D.3.11 Condenser Failure Detection

In the event that condenser failure of any of the condensers HX-88A, HX-88B, V-3, V-4, and V-5 has been observed:

The feed to the process shall be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.3.12 Closed Vent System Failure Detection

In the event that failure of the closed vent systems has been observed:

The feed to the process shall be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.3.13 Volatile Organic Liquid Storage Vessels [326 IAC 8-9-4(d)(1)]

Pursuant to 326 IAC 8-9-4(d)(1), the monitoring standards applicable to each closed vent system and control device are as follows:

The closed vent system shall be designed to collect all VOC vapors and gases discharged from the vessel and operated with no detectable emission as indicated by an instrument reading of less than five hundred (500) parts per million (ppm) above background and visual inspections as determined by the methods specified in 40 CFR 60, Subpart VV, 60.485(C).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.14 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.1, the Permittee shall keep records of chemical inventories, Material Safety Data Sheets (MSDS), and throughput for each transfer and storage operation (input and output data of TANKS program). Records necessary to demonstrate compliance shall be available no later than 30 days of the end of each compliance period and shall include, but are not limited to:

(1) the number of gallons of each liquid stored;

(2) the molecular weight of each liquid;

(3) the vapor pressure of each liquid;

(4) the composition of each liquid (VOC content);

(5) the type of operation used for each liquid (e.g., tank storage, tank filling, reaction, or stripping);

(6) the date of the transfer.

(b) In order to document the compliance status with Condition D.3.10, the Permittee shall maintain the continuous outlet exhaust temperature (on a 3-hour average basis) of the condensers during normal operation. The Permittee shall include in its daily record when a temperature reading is not taken and the reason for the lack of a temperature reading (e.g. the process did not operate that day).

(c) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

D.3.15 Record Keeping Requirements [326 IAC 8-9-6]

(a) Pursuant to 326 IAC 8-9-6(a), the owner or operator of the following storage tanks shall keep all records required by 326 IAC 8-9-6 for three (3) years unless specified otherwise:

Tank T-24, Tank T-99, Tank T-101, Tank T-103, Tank T-97, Tank T-96, Tank T-3, Tank T-85, Tank T-4, Tank T-5, Tank T-10, and Tank T-15.

(b) Pursuant to 326 IAC 8-9-6(b), the owner or operator of Tank T-24, Tank T-99, Tank T-101, Tank T-103, Tank T-97, Tank T-96, Tank T-3, Tank T-85, Tank T-4, Tank T-5, Tank T-10, and Tank T-15 shall maintain a record and submit to the department a report containing the information, as specified in (1) through (4) below, for each vessel. The records required, as specified in (1) through (4) below, shall be maintained for the life of the vessel.

(1) The vessel identification number.

(2) The vessel dimensions.

(3) The vessel capacity.

(4) A description of the emission control equipment for each vessel, or a schedule for installation of emission control equipment with a certification that the emission control equipment meets the applicable standards.

(c) Pursuant to 326 IAC 8-9-6(e), the owner or operator of each vessel equipped with a closed vent system with a control device shall comply with the following record keeping and reporting requirements:

(1) No later than sixty (60) days after demonstrating compliance with the limits of Conditions D.3.1 and D.3.2, submit an operating plan as required by Condition D.3.6(a).

(2) Maintain records of the following:

(A) The operating plan.

(B) Measured values of the parameters monitored according to Condition D.3.6(b).

(d) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

SECTION E.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(a) One (1) Kewanee Boiler, constructed in 1994, with a maximum heat input capacity of 25.1 MMBtu/hr, burning natural gas only, and exhausting uncontrolled. Under 40 CFR 60, Subpart Dc, this is considered an affected facility. [40 CFR 60, Subpart Dc]

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 for the Kewanee Boiler except as otherwise specified in 40 CFR Part 60, Subpart Dc.

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.1.2 Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Dc]

The Permittee which engages in steam generation from small industrial units shall comply with the following provisions of 40 CFR Part 60, Subpart Dc (included as Attachment B of this permit):

(a) 40 CFR 60.40c(a), (b), (c), (d);
(b) 40 CFR 60.41c; and
(c) 40 CFR 60.48c(a), (g), (i), (j).

SECTION E.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(c) A biodiesel production facility, with a maximum production rate of 800 gallons per hour, modified in 2006 for use as a single process unit, modified in 2009, approved in 2010 for modification, consisting of the following:

(7) One (1) by-product storage tank, constructed in 1951, modified in 2006, approved in 2010 for modification, identified as T-3, for storage of crude glycerin, with a maximum volume of 126,000 gallons, using the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(8) One (1) by-product storage tank, constructed in 1980, approved in 2010 for modification, identified as T-85, for storage of crude glycerin, with a maximum volume of 56,000 gallons, using the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

E.2.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 for tanks T-3 and T-85 except as otherwise specified in 40 CFR Part 60, Subpart Kb.

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.2.2 New Source Performance Standard for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 [40 CFR Part 60, Subpart Kb]

The Permittee which engages in the storage of volatile organic liquids shall comply with the following provisions of 40 CFR Part 60, Subpart Kb (included as Attachment C of this permit):

(a) 40 CFR 60.110b;
(b) 40 CFR 60.111b;
(c) 40 CFR 60.112b(a)(3);
(d) 40 CFR 60.113b(c);
(e) 40 CFR 60.114b;
(f) 40 CFR 60.115b(c);
(g) 40 CFR 60.116b; and
(h) 40 CFR 60.117b.

SECTION E.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(c) A biodiesel production facility, with a maximum production rate of 800 gallons per hour, modified in 2006 for use as a single process unit, modified in 2009, approved in 2010 for modification, consisting of the following:

Under 40 CFR 60, Subpart VVa, these are considered affected facilities. Under 40 CFR 63, Subpart FFFF, these are considered affected facilities. [40 CFR 60, Subpart VVa] [40 CFR 63, Subpart FFFF]

(1) One (1) feedstock storage tank, constructed in 1951, modified in 2006, identified as T-24, for storage of soy oil, with a maximum volume of 420,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(2) One (1) feedstock storage tank, constructed in 1996, modified in 2006, identified as T-99, for storage of methanol, with a maximum volume of 16,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(3) Two (2) feedstock storage tanks, constructed in 1996, approved in 2010 for modification, identified as T-101 and T-103, for storage of methanol, each with a maximum volume of 16,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(4) One (1) feedstock storage tank, constructed in 1996, modified in 2006, identified as T-97, for storage of 30% sodium methylate catalyst, with a maximum volume of 6,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(5) One (1) feedstock storage tank, constructed in 1996, approved in 2010 for modification, identified as T-96, for storage of 30% sodium methylate catalyst, with a maximum volume of 6,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(6) One (1) reactor, constructed in 1994, modified in 2006, identified as T-88, with a maximum volume of 88,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(7) One (1) by-product storage tank, constructed in 1951, modified in 2006, approved in 2010 for modification, identified as T-3, for storage of crude glycerin, with a maximum volume of 126,000 gallons, using the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(8) One (1) by-product storage tank, constructed in 1980, approved in 2010 for modification, identified as T-85, for storage of crude glycerin, with a maximum volume of 56,000 gallons, using the condenser operation HX (identified as refrigerated coolant

condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(9) One (1) process tank, constructed in 2003, approved in 2010 for modification, identified as T-118, with a maximum volume of 30,500 gallons, using reflux condenser V-5 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. This process tank will also be used for stripping methanol from glycerol brought in from outside sources;

(10) One (1) washing and drying tank, constructed in 1994, modified in 2009, identified as T-91, with a maximum volume of 88,000 gallons, using reflux condenser V-4 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(11) One (1) by-product storage tank, constructed in 1951, modified in 2006, identified as T-4, for storage of spent wash water, with a maximum volume of 126,000 gallons, using reflux condenser V-4 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(12) One (1) product storage tank, constructed in 1951, modified in 2009, approved in 2010 for modification, identified as T-5, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(13) One (1) product storage tank, constructed in 1951, modified in 2006, identified as T-10, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX; and

(14) One (1) product storage tank, constructed in 1951, modified in 2006, identified as T-15, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

E.3.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 for the biodiesel production facility except as otherwise specified in 40 CFR Part 60, Subpart VVa.

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.3.2 New Source Performance Standard for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After November 7, 2006 [40 CFR Part 60, Subpart VVa]

The Permittee which engages in equipment leaks from chemical manufacturing shall comply with the following provisions of 40 CFR Part 60, Subpart VVa (included as Attachment D of this permit):

(a) 40 CFR 60.480a(a), (b), (c), (e);
(b) 40 CFR 60.481a;
(c) 40 CFR 60.482-1a;
(d) 40 CFR 60.482-2a;
(e) 40 CFR 60.482-3a;
(f) 40 CFR 60.482-4a;
(g) 40 CFR 60.482-5a;
(h) 40 CFR 60.482-6a;
(i) 40 CFR 60.482-7a;
(j) 40 CFR 60.482-8a;
(k) 40 CFR 60.482-9a;
(l) 40 CFR 60.482-10a;
(m) 40 CFR 60.482-11a;
(n) 40 CFR 60.483-1a;
(o) 40 CFR 60.483-2a;
(p) 40 CFR 60.484a;
(q) 40 CFR 60.485a;
(r) 40 CFR 60.486a;
(s) 40 CFR 60.487a;
(t) 40 CFR 60.488a; and
(u) 40 CFR 60.489a.

SECTION E.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(b) A storage tank facility (with vertical, above ground, fixed cone roof tanks, without internal floating roofs) holding products with a vapor pressure less than 0.50 psia, consisting of the following:

(5) one (1) storage tank, constructed in 1951, identified as Tank 8, for storage of Atosol 100, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(9) one (1) storage tank, constructed in 1951, identified as Tank 13, for storage of glycerin/water, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(10) one (1) storage tank, constructed in 1951, identified as Tank 14, for storage of Atosol 150, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(14) one (1) storage tank, constructed in 1951, identified as Tank 19, for storage of glycerin/water, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(76) one (1) storage tank, constructed in 1980, identified as Tank 83, for storage of glycerin/water, with a maximum volume of 56,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

E.4.1 General Provisions Relating to National Emissions Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1-1] [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.2398, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, as specified in Table 12 of 40 CFR 63, Subpart EEEE in accordance with the Schedule in 40 CFR Part 63, Subpart EEEE.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.4.2 National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) [40 CFR Part 63, Subpart EEEE]

The Permittee which engages in organic liquids distribution shall comply with the following provisions of 40 CFR Part 63, Subpart EEEE (included as Attachment H of this permit):

(a) 40 CFR 63.2330;
(b) 40 CFR 63.2334(a);
(c) 40 CFR 63.2338(a), (b), (c), (f);
(d) 40 CFR 63.2342(b)(1), (d);
(e) 40 CFR 63.2343(b), (c), (d);
(f) 40 CFR 63.2350;
(g) 40 CFR 63.2382(a), (b)(1);
(h) 40 CFR 63.2386(a), (b), (c)(1), (c)(2), (c)(3), (c)(4), (c)(10)(i), (d)(4);
(i) 40 CFR 63.2390(a), (d);
(j) 40 CFR 63.2394;
(k) 40 CFR 63.2398;
(l) 40 CFR 63.2402;
(m) 40 CFR 63.2406;
(n) Table 1 to Subpart EEEE of Part 63;
(o) Table 11 to Subpart EEEE of Part 63; and
(p) Table 12 to Subpart EEEE of Part 63.

SECTION E.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(c) A biodiesel production facility, with a maximum production rate of 800 gallons per hour, modified in 2006 for use as a single process unit, modified in 2009, approved in 2010 for modification, consisting of the following:

Under 40 CFR 60, Subpart VVa, these are considered affected facilities. Under 40 CFR 63, Subpart FFFF, these are considered affected facilities. [40 CFR 60, Subpart VVa] [40 CFR 63, Subpart FFFF]

(1) One (1) feedstock storage tank, constructed in 1951, modified in 2006, identified as T-24, for storage of soy oil, with a maximum volume of 420,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(2) One (1) feedstock storage tank, constructed in 1996, modified in 2006, identified as T-99, for storage of methanol, with a maximum volume of 16,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(3) Two (2) feedstock storage tanks, constructed in 1996, approved in 2010 for modification, identified as T-101 and T-103, for storage of methanol, each with a maximum volume of 16,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(4) One (1) feedstock storage tank, constructed in 1996, modified in 2006, identified as T-97, for storage of 30% sodium methylate catalyst, with a maximum volume of 6,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(5) One (1) feedstock storage tank, constructed in 1996, approved in 2010 for modification, identified as T-96, for storage of 30% sodium methylate catalyst, with a maximum volume of 6,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(6) One (1) reactor, constructed in 1994, modified in 2006, identified as T-88, with a maximum volume of 88,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(7) One (1) by-product storage tank, constructed in 1951, modified in 2006, approved in 2010 for modification, identified as T-3, for storage of crude glycerin, with a maximum volume of 126,000 gallons, using the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(8) One (1) by-product storage tank, constructed in 1980, approved in 2010 for modification, identified as T-85, for storage of crude glycerin, with a maximum volume of 56,000 gallons, using the condenser operation HX (identified as refrigerated coolant

condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(9) One (1) process tank, constructed in 2003, approved in 2010 for modification, identified as T-118, with a maximum volume of 30,500 gallons, using reflux condenser V-5 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. This process tank will also be used for stripping methanol from glycerol brought in from outside sources;

(10) One (1) washing and drying tank, constructed in 1994, modified in 2009, identified as T-91, with a maximum volume of 88,000 gallons, using reflux condenser V-4 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(11) One (1) by-product storage tank, constructed in 1951, modified in 2006, identified as T-4, for storage of spent wash water, with a maximum volume of 126,000 gallons, using reflux condenser V-4 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(12) One (1) product storage tank, constructed in 1951, modified in 2009, approved in 2010 for modification, identified as T-5, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(13) One (1) product storage tank, constructed in 1951, modified in 2006, identified as T-10, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX; and

(14) One (1) product storage tank, constructed in 1951, modified in 2006, identified as T-15, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

E.5.1 General Provisions Relating to National Emissions Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1-1] [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.2540, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, as specified in Table 12 of 40 CFR 63, Subpart FFFF in accordance with the Schedule in 40 CFR Part 63, Subpart FFFF.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.5.2 Miscellaneous Organic Chemical Manufacturing NESHAP [40 CFR Part 63, Subpart FFFF]

The Permittee which engages in miscellaneous organic chemical manufacturing shall comply with the following provisions of 40 CFR Part 63, Subpart FFFF (included as Attachment I of this permit), with a compliance date upon startup of the affected source:

(a) 40 CFR 63.2430;
(b) 40 CFR 63.2435(a), (b)(1)(i);
(c) 40 CFR 63.2440(a), (b), (c);
(d) 40 CFR 63.2445(a)(2), (c), (d);
(e) 40 CFR 63.2450(a), (b), (e)(1), (g), (j), (k), (l), (m), (o), (p);
(f) 40 CFR 63.2455;
(g) 40 CFR 63.2470;
(h) 40 CFR 63.2475;
(i) 40 CFR 63.2480;
(j) 40 CFR 63.2505;
(k) 40 CFR 63.2515(a), (b)(2), (c);
(l) 40 CFR 63.2520;
(m) 40 CFR 63.2525;
(n) 40 CFR 63.2535(c);
(o) 40 CFR 63.2540;
(p) 40 CFR 63.2545;
(q) 40 CFR 63.2550;
(r) 40 CFR 63, Subpart FFFF, Table 1;
(s) 40 CFR 63, Subpart FFFF, Table 3;
(t) 40 CFR 63, Subpart FFFF, Table 4;
(u) 40 CFR 63, Subpart FFFF, Table 5;
(v) 40 CFR 63, Subpart FFFF, Table 6;
(w) 40 CFR 63, Subpart FFFF, Table 11; and
(x) 40 CFR 63, Subpart FFFF, Table 12.

E.5.3 National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices, and Routing to a Fuel Gas System or Process [40 CFR Part 63, Subpart SS]

The Permittee which engages in miscellaneous organic chemical manufacturing shall comply with the applicable provisions of 40 CFR Part 63, Subpart SS (included as Attachment E of this permit), as referenced in 40 CFR 63, Subpart FFFF.

E.5.4 National Emission Standards for Equipment Leaks—Control Level 2 Standards [40 CFR Part 63, Subpart UU]

The Permittee which engages in miscellaneous organic chemical manufacturing shall comply with the applicable provisions of 40 CFR Part 63, Subpart UU (included as Attachment F of this permit), as referenced in 40 CFR 63, Subpart FFFF.

E.5.5 National Emission Standards for Storage Vessels (Tanks)—Control Level 2 [40 CFR Part 63, Subpart WW]

The Permittee which engages in miscellaneous organic chemical manufacturing shall comply with the applicable provisions of 40 CFR Part 63, Subpart WW (included as Attachment G of this permit), as referenced in 40 CFR 63, Subpart FFFF.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: Wolf Lake Terminals, Inc.
Source Address: 3200 South Sheffield Avenue, Hammond, Indiana 46327
Part 70 Permit No.: T089-28673-00230

This certification shall be included when submitting monitoring, testing reports/results, or other documents as required by this permit.

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify)

☐ Report (specify)

☐ Notification (specify)

☐ Affidavit (specify)

☐ Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
Signature:
Printed Name:
Title/Position:
Phone:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Wolf Lake Terminals, Inc.
Source Address: 3200 South Sheffield Avenue, Hammond, Indiana 46327
Part 70 Permit No.: T089-28673-00230

This form consists of 2 pages **Page 1 of 2**

☐ This is an emergency as defined in 326 IAC 2-7-1(12)

- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Wolf Lake Terminals, Inc.
Source Address: 3200 South Sheffield Avenue, Hammond, Indiana 46327
Part 70 Permit No.: T089-28673-00230
Facilities: Storage tank facility, biodiesel production, and methanol stripping processes
Parameter: VOC
Limit: Less than 99 tons of VOC per twelve (12) consecutive month period

QUARTER : _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Wolf Lake Terminals, Inc.
Source Address: 3200 South Sheffield Avenue, Hammond, Indiana 46327
Part 70 Permit No.: T089-28673-00230

Months: _____ to _____ Year: _____

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

ATTACHMENT A

BIO-DIESEL PRODUCTION FACILITY FUGITIVE DUST CONTROL PLAN

WOLF LAKE TERMINALS
2300 SOUTH SHEFFIELD AVENUE
HAMMOND, IN 46327

Facility Contact: Jerry Patton
Title: Terminal Manager
Phone Number: 219-937-4300

Processes at the facility which have the potential to emit fugitive particulate matter include paved roads.

(a) Fugitive particulate matter (dust) emissions from paved roads shall be controlled by one or more of the following measures:

(1) Paved roads and parking lots:

(A) Cleaning by vacuum sweeping on an as needed basis

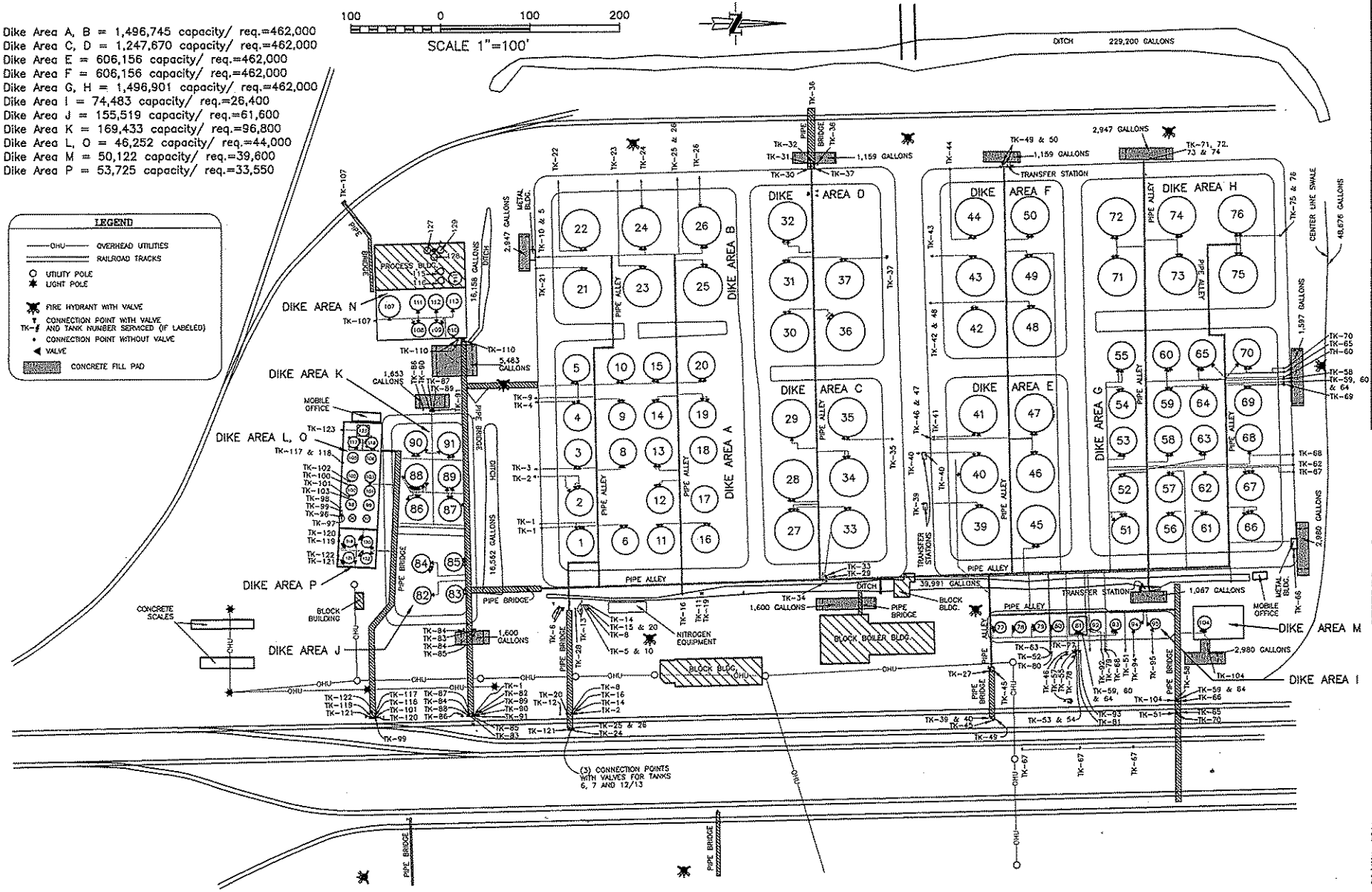
OR

(B) Power brooming while wet either from rain or application of water on an as needed basis.

"An as needed basis" means the frequency or quantity of application necessary to minimize visible particulate matter emissions.

FACILITY MAP

Dike Area A, B = 1,496,745 capacity/ req.=462,000
Dike Area C, D = 1,247,670 capacity/ req.=462,000
Dike Area E = 606,156 capacity/ req.=462,000
Dike Area F = 606,156 capacity/ req.=462,000
Dike Area G, H = 1,496,901 capacity/ req.=462,000
Dike Area I = 74,483 capacity/ req.=26,400
Dike Area J = 155,519 capacity/ req.=61,600
Dike Area K = 169,433 capacity/ req.=96,800
Dike Area L, O = 46,252 capacity/ req.=44,000
Dike Area M = 50,122 capacity/ req.=39,600
Dike Area P = 53,725 capacity/ req.=33,550



FACILITY MAP
WOLF LAKE TERMINALS
3200 SHEFFIELD AVENUE, HAMMOND IN
FOR: WOLF LAKE TERMINALS

Plumb Tuckett & Associates
SURVEYORS • ENGINEERS • ARCHITECTS

FACILITY MAP
DRAWING NUMBER
1

Indiana Department of Environmental Management
Office of Air Quality

Attachment B

Title 40: Protection of Environment
Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Source: 72 FR 32759, June 13, 2007, unless otherwise noted.

§ 60.40c Applicability and delegation of authority.

(a) Except as provided in paragraph (d) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, §60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO_2) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in §60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under §60.14.

(e) Heat recovery steam generators that are associated with combined cycle gas turbines and meet the applicability requirements of subpart GG or KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/hr) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/hr) heat input of fossil fuel. If the heat recovery steam generator is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG or KKKK, as applicable, of this part).

(f) Any facility covered by subpart AAAA of this part is not covered by this subpart.

(g) Any facility covered by an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not covered by this subpart.

§ 60.41c Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input

shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

Cogeneration steam generating unit means a steam generating unit that simultaneously produces both electrical (or mechanical) and thermal energy from the same primary energy source.

Combined cycle system means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

Combustion research means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (*i.e.* , the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

Conventional technology means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Dry flue gas desulfurization technology means a SO_2 control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO_2 control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under §60.48c(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

Fluidized bed combustion technology means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

Heat transfer medium means any material that is used to transfer heat from one point to another point.

Maximum design heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

Natural gas means: (1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or (2) liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §60.17).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

Potential sulfur dioxide emission rate means the theoretical SO_2 emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Steam generating unit means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Wet flue gas desulfurization technology means an SO_2 control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO_2.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

§ 60.42c Standard for sulfur dioxide (SO_2).

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that combusts only coal shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2 emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2 emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.

(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that:

(1) Combusts only coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential SO_2 emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of SO_2 in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is fired with coal refuse, the affected facility subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 87 ng/J (0.20 lb/MMBtu) heat input SO_2 emissions limit or the 90 percent SO_2 reduction requirement specified in paragraph (a) of this section and the emission limit is determined pursuant to paragraph (e)(2) of this section.

(2) Combusts only coal and that uses an emerging technology for the control of SO_2 emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 50 percent (0.50) of the potential SO_2 emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 260 ng/J (0.60 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent SO_2 reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under paragraphs (c)(1), (2), (3), or (4).

(1) Affected facilities that have a heat input capacity of 22 MW (75 MMBtu/hr) or less.

(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.

(3) Affected facilities located in a noncontinental area.

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from exhaust gases entering the duct burner.

(d) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 215 ng/J (0.50 lb/MMBtu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(e) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of the following:

(1) The percent of potential SO_2 emission rate or numerical SO_2 emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that

(i) Combusts coal in combination with any other fuel;

(ii) Has a heat input capacity greater than 22 MW (75 MMBtu/hr); and

(iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s = \frac{(K_a H_a + K_b H_b + K_c H_c)}{(H_a + H_b + H_c)}$$

Where:

E_s= SO_2 emission limit, expressed in ng/J or lb/MMBtu heat input;

K_a= 520 ng/J (1.2 lb/MMBtu);

K_b= 260 ng/J (0.60 lb/MMBtu);

K_c= 215 ng/J (0.50 lb/MMBtu);

H_a= Heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [MMBtu];

H_b= Heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (MMBtu); and

$H_cK_aH_b$= Heat input from the combustion of oil, in J (MMBtu).

(f) Reduction in the potential SO_2 emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

(1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential SO_2 emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion SO_2 control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), or (3) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under §60.48c(f), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).

(2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(3) Coal-fired facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(i) The SO_2 emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

§ 60.43c Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

(2) 130 ng/J (0.30 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

(e)(1) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) of this section.

(2) As an alternative to meeting the requirements of paragraph (e)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial

performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under §60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO_2 emissions is not subject to the PM limit in this section.

§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.

(a) Except as provided in paragraphs (g) and (h) of this section and §60.8(b), performance tests required under §60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in §60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under §60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO_2 emission limits under §60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affect facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) of this section and §60.8, compliance with the percent reduction requirements and SO_2 emission limits under §60.42c is based on the average percent reduction and the average SO_2 emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and SO_2 emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 of appendix A of this part are used to determine the hourly SO_2 emission rate (E_{ho}) and the 30-day average SO_2 emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the CEMS. Method 19 of appendix A of this

part shall be used to calculate $E_{ao}$when using daily fuel sampling or Method 6B of appendix A of this part.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted E_{ho}(E_{ho}o) is used in Equation 19–19 of Method 19 of appendix A of this part to compute the adjusted E_{ao}(E_{ao}o). The E_{ho}o is computed using the following formula:

$$E_{ho}o = \frac{E_{ho} - E_w(1 - X_k)}{X_k}$$

Where:

E_{ho}o = Adjusted E_{ho}, ng/J (lb/MMBtu);

E_{ho}= Hourly SO_2 emission rate, ng/J (lb/MMBtu);

E_w= SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value $E_w$for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure $E_w$if the owner or operator elects to assume E_w= 0.

X_k= Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(2) The owner or operator of an affected facility that qualifies under the provisions of §60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters $E_w$or $X_k$if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under §60.42c(a) or (b) shall determine compliance with the SO_2 emission limits under §60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential SO_2 emission rate is computed using the following formula:

$$\%P_s = 100\left(1 - \frac{\%R_g}{100}\right)\left(1 - \frac{\%R_f}{100}\right)$$

Where:

$\%P_s$= Potential SO_2 emission rate, in percent;

$\%R_g$= SO_2 removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

$\%R_f$= SO_2 removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the $\%P_s$, an adjusted $\%R_g$($\%R_g$o) is computed from E_{ao}o from paragraph (e)(1) of this section and an adjusted average SO_2 inlet rate (E_{ai}o) using the following formula:

$$\%R_g o = 100\left(1 - \frac{E^{\circ}_{ao}}{E^{\circ}_{ai}}\right)$$

Where:

$\%R_g$o = Adjusted $\%R_g$, in percent;

E_{ao}o = Adjusted E_{ao}, ng/J (lb/MMBtu); and

E_{ai}o = Adjusted average SO_2 inlet rate, ng/J (lb/MMBtu).

(ii) To compute E_{ai}o, an adjusted hourly SO_2 inlet rate (E_{hi}o) is used. The E_{hi}o is computed using the following formula:

$$E_{hi}o = \frac{E_{hi} - E_w(1 - X_k)}{X_k}$$

Where:

E_{hi}o = Adjusted E_{hi}, ng/J (lb/MMBtu);

E_{hi}= Hourly SO_2 inlet rate, ng/J (lb/MMBtu);

E_w= SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value $E_w$for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure $E_w$if the owner or operator elects to assume E_w= 0; and

X_k= Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under §60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under §60.46c(d)(2).

(h) For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, the performance test shall consist of the certification, the certification from the fuel supplier, as described under §60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO_2 standards under §60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the

steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO_2 emissions data in calculating $\%P_s$ and E_{ho} under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under §60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$ or E_{ho} pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

§ 60.45c Compliance and performance test methods and procedures for particulate matter.

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under §60.43c shall conduct an initial performance test as required under §60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of this section.

(1) Method 1 of appendix A of this part shall be used to select the sampling site and the number of traverse sampling points.

(2) Method 3 of appendix A of this part shall be used for gas analysis when applying Method 5, 5B, or 17 of appendix A of this part.

(3) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 of appendix A of this part may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 8.1 and 11.1 of Method 5B of appendix A of this part may be used in Method 17 of appendix A of this part only if Method 17 of appendix A of this part is used in conjunction with a wet scrubber system. Method 17 of appendix A of this part shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(5) For Method 5 or 5B of appendix A of this part, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 ±14 °C (320±25 °F).

(6) For determination of PM emissions, an oxygen (O_2) or carbon dioxide (CO_2) measurement shall be obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(7) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rates expressed in ng/J (lb/MMBtu) heat input shall be determined using:

(i) The O_2or CO_2measurements and PM measurements obtained under this section, (ii) The dry basis F factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(8) Method 9 of appendix A of this part (6-minute average of 24 observations) shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under §60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(c) In place of PM testing with EPA Reference Method 5, 5B, or 17 of appendix A of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using EPA Method 5, 5B, or 17 of appendix A of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(13) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with §60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under §60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraph (d)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (d)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (d)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O_2(or CO_2) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in paragraph (d)(7)(i) of this section.

(i) For PM, EPA Reference Method 5, 5B, or 17 of appendix A of this part shall be used.

(ii) For O_2(or CO_2), EPA reference Method 3, 3A, or 3B of appendix A of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.

(d) The owner or operator of an affected facility seeking to demonstrate compliance under §60.43c(e)(4) shall follow the applicable procedures under §60.48c(f). For residual oil-fired affected facilities, fuel supplier certifications are only allowed for facilities with heat input capacities between 2.9 and 8.7 MW (10 to 30 MMBtu/hr).

§ 60.46c Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the SO_2 emission limits under §60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO_2 concentrations and either O_2or CO_2concentrations at the outlet of the SO_2 control device (or the outlet of the steam generating unit if no SO_2 control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under §60.42c shall measure SO_2 concentrations and either O_2 or CO_2 concentrations at both the inlet and outlet of the SO_2 control device.

(b) The 1-hour average SO_2 emission rates measured by a CEMS shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.42c. Each 1-hour average SO_2 emission rate must be based on at least 30 minutes of operation, and shall be calculated using the data points required under §60.13(h)(2). Hourly SO_2 emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities subject to the percent reduction requirements under §60.42c, the span value of the SO_2 CEMS at the inlet to the SO_2 control device shall be 125 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted, and the span value of the SO_2 CEMS at the outlet from the SO_2 control device shall be 50 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of §60.42c, the span value of the SO_2 CEMS at the outlet from the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) shall be 125 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emission rate by using Method 6B of appendix A of this part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according the Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO_2 input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B of appendix A of this part may be used in lieu of CEMS to measure SO_2 at the inlet or outlet of the SO_2 control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable SO_2 and CO_2 measurement train operated at the candidate location and a second similar train operated according to the procedures in §3.2 and the applicable procedures in section 7 of Performance Specification 2 of appendix B of this part. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to §60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, as described under §60.48c(f), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

§ 60.47c Emission monitoring for particulate matter.

(a) Except as provided in paragraphs (c), (d), (e), and (f) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under §60.43c shall install, calibrate, maintain, and operate a COMS for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system.

(b) All COMS for measuring opacity shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.06 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO_2 or PM emissions are not required to operate a CEMS for measuring opacity if they follow the applicable procedures under §60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS monitor instead of monitoring opacity must calibrate, maintain, and operate a CEMS, and record the output of the system, for PM emissions discharged to the atmosphere as specified in §60.45c(d). The CEMS specified in paragraph §60.45c(d) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(e) An affected facility that does not use post-combustion technology (except a wet scrubber) for reducing PM, SO_2, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur, and is operated such that emissions of CO to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS for

measuring opacity. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section.

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in §60.58b(i)(3) of subpart Eb of this part.

(ii) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(iii) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. At least two data points per hour must be used to calculate each 1-hour average.

(iv) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(2) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(3) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(4) You must record the CO measurements and calculations performed according to paragraph (e) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(f) An affected facility that burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur and operates according to a written site-specific monitoring plan approved by the appropriate delegated permitting authority is not required to operate a COMS for measuring opacity. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard.

§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c, or §60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO_2 emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO_2 emission limits of §60.42c, or the PM or opacity limits of §60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) The owner or operator of each coal-fired, oil-fired, or wood-fired affected facility subject to the opacity limits under §60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period.

(d) The owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall submit reports to the Administrator.

(e) The owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO_2 emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO_2 emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO_2 or diluent (O_2or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c; and

(iii) The sulfur content of the oil.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO_2 standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42C to use fuel certification to demonstrate compliance with the SO_2 standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

(h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under §60.42c or §60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

Indiana Department of Environmental Management
Office of Air Quality

Attachment C

Title 40: Protection of Environment
Subpart Kb—Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984

Source: 52 FR 11429, Apr. 8, 1987, unless otherwise noted.

§ 60.110b Applicability and designation of affected facility.

(a) Except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

(b) This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure less than 15.0 kPa.

(c) [Reserved]

(d) This subpart does not apply to the following:

(1) Vessels at coke oven by-product plants.

(2) Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere.

(3) Vessels permanently attached to mobile vehicles such as trucks, railcars, barges, or ships.

(4) Vessels with a design capacity less than or equal to 1,589.874 m^3 used for petroleum or condensate stored, processed, or treated prior to custody transfer.

(5) Vessels located at bulk gasoline plants.

(6) Storage vessels located at gasoline service stations.

(7) Vessels used to store beverage alcohol.

(8) Vessels subject to subpart GGGG of 40 CFR part 63.

(e) *Alternative means of compliance* —(1) *Option to comply with part 65.* Owners or operators may choose to comply with 40 CFR part 65, subpart C, to satisfy the requirements of §§60.112b through 60.117b for storage vessels that are subject to this subpart that meet the specifications in paragraphs (e)(1)(i) and (ii) of this section. When choosing to comply with 40 CFR part 65, subpart C, the monitoring requirements of §60.116b(c), (e), (f)(1), and (g) still apply. Other provisions applying to owners or operators who choose to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(i) A storage vessel with a design capacity greater than or equal to 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa; or

(ii) A storage vessel with a design capacity greater than 75 m^3 but less than 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa.

(2) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 65, subpart C, must also comply with §§60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for those storage vessels. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(2) do not apply to owners or operators of storage vessels complying with 40 CFR part 65, subpart C, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart C, must comply with 40 CFR part 65, subpart A.

(3) *Internal floating roof report.* If an owner or operator installs an internal floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.43. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

(4) *External floating roof report.* If an owner or operator installs an external floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.44. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 78275, Dec. 14, 2000; 68 FR 59332, Oct. 15, 2003]

§ 60.111b Definitions.

Terms used in this subpart are defined in the Act, in subpart A of this part, or in this subpart as follows:

Bulk gasoline plant means any gasoline distribution facility that has a gasoline throughput less than or equal to 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal requirement or Federal, State or local law, and discoverable by the Administrator and any other person.

Condensate means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions.

Custody transfer means the transfer of produced petroleum and/or condensate, after processing and/or treatment in the producing operations, from storage vessels or automatic transfer facilities to pipelines or any other forms of transportation.

Fill means the introduction of VOL into a storage vessel but not necessarily to complete capacity.

Gasoline service station means any site where gasoline is dispensed to motor vehicle fuel tanks from stationary storage tanks.

Maximum true vapor pressure means the equilibrium partial pressure exerted by the volatile organic compounds (as defined in 40 CFR 51.100) in the stored VOL at the temperature equal to the highest calendar-month average of the VOL storage temperature for VOL's stored above or below the ambient temperature or at the local maximum monthly average temperature as

reported by the National Weather Service for VOL's stored at the ambient temperature, as determined:

(1) In accordance with methods described in American Petroleum institute Bulletin 2517, Evaporation Loss From External Floating Roof Tanks, (incorporated by reference—see §60.17); or

(2) As obtained from standard reference texts; or

(3) As determined by ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17);

(4) Any other method approved by the Administrator.

Petroleum means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.

Petroleum liquids means petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery.

Process tank means a tank that is used within a process (including a solvent or raw material recovery process) to collect material discharged from a feedstock storage vessel or equipment within the process before the material is transferred to other equipment within the process, to a product or by-product storage vessel, or to a vessel used to store recovered solvent or raw material. In many process tanks, unit operations such as reactions and blending are conducted. Other process tanks, such as surge control vessels and bottoms receivers, however, may not involve unit operations.

Reid vapor pressure means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids except liquified petroleum gases, as determined by ASTM D323–82 or 94 (incorporated by reference—see §60.17).

Storage vessel means each tank, reservoir, or container used for the storage of volatile organic liquids but does not include:

(1) Frames, housing, auxiliary supports, or other components that are not directly involved in the containment of liquids or vapors;

(2) Subsurface caverns or porous rock reservoirs; or

(3) Process tanks.

Volatile organic liquid (VOL) means any organic liquid which can emit volatile organic compounds (as defined in 40 CFR 51.100) into the atmosphere.

Waste means any liquid resulting from industrial, commercial, mining or agricultural operations, or from community activities that is discarded or is being accumulated, stored, or physically, chemically, or biologically treated prior to being discarded or recycled.

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 61756, Oct. 17, 2000; 68 FR 59333, Oct. 15, 2003]

§ 60.112b Standard for volatile organic compounds (VOC).

(a) The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:

(1) A fixed roof in combination with an internal floating roof meeting 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 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.

(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:

(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.

(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.

(C) A mechanical shoe seal. A mechanical shoe seal 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.

(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.

(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.

(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.

(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.

(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.

(viii) 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.

(ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(2) An external floating roof. An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Each external floating roof must meet the following specifications:

(i) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in §60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.

(B) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in §60.113b(b)(4).

(ii) Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. 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. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(iii) The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

(3) A closed vent system and control device meeting the following specifications:

(i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, §60.485(b).

(ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§60.18) of the General Provisions.

(4) A system equivalent to those described in paragraphs (a)(1), (a)(2), or (a)(3) of this section as provided in §60.114b of this subpart.

(b) The owner or operator of each storage vessel with a design capacity greater than or equal to 75 m^3 which contains a VOL that, as stored, has a maximum true vapor pressure greater than or equal to 76.6 kPa shall equip each storage vessel with one of the following:

(1) A closed vent system and control device as specified in §60.112b(a)(3).

(2) A system equivalent to that described in paragraph (b)(1) as provided in §60.114b of this subpart.

(c) *Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia.* This paragraph applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia ("site").

(1) For any storage vessel that otherwise would be subject to the control technology requirements of paragraphs (a) or (b) of this section, the site shall have the option of either complying directly with the requirements of this subpart, or reducing the site-wide total criteria pollutant emissions cap (total emissions cap) in accordance with the procedures set forth in a permit issued pursuant to 40 CFR 52.2454. If the site chooses the option of reducing the total emissions cap in accordance with the procedures set forth in such permit, the requirements of such permit shall apply in lieu of the otherwise applicable requirements of this subpart for such storage vessel.

(2) For any storage vessel at the site not subject to the requirements of 40 CFR 60.112b (a) or (b), the requirements of 40 CFR 60.116b (b) and (c) and the General Provisions (subpart A of this part) shall not apply.

[52 FR 11429, Apr. 8, 1987, as amended at 62 FR 52641, Oct. 8, 1997]

§ 60.113b Testing and procedures.

The owner or operator of each storage vessel as specified in §60.112b(a) shall meet the requirements of paragraph (a), (b), or (c) of this section. The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of §60.112b.

(a) After installing the control equipment required to meet §60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall:

(1) 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 owner or operator shall repair the items before filling the storage vessel.

(2) 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 there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator 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, a 30-day extension may be requested from the Administrator in the inspection report required in §60.115b(a)(3). 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 assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(3) For vessels equipped with a double-seal system as specified in §60.112b(a)(1)(ii)(B):

(i) Visually inspect the vessel as specified in paragraph (a)(4) of this section at least every 5 years; or

(ii) Visually inspect the vessel as specified in paragraph (a)(2) of this section.

(4) 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 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 owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist 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 (a)(2) and (a)(3)(ii) of this section and at intervals no greater than 5 years in the case of vessels specified in paragraph (a)(3)(i) of this section.

(5) Notify the Administrator 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)(1) and (a)(4) of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by paragraph (a)(4) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator 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 Administrator at least 7 days prior to the refilling.

(b) After installing the control equipment required to meet §60.112b(a)(2) (external floating roof), the owner or operator shall:

(1) Determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the following frequency.

(i) Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.

(ii) Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.

(iii) If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for the purposes of paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(2) Determine gap widths and areas in the primary and secondary seals individually by the following procedures:

(i) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.

(ii) Measure seal gaps around the entire circumference of the tank in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal

and the wall of the storage vessel and measure the circumferential distance of each such location.

(iii) The total surface area of each gap described in paragraph (b)(2)(ii) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(3) Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in paragraph (b)(4) of this section.

(4) Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in (b)(4) (i) and (ii) of this section:

(i) The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 Cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.

(A) One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface.

(B) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

(ii) The secondary seal is to meet the following requirements:

(A) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section.

(B) The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.

(C) There are to be no holes, tears, or other openings in the seal or seal fabric.

(iii) If a failure that is detected during inspections required in paragraph (b)(1) of §60.113b(b) cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in §60.115b(b)(4). Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(5) Notify the Administrator 30 days in advance of any gap measurements required by paragraph (b)(1) of this section to afford the Administrator the opportunity to have an observer present.

(6) Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

(i) If the external 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, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.

(ii) For all the inspections required by paragraph (b)(6) of this section, the owner or operator shall notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the Administrator the opportunity to inspect the storage vessel prior to refilling. If the inspection required by paragraph (b)(6) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Administrator 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 Administrator at least 7 days prior to the refilling.

(c) The owner or operator of each source that is equipped with a closed vent system and control device as required in §60.112b (a)(3) or (b)(2) (other than a flare) is exempt from §60.8 of the General Provisions and shall meet the following requirements.

(1) Submit for approval by the Administrator as an attachment to the notification required by §60.7(a)(1) or, if the facility is exempt from §60.7(a)(1), as an attachment to the notification required by §60.7(a)(2), an operating plan containing the information listed below.

(i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

(ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (c)(1) of this section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.

(d) The owner or operator of each source that is equipped with a closed vent system and a flare to meet the requirements in §60.112b (a)(3) or (b)(2) shall meet the requirements as specified in the general control device requirements, §60.18 (e) and (f).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989]

§ 60.114b Alternative means of emission limitation.

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in emissions at least equivalent to the reduction in emissions achieved by any requirement in §60.112b, the Administrator will publish in theFederal Registera notice permitting the use of the alternative means for purposes of compliance with that requirement.

(b) Any notice under paragraph (a) of this section will be published only after notice and an opportunity for a hearing.

(c) Any person seeking permission under this section shall submit to the Administrator a written application including:

(1) An actual emissions test that uses a full-sized or scale-model storage vessel that accurately collects and measures all VOC emissions from a given control device and that accurately simulates wind and accounts for other emission variables such as temperature and barometric pressure.

(2) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.

(d) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emissions reduction as specified in §60.112b.

§ 60.115b Reporting and recordkeeping requirements.

The owner or operator of each storage vessel as specified in §60.112b(a) shall keep records and furnish reports as required by paragraphs (a), (b), or (c) of this section depending upon the control equipment installed to meet the requirements of §60.112b. The owner or operator shall keep copies of all reports and records required by this section, except for the record required by (c)(1), for at least 2 years. The record required by (c)(1) will be kept for the life of the control equipment.

(a) After installing control equipment in accordance with §60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of §60.112b(a)(1) and §60.113b(a)(1). This report shall be an attachment to the notification required by §60.7(a)(3).

(2) Keep a record of each inspection performed as required by §60.113b (a)(1), (a)(2), (a)(3), and (a)(4). 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).

(3) If any of the conditions described in §60.113b(a)(2) are detected during the annual visual inspection required by §60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify 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.

(4) After each inspection required by §60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in §60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of §61.112b(a)(1) or §60.113b(a)(3) and list each repair made.

(b) After installing control equipment in accordance with §61.112b(a)(2) (external floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of §60.112b(a)(2) and §60.113b(b)(2), (b)(3), and (b)(4). This report shall be an attachment to the notification required by §60.7(a)(3).

(2) Within 60 days of performing the seal gap measurements required by §60.113b(b)(1), furnish the Administrator with a report that contains:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in §60.113b (b)(2) and (b)(3).

(3) Keep a record of each gap measurement performed as required by §60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in §60.113b (b)(2) and (b)(3).

(4) After each seal gap measurement that detects gaps exceeding the limitations specified by §60.113b(b)(4), submit a report to the Administrator within 30 days of the inspection. The report will identify the vessel and contain the information specified in paragraph (b)(2) of this section and the date the vessel was emptied or the repairs made and date of repair.

(c) After installing control equipment in accordance with §60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records.

(1) A copy of the operating plan.

(2) A record of the measured values of the parameters monitored in accordance with §60.113b(c)(2).

(d) After installing a closed vent system and flare to comply with §60.112b, the owner or operator shall meet the following requirements.

(1) A report containing the measurements required by §60.18(f) (1), (2), (3), (4), (5), and (6) shall be furnished to the Administrator as required by §60.8 of the General Provisions. This report shall be submitted within 6 months of the initial start-up date.

(2) Records shall be kept of all periods of operation during which the flare pilot flame is absent.

(3) Semiannual reports of all periods recorded under §60.115b(d)(2) in which the pilot flame was absent shall be furnished to the Administrator.

§ 60.116b Monitoring of operations.

(a) The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source.

(b) The owner or operator of each storage vessel as specified in §60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

(c) Except as provided in paragraphs (f) and (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

(d) Except as provided in paragraph (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor vapor pressure values for each volume range.

(e) Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below.

(1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

(2) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:

(i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference—see §60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

(ii) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

(3) For other liquids, the vapor pressure:

(i) May be obtained from standard reference texts, or

(ii) Determined by ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17); or

(iii) Measured by an appropriate method approved by the Administrator; or

(iv) Calculated by an appropriate method approved by the Administrator.

(f) The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.

(1) Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph (e) of this section.

(2) For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in §60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:

(i) ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17); or

(ii) ASTM D323–82 or 94 (incorporated by reference—see §60.17); or

(iii) As measured by an appropriate method as approved by the Administrator.

(g) The owner or operator of each vessel equipped with a closed vent system and control device meeting the specification of §60.112b or with emissions reductions equipment as specified in 40 CFR 65.42(b)(4), (b)(5), (b)(6), or (c) is exempt from the requirements of paragraphs (c) and (d) of this section.

[52 FR 11429, Apr. 8, 1987, as amended at 65 FR 61756, Oct. 17, 2000; 65 FR 78276, Dec. 14, 2000; 68 FR 59333, Oct. 15, 2003]

§ 60.117b Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: §§60.111b(f)(4), 60.114b, 60.116b(e)(3)(iii), 60.116b(e)(3)(iv), and 60.116b(f)(2)(iii).

[52 FR 11429, Apr. 8, 1987, as amended at 52 FR 22780, June 16, 1987]

Indiana Department of Environmental Management
Office of Air Quality

Attachment D

Title 40: Protection of Environment
Subpart VVa—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006

Source: 72 FR 64883, Nov. 16, 2007, unless otherwise noted.

§ 60.480a Applicability and designation of affected facility.

(a)(1) The provisions of this subpart apply to affected facilities in the synthetic organic chemicals manufacturing industry.

(2) The group of all equipment (defined in §60.481a) within a process unit is an affected facility.

(b) Any affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after November 7, 2006, shall be subject to the requirements of this subpart.

(c) Addition or replacement of equipment for the purpose of process improvement which is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.

(d)(1) If an owner or operator applies for one or more of the exemptions in this paragraph, then the owner or operator shall maintain records as required in §60.486a(i).

(2) Any affected facility that has the design capacity to produce less than 1,000 Mg/yr (1,102 ton/yr) of a chemical listed in §60.489 is exempt from §§60.482–1a through 60.482–11a.

(3) If an affected facility produces heavy liquid chemicals only from heavy liquid feed or raw materials, then it is exempt from §§60.482–1a through 60.482–11a.

(4) Any affected facility that produces beverage alcohol is exempt from §§60.482–1a through 60.482–11a.

(5) Any affected facility that has no equipment in volatile organic compounds (VOC) service is exempt from §§60.482–1a through 60.482–11a.

(e) *Alternative means of compliance* —(1) *Option to comply with part 65.* (i) Owners or operators may choose to comply with the provisions of 40 CFR part 65, subpart F, to satisfy the requirements of §§60.482–1a through 60.487a for an affected facility. When choosing to comply with 40 CFR part 65, subpart F, the requirements of §§60.485a(d), (e), and (f), and 60.486a(i) and (j) still apply. Other provisions applying to an owner or operator who chooses to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(ii) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 65, subpart F must also comply with §§60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for that equipment. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(1)(ii) do not apply to owners or operators of equipment subject to this subpart complying with 40 CFR part 65, subpart F, except that provisions required to be met prior to

implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart F, must comply with 40 CFR part 65, subpart A.

(2) *Part 63, subpart H.* (i) Owners or operators may choose to comply with the provisions of 40 CFR part 63, subpart H, to satisfy the requirements of §§60.482–1a through 60.487a for an affected facility. When choosing to comply with 40 CFR part 63, subpart H, the requirements of §60.485a(d), (e), and (f), and §60.486a(i) and (j) still apply.

(ii) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 63, subpart H must also comply with §§60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for that equipment. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(2)(ii) do not apply to owners or operators of equipment subject to this subpart complying with 40 CFR part 63, subpart H, except that provisions required to be met prior to implementing 40 CFR part 63 still apply. Owners and operators who choose to comply with 40 CFR part 63, subpart H, must comply with 40 CFR part 63, subpart A.

(f) *Stay of standards.* (1) Owners or operators that start a new, reconstructed, or modified affected source prior to November 16, 2007 are not required to comply with the requirements in this paragraph until EPA takes final action to require compliance and publishes a document in the Federal Register.

(i) The definition of “capital expenditure” in §60.481a of this subpart. While the definition of “capital expenditure” is stayed, owners or operators should use the definition found in §60.481 of subpart VV of this part.

(ii) [Reserved]

(2) Owners or operators are not required to comply with the requirements in this paragraph until EPA takes final action to require compliance and publishes a document in theFederal Register.

(i) The definition of “process unit” in §60.481a of this subpart. While the definition of “process unit” is stayed, owners or operators should use the following definition:

Process unit means components assembled to produce, as intermediate or final products, one or more of the chemicals listed in §60.489 of this part. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product.

(ii) The method of allocation of shared storage vessels in §60.482–1a(g) of this subpart.

(iii) The standards for connectors in gas/vapor service and in light liquid service in §60.482–11a of this subpart.

[72 FR 64883, Nov. 16, 2007, as amended at 73 FR 31375, June 2, 2008]

§ 60.481a Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act (CAA) or in subpart A of part 60, and the following terms shall have the specific meanings given them.

Capital expenditure means, in addition to the definition in 40 CFR 60.2, an expenditure for a physical or operational change to an existing facility that:

(a) Exceeds P, the product of the facility's replacement cost, R, and an adjusted annual asset guideline repair allowance, A, as reflected by the following equation: $P = R \times A$, where:

(1) The adjusted annual asset guideline repair allowance, A, is the product of the percent of the replacement cost, Y, and the applicable basic annual asset guideline repair allowance, B, divided by 100 as reflected by the following equation:

$$A = Y \times (B \div 100);$$

(2) The percent Y is determined from the following equation: $Y = 1.0 - 0.575 \log X$, where X is 2006 minus the year of construction; and

(3) The applicable basic annual asset guideline repair allowance, B, is selected from the following table consistent with the applicable subpart:

Table for Determining Applicable Value for B

Subpart applicable to facility	Value of B to be used in equation
VVa	12.5
GGGa	7.0

Closed-loop system means an enclosed system that returns process fluid to the process.

Closed-purge system means a system or combination of systems and portable containers to capture purged liquids. Containers for purged liquids must be covered or closed when not being filled or emptied.

Closed vent system means a system that is not open to the atmosphere and that is composed of hard-piping, ductwork, connections, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device or back to a process.

Connector means flanged, screwed, or other joined fittings used to connect two pipe lines or a pipe line and a piece of process equipment or that close an opening in a pipe that could be connected to another pipe. Joined fittings welded completely around the circumference of the interface are not considered connectors for the purpose of this regulation.

Control device means an enclosed combustion device, vapor recovery system, or flare.

Distance piece means an open or enclosed casing through which the piston rod travels, separating the compressor cylinder from the crankcase.

Double block and bleed system means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

Duct work means a conveyance system such as those commonly used for heating and ventilation systems. It is often made of sheet metal and often has sections connected by screws or crimping. Hard-piping is not ductwork.

Equipment means each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector in VOC service and any devices or systems required by this subpart.

First attempt at repair means to take action for the purpose of stopping or reducing leakage of organic material to the atmosphere using best practices.

Fuel gas means gases that are combusted to derive useful work or heat.

Fuel gas system means the offsite and onsite piping and flow and pressure control system that gathers gaseous stream(s) generated by onsite operations, may blend them with other sources of gas, and transports the gaseous stream for use as fuel gas in combustion devices or in-process combustion equipment, such as furnaces and gas turbines, either singly or in combination.

Hard-piping means pipe or tubing that is manufactured and properly installed using good engineering judgment and standards such as ASME B31.3, Process Piping (available from the American Society of Mechanical Engineers, P.O. Box 2300, Fairfield, NJ 07007–2300).

In gas/vapor service means that the piece of equipment contains process fluid that is in the gaseous state at operating conditions.

In heavy liquid service means that the piece of equipment is not in gas/vapor service or in light liquid service.

In light liquid service means that the piece of equipment contains a liquid that meets the conditions specified in §60.485a(e).

In-situ sampling systems means nonextractive samplers or in-line samplers.

In vacuum service means that equipment is operating at an internal pressure which is at least 5 kilopascals (kPa) (0.7 psia) below ambient pressure.

In VOC service means that the piece of equipment contains or contacts a process fluid that is at least 10 percent VOC by weight. (The provisions of §60.485a(d) specify how to determine that a piece of equipment is not in VOC service.)

Initial calibration value means the concentration measured during the initial calibration at the beginning of each day required in §60.485a(b)(1), or the most recent calibration if the instrument is recalibrated during the day (i.e., the calibration is adjusted) after a calibration drift assessment.

Liquids dripping means any visible leakage from the seal including spraying, misting, clouding, and ice formation.

Open-ended valve or line means any valve, except safety relief valves, having one side of the valve seat in contact with process fluid and one side open to the atmosphere, either directly or through open piping.

Pressure release means the emission of materials resulting from system pressure being greater than set pressure of the pressure relief device.

Process improvement means routine changes made for safety and occupational health requirements, for energy savings, for better utility, for ease of maintenance and operation, for correction of design deficiencies, for bottleneck removal, for changing product requirements, or for environmental control.

Process unit means the components assembled and connected by pipes or ducts to process raw materials and to produce, as intermediate or final products, one or more of the chemicals listed in §60.489. A process unit can operate independently if supplied with sufficient feed or raw

materials and sufficient storage facilities for the product. For the purpose of this subpart, process unit includes any feed, intermediate and final product storage vessels (except as specified in §60.482–1a(g)), product transfer racks, and connected ducts and piping. A process unit includes all equipment as defined in this subpart.

Process unit shutdown means a work practice or operational procedure that stops production from a process unit or part of a process unit during which it is technically feasible to clear process material from a process unit or part of a process unit consistent with safety constraints and during which repairs can be accomplished. The following are not considered process unit shutdowns:

(1) An unscheduled work practice or operational procedure that stops production from a process unit or part of a process unit for less than 24 hours.

(2) An unscheduled work practice or operational procedure that would stop production from a process unit or part of a process unit for a shorter period of time than would be required to clear the process unit or part of the process unit of materials and start up the unit, and would result in greater emissions than delay of repair of leaking components until the next scheduled process unit shutdown.

(3) The use of spare equipment and technically feasible bypassing of equipment without stopping production.

Quarter means a 3-month period; the first quarter concludes on the last day of the last full month during the 180 days following initial startup.

Repaired means that equipment is adjusted, or otherwise altered, in order to eliminate a leak as defined in the applicable sections of this subpart and, except for leaks identified in accordance with §§60.482–2a(b)(2)(ii) and (d)(6)(ii) and (d)(6)(iii), 60.482–3a(f), and 60.482–10a(f)(1)(ii), is re-monitored as specified in §60.485a(b) to verify that emissions from the equipment are below the applicable leak definition.

Replacement cost means the capital needed to purchase all the depreciable components in a facility.

Sampling connection system means an assembly of equipment within a process unit used during periods of representative operation to take samples of the process fluid. Equipment used to take nonroutine grab samples is not considered a sampling connection system.

Sensor means a device that measures a physical quantity or the change in a physical quantity such as temperature, pressure, flow rate, pH, or liquid level.

Storage vessel means a tank or other vessel that is used to store organic liquids that are used in the process as raw material feedstocks, produced as intermediates or final products, or generated as wastes. Storage vessel does not include vessels permanently attached to motor vehicles, such as trucks, railcars, barges or ships.

Synthetic organic chemicals manufacturing industry means the industry that produces, as intermediates or final products, one or more of the chemicals listed in §60.489.

Transfer rack means the collection of loading arms and loading hoses, at a single loading rack, that are used to fill tank trucks and/or railcars with organic liquids.

Volatile organic compounds or VOC means, for the purposes of this subpart, any reactive organic compounds as defined in §60.2 Definitions.

Effective Date Note: At 73 FR 31376, June 2, 2008, in §60.481a, the definitions of "capital expenditure" and "process unit" were stayed until further notice.

§ 60.482-1a Standards: General.

(a) Each owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of §§60.482–1a through 60.482–10a or §60.480a(e) for all equipment within 180 days of initial startup.

(b) Compliance with §§60.482–1a to 60.482–10a will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in §60.485a.

(c)(1) An owner or operator may request a determination of equivalence of a means of emission limitation to the requirements of §§60.482–2a, 60.482–3a, 60.482–5a, 60.482–6a, 60.482–7a, 60.482–8a, and 60.482–10a as provided in §60.484a.

(2) If the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of §§60.482–2a, 60.482–3a, 60.482–5a, 60.482–6a, 60.482–7a, 60.482–8a, or 60.482–10a, an owner or operator shall comply with the requirements of that determination.

(d) Equipment that is in vacuum service is excluded from the requirements of §§60.482–2a through 60.482–10a if it is identified as required in §60.486a(e)(5).

(e) Equipment that an owner or operator designates as being in VOC service less than 300 hr/yr is excluded from the requirements of §§60.482–2a through 60.482–11a if it is identified as required in §60.486a(e)(6) and it meets any of the conditions specified in paragraphs (e)(1) through (3) of this section.

(1) The equipment is in VOC service only during startup and shutdown, excluding startup and shutdown between batches of the same campaign for a batch process.

(2) The equipment is in VOC service only during process malfunctions or other emergencies.

(3) The equipment is backup equipment that is in VOC service only when the primary equipment is out of service.

(f)(1) If a dedicated batch process unit operates less than 365 days during a year, an owner or operator may monitor to detect leaks from pumps, valves, and open-ended valves or lines at the frequency specified in the following table instead of monitoring as specified in §§60.482–2a, 60.482–7a, and 60.483.2a:

	Equivalent monitoring frequency time in use		
Operating time (percent of hours during year)	**Monthly**	**Quarterly**	**Semiannually**
0 to <25	Quarterly	Annually	Annually.
25 to <50	Quarterly	Semiannually	Annually.
50 to <75	Bimonthly	Three quarters	Semiannually.
75 to 100	Monthly	Quarterly	Semiannually.

(2) Pumps and valves that are shared among two or more batch process units that are subject to this subpart may be monitored at the frequencies specified in paragraph (f)(1) of this section, provided the operating time of all such process units is considered.

(3) The monitoring frequencies specified in paragraph (f)(1) of this section are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. An owner or operator may monitor at any time during the specified monitoring period (e.g., month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. Reasonable intervals are defined in paragraphs (f)(3)(i) through (iv) of this section.

(i) When monitoring is conducted quarterly, monitoring events must be separated by at least 30 calendar days.

(ii) When monitoring is conducted semiannually (*i.e.* , once every 2 quarters), monitoring events must be separated by at least 60 calendar days.

(iii) When monitoring is conducted in 3 quarters per year, monitoring events must be separated by at least 90 calendar days.

(iv) When monitoring is conducted annually, monitoring events must be separated by at least 120 calendar days.

(g) If the storage vessel is shared with multiple process units, the process unit with the greatest annual amount of stored materials (predominant use) is the process unit the storage vessel is assigned to. If the storage vessel is shared equally among process units, and one of the process units has equipment subject to this subpart, the storage vessel is assigned to that process unit. If the storage vessel is shared equally among process units, none of which have equipment subject to this subpart of this part, the storage vessel is assigned to any process unit subject to subpart VV of this part. If the predominant use of the storage vessel varies from year to year, then the owner or operator must estimate the predominant use initially and reassess every 3 years. The owner or operator must keep records of the information and supporting calculations that show how predominant use is determined. All equipment on the storage vessel must be monitored when in VOC service.

Effective Date Note: At 73 FR 31376, June 2, 2008, in §60.482–1a, paragraph (g) was stayed until further notice.

§ 60.482-2a Standards: Pumps in light liquid service.

(a)(1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in §60.485a(b), except as provided in §60.482–1a(c) and (f) and paragraphs (d), (e), and (f) of this section. A pump that begins operation in light liquid service after the initial startup date for the process unit must be monitored for the first time within 30 days after the end of its startup period, except for a pump that replaces a leaking pump and except as provided in §60.482–1a(c) and paragraphs (d), (e), and (f) of this section.

(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal, except as provided in §60.482–1a(f).

(b)(1) The instrument reading that defines a leak is specified in paragraphs (b)(1)(i) and (ii) of this section.

(i) 5,000 parts per million (ppm) or greater for pumps handling polymerizing monomers;

(ii) 2,000 ppm or greater for all other pumps.

(2) If there are indications of liquids dripping from the pump seal, the owner or operator shall follow the procedure specified in either paragraph (b)(2)(i) or (ii) of this section. This requirement does not apply to a pump that was monitored after a previous weekly inspection and the instrument reading was less than the concentration specified in paragraph (b)(1)(i) or (ii) of this section, whichever is applicable.

(i) Monitor the pump within 5 days as specified in §60.485a(b). A leak is detected if the instrument reading measured during monitoring indicates a leak as specified in paragraph (b)(1)(i) or (ii) of this section, whichever is applicable. The leak shall be repaired using the procedures in paragraph (c) of this section.

(ii) Designate the visual indications of liquids dripping as a leak, and repair the leak using either the procedures in paragraph (c) of this section or by eliminating the visual indications of liquids dripping.

(c)(1) 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 §60.482–9a.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the practices described in paragraphs (c)(2)(i) and (ii) of this section, where practicable.

(i) Tightening the packing gland nuts;

(ii) Ensuring that the seal flush is operating at design pressure and temperature.

(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a) of this section, provided the requirements specified in paragraphs (d)(1) through (6) of this section are met.

(1) Each dual mechanical seal system is:

(i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

(ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §60.482–10a; or

(iii) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(2) The barrier fluid system is in heavy liquid service or is not in VOC service.

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4)(i) Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

(ii) If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the owner or operator shall follow the procedure specified in either paragraph (d)(4)(ii)(A) or (B) of this section prior to the next required inspection.

(A) Monitor the pump within 5 days as specified in §60.485a(b) to determine if there is a leak of VOC in the barrier fluid. If an instrument reading of 2,000 ppm or greater is measured, a leak is detected.

(B) Designate the visual indications of liquids dripping as a leak.

(5)(i) Each sensor as described in paragraph (d)(3) is checked daily or is equipped with an audible alarm.

(ii) The owner or operator determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(iii) If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion established in paragraph (d)(5)(ii) of this section, a leak is detected.

(6)(i) When a leak is detected pursuant to paragraph (d)(4)(ii)(A) of this section, it shall be repaired as specified in paragraph (c) of this section.

(ii) A leak detected pursuant to paragraph (d)(5)(iii) of this section shall be repaired within 15 days of detection by eliminating the conditions that activated the sensor.

(iii) A designated leak pursuant to paragraph (d)(4)(ii)(B) of this section shall be repaired within 15 days of detection by eliminating visual indications of liquids dripping.

(e) Any pump that is designated, as described in §60.486a(e)(1) and (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 (a), (c), and (d) of this section if the pump:

(1) Has no externally actuated shaft penetrating the pump housing;

(2) 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 methods specified in §60.485a(c); and

(3) Is tested for compliance with paragraph (e)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(f) If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of §60.482–10a, it is exempt from paragraphs (a) through (e) of this section.

(g) Any pump that is designated, as described in §60.486a(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of paragraphs (a) and (d)(4) through (6) of this section if:

(1) The owner or operator of the pump demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section; and

(2) The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph (c) of this section if a leak is detected.

(h) Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (a)(2) and (d)(4) of this section, and the daily requirements of paragraph (d)(5) of this section, provided that each pump is visually inspected as often as practicable and at least monthly.

§ 60.482-3a Standards: Compressors.

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in §60.482–1a(c) and paragraphs (h), (i), and (j) of this section.

(b) Each compressor seal system as required in paragraph (a) of this section shall be:

(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

(2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §60.482–10a; or

(3) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(c) The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

(d) Each barrier fluid system as described in paragraph (a) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e)(1) Each sensor as required in paragraph (d) of this section shall be checked daily or shall be equipped with an audible alarm.

(2) 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.

(f) If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under paragraph (e)(2) of this section, a leak is detected.

(g)(1) 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 §60.482–9a.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(h) A compressor is exempt from the requirements of paragraphs (a) and (b) of this section, if it is equipped with a closed vent system to capture and transport leakage from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of §60.482–10a, except as provided in paragraph (i) of this section.

(i) Any compressor that is designated, as described in §60.486a(e)(1) and (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 (a) through (h) of this section if the compressor:

(1) 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 methods specified in §60.485a(c); and

(2) Is tested for compliance with paragraph (i)(1) of this section initially upon designation, annually, and at other times requested by the Administrator.

(j) Any existing reciprocating compressor in a process unit which becomes an affected facility under provisions of §60.14 or §60.15 is exempt from paragraphs (a) through (e) and (h) of this section, provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of paragraphs (a) through (e) and (h) of this section.

§ 60.482-4a Standards: Pressure relief devices in gas/vapor service.

(a) 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 determined by the methods specified in §60.485a(c).

(b)(1) 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 the pressure release, except as provided in §60.482–9a.

(2) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in §60.485a(c).

(c) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in §60.482–10a is exempted from the requirements of paragraphs (a) and (b) of this section.

(d)(1) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (a) and (b) of this section, provided the owner or operator complies with the requirements in paragraph (d)(2) of this section.

(2) After each pressure release, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §60.482–9a.

§ 60.482-5a Standards: Sampling connection systems.

(a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in §60.482–1a(c) and paragraph (c) of this section.

(b) Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall comply with the requirements specified in paragraphs (b)(1) through (4) of this section.

(1) Gases displaced during filling of the sample container are not required to be collected or captured.

(2) Containers that are part of a closed-purge system must be covered or closed when not being filled or emptied.

(3) Gases remaining in the tubing or piping between the closed-purge system valve(s) and sample container valve(s) after the valves are closed and the sample container is disconnected are not required to be collected or captured.

(4) Each closed-purge, closed-loop, or closed-vent system shall be designed and operated to meet requirements in either paragraph (b)(4)(i), (ii), (iii), or (iv) of this section.

(i) Return the purged process fluid directly to the process line.

(ii) Collect and recycle the purged process fluid to a process.

(iii) Capture and transport all the purged process fluid to a control device that complies with the requirements of §60.482–10a.

(iv) Collect, store, and transport the purged process fluid to any of the following systems or facilities:

(A) A waste management unit as defined in 40 CFR 63.111, if the waste management unit is subject to and operated in compliance with the provisions of 40 CFR part 63, subpart G, applicable to Group 1 wastewater streams;

(B) A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266;

(C) A facility permitted, licensed, or registered by a state to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261;

(D) A waste management unit subject to and operated in compliance with the treatment requirements of 40 CFR 61.348(a), provided all waste management units that collect, store, or transport the purged process fluid to the treatment unit are subject to and operated in compliance with the management requirements of 40 CFR 61.343 through 40 CFR 61.347; or

(E) A device used to burn off-specification used oil for energy recovery in accordance with 40 CFR part 279, subpart G, provided the purged process fluid is not hazardous waste as defined in 40 CFR part 261.

(c) In-situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.

§ 60.482-6a Standards: Open-ended valves or lines.

(a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482–1a(c) and paragraphs (d) and (e) of this section.

(2) 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.

(b) 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.

(c) 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 (a) of this section at all other times.

(d) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (a), (b), and (c) of this section.

(e) Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs (a) through (c) of this section are exempt from the requirements of paragraphs (a) through (c) of this section.

§ 60.482-7a Standards: Valves in gas/vapor service and in light liquid service.

(a)(1) Each valve shall be monitored monthly to detect leaks by the methods specified in §60.485a(b) and shall comply with paragraphs (b) through (e) of this section, except as provided in paragraphs (f), (g), and (h) of this section, §60.482–1a(c) and (f), and §§60.483–1a and 60.483–2a.

(2) A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be monitored according to paragraphs (a)(2)(i) or (ii), except for a valve that replaces a leaking valve and except as provided in paragraphs (f), (g), and (h) of this section, §60.482–1a(c), and §§60.483–1a and 60.483–2a.

(i) Monitor the valve as in paragraph (a)(1) of this section. The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation.

(ii) If the existing valves in the process unit are monitored in accordance with §60.483–1a or §60.483–2a, count the new valve as leaking when calculating the percentage of valves leaking as described in §60.483–2a(b)(5). If less than 2.0 percent of the valves are leaking for that process unit, the valve must be monitored for the first time during the next scheduled monitoring event for existing valves in the process unit or within 90 days, whichever comes first.

(b) If an instrument reading of 500 ppm or greater is measured, a leak is detected.

(c)(1)(i) 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.

(ii) As an alternative to monitoring all of the valves in the first month of a quarter, an owner or operator may elect to subdivide the process unit into two or three subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every 3 months. The owner or operator must keep records of the valves assigned to each subgroup.

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

(d)(1) 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 §60.482–9a.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

(1) Tightening of bonnet bolts;

(2) Replacement of bonnet bolts;

(3) Tightening of packing gland nuts;

(4) Injection of lubricant into lubricated packing.

(f) Any valve that is designated, as described in §60.486a(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 (a) of this section if the valve:

(1) Has no external actuating mechanism in contact with the process fluid,

(2) Is operated with emissions less than 500 ppm above background as determined by the method specified in §60.485a(c), and

(3) Is tested for compliance with paragraph (f)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(g) Any valve that is designated, as described in §60.486a(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) of this section if:

(1) 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 (a) of this section, and

(2) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

(h) Any valve that is designated, as described in §60.486a(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) of this section if:

(1) 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.

(2) The process unit within which the valve is located either:

(i) Becomes an affected facility through §60.14 or §60.15 and was constructed on or before January 5, 1981; or

(ii) Has less than 3.0 percent of its total number of valves designated as difficult-to-monitor by the owner or operator.

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

§ 60.482-8a Standards: Pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service.

(a) If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service, the owner or operator shall follow either one of the following procedures:

(1) The owner or operator shall monitor the equipment within 5 days by the method specified in §60.485a(b) and shall comply with the requirements of paragraphs (b) through (d) of this section.

(2) The owner or operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak within 5 calendar days of detection.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c)(1) 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 §60.482–9a.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) First attempts at repair include, but are not limited to, the best practices described under §§60.482–2a(c)(2) and 60.482–7a(e).

§ 60.482-9a Standards: Delay of repair.

(a) Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Monitoring to verify repair must occur within 15 days after startup of the process unit.

(b) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

(c) Delay of repair for valves and connectors will be allowed if:

(1) 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, and

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §60.482–10a.

(d) Delay of repair for pumps will be allowed if:

(1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and

(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(e) 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.

(f) When delay of repair is allowed for a leaking pump, valve, or connector that remains in service, the pump, valve, or connector may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition.

§ 60.482-10a Standards: Closed vent systems and control devices.

(a) 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.

(b) Vapor recovery systems (for example, condensers and absorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume (ppmv), whichever is less stringent.

(c) Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 ppmv, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 °C.

(d) Flares used to comply with this subpart shall comply with the requirements of §60.18.

(e) Owners or operators of control devices 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 designs.

(f) Except as provided in paragraphs (i) through (k) of this section, each closed vent system shall be inspected according to the procedures and schedule specified in paragraphs (f)(1) and (2) of this section.

(1) If the vapor collection system or closed vent system is constructed of hard-piping, the owner or operator shall comply with the requirements specified in paragraphs (f)(1)(i) and (ii) of this section:

(i) Conduct an initial inspection according to the procedures in §60.485a(b); and

(ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(2) If the vapor collection system or closed vent system is constructed of ductwork, the owner or operator shall:

(i) Conduct an initial inspection according to the procedures in §60.485a(b); and

(ii) Conduct annual inspections according to the procedures in §60.485a(b).

(g) Leaks, as indicated by an instrument reading greater than 500 ppmv above background or by visual inspections, shall be repaired as soon as practicable except as provided in paragraph (h) of this section.

(1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(2) Repair shall be completed no later than 15 calendar days after the leak is detected.

(h) Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.

(i) If a vapor collection system or closed vent system is operated under a vacuum, it is exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section.

(j) Any parts of the closed vent system that are designated, as described in paragraph (l)(1) of this section, as unsafe to inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section if they comply with the requirements specified in paragraphs (j)(1) and (2) of this section:

(1) The owner or operator determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraphs (f)(1)(i) or (f)(2) of this section; and

(2) The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

(k) Any parts of the closed vent system that are designated, as described in paragraph (l)(2) of this section, as difficult to inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section if they comply with the requirements specified in paragraphs (k)(1) through (3) of this section:

(1) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(2) The process unit within which the closed vent system is located becomes an affected facility through §§60.14 or 60.15, or the owner or operator designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and

(3) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years. A closed vent system is exempt from inspection if it is operated under a vacuum.

(l) The owner or operator shall record the information specified in paragraphs (l)(1) through (5) of this section.

(1) Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

(2) Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

(3) For each inspection during which a leak is detected, a record of the information specified in §60.486a(c).

(4) For each inspection conducted in accordance with §60.485a(b) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(5) For each visual inspection conducted in accordance with paragraph (f)(1)(ii) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(m) Closed vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

§ 60.482-11a Standards: Connectors in gas/vapor service and in light liquid service.

(a) The owner or operator shall initially monitor all connectors in the process unit for leaks by the later of either 12 months after the compliance date or 12 months after initial startup. If all connectors in the process unit have been monitored for leaks prior to the compliance date, no initial monitoring is required provided either no process changes have been made since the monitoring or the owner or operator can determine that the results of the monitoring, with or without adjustments, reliably demonstrate compliance despite process changes. If required to monitor because of a process change, the owner or operator is required to monitor only those connectors involved in the process change.

(b) Except as allowed in §60.482–1a(c), §60.482–10a, or as specified in paragraph (e) of this section, the owner or operator shall monitor all connectors in gas and vapor and light liquid service as specified in paragraphs (a) and (b)(3) of this section.

(1) The connectors shall be monitored to detect leaks by the method specified in §60.485a(b) and, as applicable, §60.485a(c).

(2) If an instrument reading greater than or equal to 500 ppm is measured, a leak is detected.

(3) The owner or operator shall perform monitoring, subsequent to the initial monitoring required in paragraph (a) of this section, as specified in paragraphs (b)(3)(i) through (iii) of this section, and shall comply with the requirements of paragraphs (b)(3)(iv) and (v) of this section. The required period in which monitoring must be conducted shall be determined from paragraphs (b)(3)(i) through (iii) of this section using the monitoring results from the preceding monitoring period. The percent leaking connectors shall be calculated as specified in paragraph (c) of this section.

(i) If the percent leaking connectors in the process unit was greater than or equal to 0.5 percent, then monitor within 12 months (1 year).

(ii) If the percent leaking connectors in the process unit was greater than or equal to 0.25 percent but less than 0.5 percent, then monitor within 4 years. An owner or operator may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors within 2 years of the start of the monitoring period, provided all connectors have been monitored by the end of the 4-year monitoring period.

(iii) If the percent leaking connectors in the process unit was less than 0.25 percent, then monitor as provided in paragraph (b)(3)(iii)(A) of this section and either paragraph (b)(3)(iii)(B) or (b)(3)(iii)(C) of this section, as appropriate.

(A) An owner or operator shall monitor at least 50 percent of the connectors within 4 years of the start of the monitoring period.

(B) If the percent of leaking connectors calculated from the monitoring results in paragraph (b)(3)(iii)(A) of this section is greater than or equal to 0.35 percent of the monitored connectors, the owner or operator shall monitor as soon as practical, but within the next 6 months, all connectors that have not yet been monitored during the monitoring period. At the conclusion of monitoring, a new monitoring period shall be started pursuant to paragraph (b)(3) of this section, based on the percent of leaking connectors within the total monitored connectors.

(C) If the percent of leaking connectors calculated from the monitoring results in paragraph (b)(3)(iii)(A) of this section is less than 0.35 percent of the monitored connectors, the owner or operator shall monitor all connectors that have not yet been monitored within 8 years of the start of the monitoring period.

(iv) If, during the monitoring conducted pursuant to paragraphs (b)(3)(i) through (iii) of this section, a connector is found to be leaking, it shall be re-monitored once within 90 days after repair to confirm that it is not leaking.

(v) The owner or operator shall keep a record of the start date and end date of each monitoring period under this section for each process unit.

(c) For use in determining the monitoring frequency, as specified in paragraphs (a) and (b)(3) of this section, the percent leaking connectors as used in paragraphs (a) and (b)(3) of this section shall be calculated by using the following equation:

$\%C_L = C_L / C_t * 100$

Where:

$\%C_L$ = Percent of leaking connectors as determined through periodic monitoring required in paragraphs (a) and (b)(3)(i) through (iii) of this section.

C_L = Number of connectors measured at 500 ppm or greater, by the method specified in §60.485a(b).

C_t = Total number of monitored connectors in the process unit or affected facility.

(d) When a leak is detected pursuant to paragraphs (a) and (b) of this section, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482–9a. A first attempt at repair as defined in this subpart shall be made no later than 5 calendar days after the leak is detected.

(e) Any connector that is designated, as described in §60.486a(f)(1), as an unsafe-to-monitor connector is exempt from the requirements of paragraphs (a) and (b) of this section if:

(1) The owner or operator of the connector demonstrates that the connector is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraphs (a) and (b) of this section; and

(2) The owner or operator of the connector has a written plan that requires monitoring of the connector as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph (d) of this section if a leak is detected.

(f) *Inaccessible, ceramic, or ceramic-lined connectors* . (1) Any connector that is inaccessible or that is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined), is exempt from the

monitoring requirements of paragraphs (a) and (b) of this section, from the leak repair requirements of paragraph (d) of this section, and from the recordkeeping and reporting requirements of §§63.1038 and 63.1039. An inaccessible connector is one that meets any of the provisions specified in paragraphs (f)(1)(i) through (vi) of this section, as applicable:

(i) Buried;

(ii) Insulated in a manner that prevents access to the connector by a monitor probe;

(iii) Obstructed by equipment or piping that prevents access to the connector by a monitor probe;

(iv) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold that would allow access to connectors up to 7.6 meters (25 feet) above the ground;

(v) Inaccessible because it would require elevating the monitoring personnel more than 2 meters (7 feet) above a permanent support surface or would require the erection of scaffold; or

(vi) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines, or would risk damage to equipment.

(2) If any inaccessible, ceramic, or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the visual, audible, olfactory, or other indications of a leak to the atmosphere shall be eliminated as soon as practical.

(g) Except for instrumentation systems and inaccessible, ceramic, or ceramic-lined connectors meeting the provisions of paragraph (f) of this section, identify the connectors subject to the requirements of this subpart. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this subpart are identified as a group, and the number of connectors subject is indicated.

Effective Date Note: At 73 FR 31376, June 2, 2008, §60.482–11a was stayed until further notice.

§ 60.483-1a Alternative standards for valves—allowable percentage of valves leaking.

(a) An owner or operator may elect to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent.

(b) The following requirements shall be met if an owner or operator wishes to comply with an allowable percentage of valves leaking:

(1) An owner or operator must notify the Administrator that the owner or operator has elected to comply with the allowable percentage of valves leaking before implementing this alternative standard, as specified in §60.487a(d).

(2) A performance test as specified in paragraph (c) of this section shall be conducted initially upon designation, annually, and at other times requested by the Administrator.

(3) If a valve leak is detected, it shall be repaired in accordance with §60.482–7a(d) and (e).

(c) Performance tests shall be conducted in the following manner:

(1) All valves in gas/vapor and light liquid service within the affected facility shall be monitored within 1 week by the methods specified in §60.485a(b).

(2) If an instrument reading of 500 ppm or greater is measured, a leak is detected.

(3) The leak percentage shall be determined by dividing the number of valves for which leaks are detected by the number of valves in gas/vapor and light liquid service within the affected facility.

(d) Owners and operators who elect to comply with this alternative standard shall not have an affected facility with a leak percentage greater than 2.0 percent, determined as described in §60.485a(h).

§ 60.483-2a Alternative standards for valves—skip period leak detection and repair.

(a)(1) An owner or operator may elect to comply with one of the alternative work practices specified in paragraphs (b)(2) and (3) of this section.

(2) An owner or operator must notify the Administrator before implementing one of the alternative work practices, as specified in §60.487(d)a.

(b)(1) An owner or operator shall comply initially with the requirements for valves in gas/vapor service and valves in light liquid service, as described in §60.482–7a.

(2) After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 1 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(3) After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 3 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(4) If the percent of valves leaking is greater than 2.0, the owner or operator shall comply with the requirements as described in §60.482–7a but can again elect to use this section.

(5) The percent of valves leaking shall be determined as described in §60.485a(h).

(6) An owner or operator must keep a record of the percent of valves found leaking during each leak detection period.

(7) A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for a process unit following one of the alternative standards in this section must be monitored in accordance with §60.482–7a(a)(2)(i) or (ii) before the provisions of this section can be applied to that valve.

§ 60.484a Equivalence of means of emission limitation.

(a) Each owner or operator subject to the provisions of this subpart may apply to the Administrator for determination of equivalence for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in this subpart.

(b) Determination of equivalence to the equipment, design, and operational requirements of this subpart will be evaluated by the following guidelines:

(1) Each owner or operator applying for an equivalence determination shall be responsible for collecting and verifying test data to demonstrate equivalence of means of emission limitation.

(2) The Administrator will compare test data for demonstrating equivalence of the means of emission limitation to test data for the equipment, design, and operational requirements.

(3) The Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the equipment, design, and operational requirements.

(c) Determination of equivalence to the required work practices in this subpart will be evaluated by the following guidelines:

(1) Each owner or operator applying for a determination of equivalence shall be responsible for collecting and verifying test data to demonstrate equivalence of an equivalent means of emission limitation.

(2) For each affected facility for which a determination of equivalence is requested, the emission reduction achieved by the required work practice shall be demonstrated.

(3) For each affected facility, for which a determination of equivalence is requested, the emission reduction achieved by the equivalent means of emission limitation shall be demonstrated.

(4) Each owner or operator applying for a determination of equivalence shall commit in writing to work practice(s) that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practice.

(5) The Administrator will compare the demonstrated emission reduction for the equivalent means of emission limitation to the demonstrated emission reduction for the required work practices and will consider the commitment in paragraph (c)(4) of this section.

(6) The Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the required work practice.

(d) An owner or operator may offer a unique approach to demonstrate the equivalence of any equivalent means of emission limitation.

(e)(1) After a request for determination of equivalence is received, the Administrator will publish a notice in theFederal Registerand provide the opportunity for public hearing if the Administrator judges that the request may be approved.

(2) After notice and opportunity for public hearing, the Administrator will determine the equivalence of a means of emission limitation and will publish the determination in theFederal Register.

(3) Any equivalent means of emission limitations approved under this section shall constitute a required work practice, equipment, design, or operational standard within the meaning of section 111(h)(1) of the CAA.

(f)(1) Manufacturers of equipment used to control equipment leaks of VOC may apply to the Administrator for determination of equivalence for any equivalent means of emission limitation that achieves a reduction in emissions of VOC achieved by the equipment, design, and operational requirements of this subpart.

(2) The Administrator will make an equivalence determination according to the provisions of paragraphs (b), (c), (d), and (e) of this section.

§ 60.485a Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).

(b) The owner or operator shall determine compliance with the standards in §§60.482–1a through 60.482–11a, 60.483a, and 60.484a as follows:

(1) Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 of appendix A–7 of this part. The following calibration gases shall be used:

(i) Zero air (less than 10 ppm of hydrocarbon in air); and

(ii) A mixture of methane or n-hexane and air at a concentration no more than 2,000 ppm greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 ppm above the concentration specified as a leak, and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 ppm. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.

(2) A calibration drift assessment shall be performed, at a minimum, at the end of each monitoring day. Check the instrument using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 of appendix A–7 of this part, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. Record the instrument reading for each scale used as specified in §60.486a(e)(7). Calculate the average algebraic difference between the three meter readings and the most recent calibration value. Divide this algebraic difference by the initial calibration value and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift of more than 10 percent from the initial calibration value, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100) must be re-monitored. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at the owner/operator's discretion, all equipment since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by (100 plus the percent of positive drift/divided by 100) may be re-monitored.

(c) The owner or operator shall determine compliance with the no-detectable-emission standards in §§60.482–2a(e), 60.482–3a(i), 60.482–4a, 60.482–7a(f), and 60.482–10a(e) as follows:

(1) The requirements of paragraph (b) shall apply.

(2) Method 21 of appendix A–7 of this part shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(d) The owner or operator shall test each piece of equipment unless he demonstrates that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably

expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures shall be used:

(1) Procedures that conform to the general methods in ASTM E260–73, 91, or 96, E168–67, 77, or 92, E169–63, 77, or 93 (incorporated by reference—see §60.17) shall be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment.

(2) Organic compounds that are considered by the Administrator to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid.

(3) Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If the Administrator disagrees with the judgment, paragraphs (d)(1) and (2) of this section shall be used to resolve the disagreement.

(e) The owner or operator shall demonstrate that a piece of equipment is in light liquid service by showing that all the following conditions apply:

(1) The vapor pressure of one or more of the organic components is greater than 0.3 kPa at 20 °C (1.2 in. H_2O at 68 °F). Standard reference texts or ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17) shall be used to determine the vapor pressures.

(2) The total concentration of the pure organic components having a vapor pressure greater than 0.3 kPa at 20 °C (1.2 in. H_2O at 68 °F) is equal to or greater than 20 percent by weight.

(3) The fluid is a liquid at operating conditions.

(f) Samples used in conjunction with paragraphs (d), (e), and (g) of this section shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.

(g) The owner or operator shall determine compliance with the standards of flares as follows:

(1) Method 22 of appendix A–7 of this part shall be used to determine visible emissions.

(2) A thermocouple or any other equivalent device shall be used to monitor the presence of a pilot flame in the flare.

(3) The maximum permitted velocity for air assisted flares shall be computed using the following equation:

$V_{max} = K_1 + K_2 H_T$

Where:

V_{max}= Maximum permitted velocity, m/sec (ft/sec).

H_T= Net heating value of the gas being combusted, MJ/scm (Btu/scf).

K_1= 8.706 m/sec (metric units) = 28.56 ft/sec (English units).

K_2= 0.7084 m^4 /(MJ-sec) (metric units) = 0.087 ft^4 /(Btu-sec) (English units).

(4) The net heating value (HT) of the gas being combusted in a flare shall be computed using the following equation:

$$H_T = K\sum_{i=1}^{n} C_i H_i$$

Where:

K = Conversion constant, 1.740×10^{-7} (g-mole)(MJ)/(ppm-scm-kcal) (metric units) = 4.674×10^{-6} [(g-mole)(Btu)/(ppm-scf-kcal)] (English units).

C_i= Concentration of sample component “i,” ppm

H_i= net heat of combustion of sample component “i” at 25 °C and 760 mm Hg (77 °F and 14.7 psi), kcal/g-mole.

(5) Method 18 of appendix A–6 of this part or ASTM D6420–99 (2004) (where the target compound(s) are those listed in Section 1.1 of ASTM D6420–99, and the target concentration is between 150 parts per billion by volume and 100 ppmv) and ASTM D2504–67, 77, or 88 (Reapproved 1993) (incorporated by reference-see §60.17) shall be used to determine the concentration of sample component “i.”

(6) ASTM D2382–76 or 88 or D4809–95 (incorporated by reference-see §60.17) shall be used to determine the net heat of combustion of component “i” if published values are not available or cannot be calculated.

(7) Method 2, 2A, 2C, or 2D of appendix A–7 of this part, as appropriate, shall be used to determine the actual exit velocity of a flare. If needed, the unobstructed (free) cross-sectional area of the flare tip shall be used.

(h) The owner or operator shall determine compliance with §60.483–1a or §60.483–2a as follows:

(1) The percent of valves leaking shall be determined using the following equation:

$\%V_L = (V_L / V_T) * 100$

Where:

$\%V_L$= Percent leaking valves.

V_L= Number of valves found leaking.

V_T= The sum of the total number of valves monitored.

(2) The total number of valves monitored shall include difficult-to-monitor and unsafe-to-monitor valves only during the monitoring period in which those valves are monitored.

(3) The number of valves leaking shall include valves for which repair has been delayed.

(4) Any new valve that is not monitored within 30 days of being placed in service shall be included in the number of valves leaking and the total number of valves monitored for the monitoring period in which the valve is placed in service.

(5) If the process unit has been subdivided in accordance with §60.482–7a(c)(1)(ii), the sum of valves found leaking during a monitoring period includes all subgroups.

(6) The total number of valves monitored does not include a valve monitored to verify repair.

§ 60.486a Recordkeeping requirements.

(a)(1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.

(2) An owner or operator of more than one affected facility subject to the provisions of this subpart may comply with the recordkeeping requirements for these facilities in one recordkeeping system if the system identifies each record by each facility.

(3) The owner or operator shall record the information specified in paragraphs (a)(3)(i) through (v) of this section for each monitoring event required by §§60.482–2a, 60.482–3a, 60.482–7a, 60.482–8a, 60.482–11a, and 60.483–2a.

(i) Monitoring instrument identification.

(ii) Operator identification.

(iii) Equipment identification.

(iv) Date of monitoring.

(v) Instrument reading.

(b) When each leak is detected as specified in §§60.482–2a, 60.482–3a, 60.482–7a, 60.482–8a, 60.482–11a, and 60.483–2a, the following requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in §60.482–7a(c) and no leak has been detected during those 2 months.

(3) The identification on a connector may be removed after it has been monitored as specified in §60.482–11a(b)(3)(iv) and no leak has been detected during that monitoring.

(4) The identification on equipment, except on a valve or connector, may be removed after it has been repaired.

(c) When each leak is detected as specified in §§60.482–2a, 60.482–3a, 60.482–7a, 60.482–8a, 60.482–11a, and 60.483–2a, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:

(1) The instrument and operator identification numbers and the equipment identification number, except when indications of liquids dripping from a pump are designated as a leak.

(2) The date the leak was detected and the dates of each attempt to repair the leak.

(3) Repair methods applied in each attempt to repair the leak.

(4) Maximum instrument reading measured by Method 21 of appendix A–7 of this part at the time the leak is successfully repaired or determined to be nonrepairable, except when a pump is repaired by eliminating indications of liquids dripping.

(5) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(6) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.

(7) The expected date of successful repair of the leak if a leak is not repaired within 15 days.

(8) Dates of process unit shutdowns that occur while the equipment is unrepaired.

(9) The date of successful repair of the leak.

(d) The following information pertaining to the design requirements for closed vent systems and control devices described in §60.482–10a shall be recorded and kept in a readily accessible location:

(1) Detailed schematics, design specifications, and piping and instrumentation diagrams.

(2) The dates and descriptions of any changes in the design specifications.

(3) A description of the parameter or parameters monitored, as required in §60.482–10a(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.

(4) Periods when the closed vent systems and control devices required in §§60.482–2a, 60.482–3a, 60.482–4a, and 60.482–5a are not operated as designed, including periods when a flare pilot light does not have a flame.

(5) Dates of startups and shutdowns of the closed vent systems and control devices required in §§60.482–2a, 60.482–3a, 60.482–4a, and 60.482–5a.

(e) The following information pertaining to all equipment subject to the requirements in §§60.482–1a to 60.482–11a shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for equipment subject to the requirements of this subpart.

(2)(i) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §§60.482–2a(e), 60.482–3a(i), and 60.482–7a(f).

(ii) The designation of equipment as subject to the requirements of §60.482–2a(e), §60.482–3a(i), or §60.482–7a(f) shall be signed by the owner or operator. Alternatively, the owner or operator may establish a mechanism with their permitting authority that satisfies this requirement.

(3) A list of equipment identification numbers for pressure relief devices required to comply with §60.482–4a.

(4)(i) The dates of each compliance test as required in §§60.482–2a(e), 60.482–3a(i), 60.482–4a, and 60.482–7a(f).

(ii) The background level measured during each compliance test.

(iii) The maximum instrument reading measured at the equipment during each compliance test.

(5) A list of identification numbers for equipment in vacuum service.

(6) A list of identification numbers for equipment that the owner or operator designates as operating in VOC service less than 300 hr/yr in accordance with §60.482–1a(e), a description of the conditions under which the equipment is in VOC service, and rationale supporting the designation that it is in VOC service less than 300 hr/yr.

(7) The date and results of the weekly visual inspection for indications of liquids dripping from pumps in light liquid service.

(8) Records of the information specified in paragraphs (e)(8)(i) through (vi) of this section for monitoring instrument calibrations conducted according to sections 8.1.2 and 10 of Method 21 of appendix A–7 of this part and §60.485a(b).

(i) Date of calibration and initials of operator performing the calibration.

(ii) Calibration gas cylinder identification, certification date, and certified concentration.

(iii) Instrument scale(s) used.

(iv) A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value in accordance with section 10.1 of Method 21 of appendix A–7 of this part.

(v) Results of each calibration drift assessment required by §60.485a(b)(2) (i.e., instrument reading for calibration at end of monitoring day and the calculated percent difference from the initial calibration value).

(vi) If an owner or operator makes their own calibration gas, a description of the procedure used.

(9) The connector monitoring schedule for each process unit as specified in §60.482–11a(b)(3)(v).

(10) Records of each release from a pressure relief device subject to §60.482–4a.

(f) The following information pertaining to all valves subject to the requirements of §60.482–7a(g) and (h), all pumps subject to the requirements of §60.482–2a(g), and all connectors subject to the requirements of §60.482–11a(e) shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for valves, pumps, and connectors that are designated as unsafe-to-monitor, an explanation for each valve, pump, or connector stating why the valve, pump, or connector is unsafe-to-monitor, and the plan for monitoring each valve, pump, or connector.

(2) 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 schedule for monitoring each valve.

(g) The following information shall be recorded for valves complying with §60.483–2a:

(1) A schedule of monitoring.

(2) The percent of valves found leaking during each monitoring period.

(h) The following information shall be recorded in a log that is kept in a readily accessible location:

(1) Design criterion required in §§60.482–2a(d)(5) and 60.482–3a(e)(2) and explanation of the design criterion; and

(2) Any changes to this criterion and the reasons for the changes.

(i) 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 §60.480a(d):

(1) An analysis demonstrating the design capacity of the affected facility,

(2) A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol, and

(3) An analysis demonstrating that equipment is not in VOC service.

(j) Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.

(k) The provisions of §60.7(b) and (d) do not apply to affected facilities subject to this subpart.

§ 60.487a Reporting requirements.

(a) Each owner or operator subject to the provisions of this subpart shall submit semiannual reports to the Administrator beginning 6 months after the initial startup date.

(b) The initial semiannual report to the Administrator shall include the following information:

(1) Process unit identification.

(2) Number of valves subject to the requirements of §60.482–7a, excluding those valves designated for no detectable emissions under the provisions of §60.482–7a(f).

(3) Number of pumps subject to the requirements of §60.482–2a, excluding those pumps designated for no detectable emissions under the provisions of §60.482–2a(e) and those pumps complying with §60.482–2a(f).

(4) Number of compressors subject to the requirements of §60.482–3a, excluding those compressors designated for no detectable emissions under the provisions of §60.482–3a(i) and those compressors complying with §60.482–3a(h).

(5) Number of connectors subject to the requirements of §60.482–11a.

(c) All semiannual reports to the Administrator shall include the following information, summarized from the information in §60.486a:

(1) Process unit identification.

(2) For each month during the semiannual reporting period,

(i) Number of valves for which leaks were detected as described in §60.482–7a(b) or §60.483–2a,

(ii) Number of valves for which leaks were not repaired as required in §60.482–7a(d)(1),

(iii) Number of pumps for which leaks were detected as described in §60.482–2a(b), (d)(4)(ii)(A) or (B), or (d)(5)(iii),

(iv) Number of pumps for which leaks were not repaired as required in §60.482–2a(c)(1) and (d)(6),

(v) Number of compressors for which leaks were detected as described in §60.482–3a(f),

(vi) Number of compressors for which leaks were not repaired as required in §60.482–3a(g)(1),

(vii) Number of connectors for which leaks were detected as described in §60.482–11a(b)

(viii) Number of connectors for which leaks were not repaired as required in §60.482–11a(d), and

(ix)–(x) [Reserved]

(xi) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.

(3) Dates of process unit shutdowns which occurred within the semiannual reporting period.

(4) Revisions to items reported according to paragraph (b) of this section if changes have occurred since the initial report or subsequent revisions to the initial report.

(d) An owner or operator electing to comply with the provisions of §§60.483–1a or 60.483–2a shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions.

(e) An owner or operator shall report the results of all performance tests in accordance with §60.8 of the General Provisions. The provisions of §60.8(d) do not apply to affected facilities subject to the provisions of this subpart except that an owner or operator must notify the Administrator of the schedule for the initial performance tests at least 30 days before the initial performance tests.

(f) The requirements of paragraphs (a) through (c) of this section remain in force until and unless EPA, in delegating enforcement authority to a state under section 111(c) of the CAA, approves reporting requirements or an alternative means of compliance surveillance adopted by such state. In that event, affected sources within the state will be relieved of the obligation to comply with the requirements of paragraphs (a) through (c) of this section, provided that they comply with the requirements established by the state.

§ 60.488a Reconstruction.

For the purposes of this subpart:

(a) The cost of the following frequently replaced components of the facility shall not be considered in calculating either the “fixed capital cost of the new components” or the “fixed capital costs that

would be required to construct a comparable new facility" under §60.15: Pump seals, nuts and bolts, rupture disks, and packings.

(b) Under §60.15, the "fixed capital cost of new components" includes the fixed capital cost of all depreciable components (except components specified in §60.488a(a)) which are or will be replaced pursuant to all continuous programs of component replacement which are commenced within any 2-year period following the applicability date for the appropriate subpart. (See the "Applicability and designation of affected facility" section of the appropriate subpart.) For purposes of this paragraph, "commenced" means that an owner or operator has undertaken a continuous program of component replacement or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of component replacement.

§ 60.489a List of chemicals produced by affected facilities.

Process units that produce, as intermediates or final products, chemicals listed in §60.489 are covered under this subpart. The applicability date for process units producing one or more of these chemicals is November 8, 2006.

Indiana Department of Environmental Management
Office of Air Quality

Attachment E

Title 40: Protection of Environment
Subpart SS—National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process

Source: 64 FR 34866, June 29, 1999, unless otherwise noted.

§ 63.980 Applicability.

The provisions of this subpart include requirements for closed vent systems, control devices and routing of air emissions to a fuel gas system or process. These provisions apply when another subpart references the use of this subpart for such air emission control. These air emission standards are placed here for administrative convenience and only apply to those owners and operators of facilities subject to a referencing subpart. The provisions of 40 CFR part 63, subpart A (General Provisions) do not apply to this subpart except as specified in a referencing subpart.

§ 63.981 Definitions.

Alternative test method means any method of sampling and analyzing for an air pollutant that is not a reference test or equivalent method, and that has been demonstrated to the Administrator's satisfaction, using Method 301 in appendix A of this part 63, or previously approved by the Administrator prior to the promulgation date of standards for an affected source or affected facility under a referencing subpart, to produce results adequate for the Administrator's determination that it may be used in place of a test method specified in this subpart.

Boiler means any enclosed combustion device that extracts useful energy in the form of steam and is not an incinerator or a process heater.

By compound means by individual stream components, not carbon equivalents.

Closed vent system means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow inducing devices that transport gas or vapor from an emission point to a control device. Closed vent system does not include the vapor collection system that is part of any tank truck or railcar.

Closed vent system shutdown means a work practice or operational procedure that stops production from a process unit or part of a process unit during which it is technically feasible to clear process material from a closed vent system or part of a closed vent system consistent with safety constraints and during which repairs can be effected. An unscheduled work practice or operational procedure that stops production from a process unit or part of a process unit for less than 24 hours is not a closed vent system shutdown. An unscheduled work practice or operational procedure that would stop production from a process unit or part of a process unit for a shorter period of time than would be required to clear the closed vent system or part of the closed vent system of materials and start up the unit, and would result in greater emissions than delay of repair of leaking components until the next scheduled closed vent system shutdown, is not a closed vent system shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping production are not closed vent system shutdowns.

Combustion device means an individual unit of equipment, such as a flare, incinerator, process heater, or boiler, used for the combustion of organic emissions.

Continuous parameter monitoring system (CPMS) means the total equipment that may be required to meet the data acquisition and availability requirements of this part, used to sample, condition (if applicable), analyze, and provide a record of process or control system parameters.

Continuous record means documentation, either in hard copy or computer readable form, of data values measured at least once every 15 minutes and recorded at the frequency specified in §63.998(b).

Control device means, with the exceptions noted below, a combustion device, recovery device, recapture device, or any combination of these devices used to comply with this subpart or a referencing subpart. For process vents from continuous unit operations at affected sources in subcategories where the applicability criteria includes a TRE index value, recovery devices are not considered to be control devices. Primary condensers on steam strippers or fuel gas systems are not considered to be control devices.

Control System means the combination of the closed vent system and the control devices used to collect and control vapors or gases from a regulated emission source.

Day means a calendar day.

Ductwork means a conveyance system such as those commonly used for heating and ventilation systems. It is often made of sheet metal and often has sections connected by screws or crimping. Hard-piping is not ductwork.

Final recovery device means the last recovery device on a process vent stream from a continuous unit operation at an affected source in a subcategory where the applicability criteria includes a TRE index value. The final recovery device usually discharges to a combustion device, recapture device, or directly to the atmosphere.

First attempt at repair, for the purposes of this subpart, means to take action for the purpose of stopping or reducing leakage of organic material to the atmosphere, followed by monitoring as specified in §63.983(c) to verify whether the leak is repaired, unless the owner or operator determines by other means that the leak is not repaired.

Flame zone means the portion of the combustion chamber in a boiler or process heater occupied by the flame envelope.

Flow indicator means a device which indicates whether gas flow is, or whether the valve position would allow gas flow to be, present in a line.

Fuel gas means gases that are combusted to derive useful work or heat.

Fuel gas system means the offsite and onsite piping and flow and pressure control system that gathers gaseous streams generated by onsite operations, may blend them with other sources of gas, and transports the gaseous streams for use as fuel gas in combustion devices or in-process combustion equipment such as furnaces and gas turbines, either singly or in combination.

Hard-piping means pipe or tubing that is manufactured and properly installed using good engineering judgment and standards, such as ANSI B31.3.

High throughput transfer rack means those transfer racks that transfer a total of 11.8 million liters per year or greater of liquid containing regulated material.

Incinerator means an enclosed combustion device that is used for destroying organic compounds. Auxiliary fuel may be used to heat waste gas to combustion temperatures. Any energy recovery section present is not physically formed into one manufactured or assembled unit with the combustion section; rather, the energy recovery section is a separate section following the combustion section and the two are joined by ducts or connections carrying flue gas. The above energy recovery section limitation does not apply to an energy recovery section used solely to preheat the incoming vent stream or combustion air.

Low throughput transfer rack means those transfer racks that transfer less than a total of 11.8 million liters per year of liquid containing regulated material.

Operating parameter value means a minimum or maximum value established for a control device parameter which, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator has complied with an applicable emission limit or operating limit.

Organic monitoring device means a unit of equipment used to indicate the concentration level of organic compounds based on a detection principle such as infra-red, photo ionization, or thermal conductivity.

Owner or operator means any person who owns, leases, operates, controls, or supervises a regulated source or a stationary source of which a regulated source is a part.

Performance level means the level at which the regulated material in the gases or vapors vented to a control or recovery device is removed, recovered, or destroyed. Examples of control device performance levels include: achieving a minimum organic reduction efficiency expressed as a percentage of regulated material removed or destroyed in the control device inlet stream on a weight-basis; achieving an organic concentration in the control device exhaust stream that is less than a maximum allowable limit expressed in parts per million by volume on a dry basis corrected to 3 percent oxygen if a combustion device is the control device and supplemental combustion air is used to combust the emissions; or maintaining appropriate control device operating parameters indicative of the device performance at specified values.

Performance test means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission limit as specified in the performance test section of this subpart or in the referencing subpart.

Primary fuel means the fuel that provides the principal heat input to a device. To be considered primary, the fuel must be able to sustain operation without the addition of other fuels.

Process heater means an enclosed combustion device that transfers heat liberated by burning fuel directly to process streams or to heat transfer liquids other than water. A process heater may, as a secondary function, heat water in unfired heat recovery sections.

Recapture device means an individual unit of equipment capable of and used for the purpose of recovering chemicals, but not normally for use, reuse, or sale. For example, a recapture device may recover chemicals primarily for disposal. Recapture devices include, but are not limited to, absorbers, carbon adsorbers, and condensers. For purposes of the monitoring, recordkeeping and reporting requirements of this subpart, recapture devices are considered recovery devices.

Recovery device means an individual unit of equipment capable of and normally used for the purpose of recovering chemicals for fuel value (i.e., net positive heating value), use, reuse, or for sale for fuel value, use, or reuse. Examples of equipment that may be recovery devices include absorbers, carbon adsorbers, condensers, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units. For purposes

of the monitoring, recordkeeping, and reporting requirements of this subpart, recapture devices are considered recovery devices.

Recovery operations equipment means the equipment used to separate the components of process streams. Recovery operations equipment includes distillation units, condensers, etc. Equipment used for wastewater treatment shall not be considered recovery operations equipment.

Referencing subpart means the subpart which refers an owner or operator to this subpart.

Regulated material, for purposes of this subpart, refers to vapors from volatile organic liquids (VOL), volatile organic compounds (VOC), or hazardous air pollutants (HAP), or other chemicals or groups of chemicals that are regulated by a referencing subpart.

Regulated source for the purposes of this subpart, means the stationary source, the group of stationary sources, or the portion of a stationary source that is regulated by a relevant standard or other requirement established pursuant to a referencing subpart.

Repaired, for the purposes of this subpart, means that equipment; is adjusted, or otherwise altered, to eliminate a leak as defined in the applicable sections of this subpart; and unless otherwise specified in applicable provisions of this subpart, is inspected as specified in §63.983(c) to verify that emissions from the equipment are below the applicable leak definition.

Routed to a process or route to a process means the gas streams are conveyed to any enclosed portion of a process unit where the emissions are recycled and/or consumed in the same manner as a material that fulfills the same function in the process; and/or transformed by chemical reaction into materials that are not regulated materials; and/or incorporated into a product; and/or recovered.

Run means one of a series of emission or other measurements needed to determine emissions for a representative operating period or cycle as specified in this subpart. Unless otherwise specified, a run may be either intermittent or continuous within the limits of good engineering practice.

Secondary fuel means a fuel fired through a burner other than the primary fuel burner that provides supplementary heat in addition to the heat provided by the primary fuel.

Sensor means a device that measures a physical quantity or the change in a physical quantity, such as temperature, pressure, flow rate, pH, or liquid level.

Specific gravity monitoring device means a unit of equipment used to monitor specific gravity and having a minimum accuracy of ±0.02 specific gravity units.

Supplemental combustion air means the air that is added to a vent stream after the vent stream leaves the unit operation. Air that is part of the vent stream as a result of the nature of the unit operation is not considered supplemental combustion air. Air required to operate combustion device burner(s) is not considered supplemental combustion air. Air required to ensure the proper operation of catalytic oxidizers, to include the intermittent addition of air upstream of the catalyst bed to maintain a minimum threshold flow rate through the catalyst bed or to avoid excessive temperatures in the catalyst bed, is not considered to be supplemental combustion air.

Temperature monitoring device means a unit of equipment used to monitor temperature and having a minimum accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius or ±1.2 degrees Celsius (°C), whichever is greater.

[64 FR 34866, June 29, 1999, as amended at 64 FR 63705, Nov. 22, 1999; 67 FR 46277, July 12, 2002]

§ 63.982 Requirements.

(a) *General compliance requirements for storage vessels, process vents, transfer racks, and equipment leaks.* An owner or operator who is referred to this subpart for controlling regulated material emissions from storage vessels, process vents, low and high throughput transfer racks, or equipment leaks by venting emissions through a closed vent system to a flare, nonflare control device or routing to a fuel gas system or process shall comply with the applicable requirements of paragraphs (a)(1) through (4) of this section.

(1) *Storage vessels.* The owner or operator shall comply with the applicable provisions of paragraphs (b), (c)(1), and (d) of this section.

(2) *Process vents.* The owner or operator shall comply with the applicable provisions of paragraphs (b), (c)(2), and (e) of this section.

(3) *Transfer racks.* (i) For low throughput transfer racks, the owner or operator shall comply with the applicable provisions of paragraphs (b), (c)(1), and (d) of this section.

(ii) For high throughput transfer racks, the owner or operator shall comply with the applicable provisions of paragraphs (b), (c)(2), and (d) of this section.

(4) *Equipment leaks.* The owner or operator shall comply with the applicable provisions of paragraphs (b), (c)(3), and (d) of this section.

(b) *Closed vent system and flare.* Owners or operators that vent emissions through a closed vent system to a flare shall meet the requirements in §63.983 for closed vent systems; §63.987 for flares; §63.997 (a), (b) and (c) for provisions regarding flare compliance assessments; the monitoring, recordkeeping, and reporting requirements referenced therein; and the applicable recordkeeping and reporting requirements of §§63.998 and 63.999. No other provisions of this subpart apply to emissions vented through a closed vent system to a flare.

(c) *Closed vent system and nonflare control device.* Owners or operators who control emissions through a closed vent system to a nonflare control device shall meet the requirements in §63.983 for closed vent systems, the applicable recordkeeping and reporting requirements of §§63.998 and 63.999, and the applicable requirements listed in paragraphs (c)(1) through (3) of this section.

(1) For storage vessels and low throughput transfer racks, the owner or operator shall meet the requirements in §63.985 for nonflare control devices and the monitoring, recordkeeping, and reporting requirements referenced therein. No other provisions of this subpart apply to low throughput transfer rack emissions or storage vessel emissions vented through a closed vent system to a nonflare control device unless specifically required in the monitoring plan submitted under §63.985(c).

(2) For process vents and high throughput transfer racks, the owner or operator shall meet the requirements applicable to the control devices being used in §63.988, §63.990 or §63.995; the applicable general monitoring requirements of §63.996 and the applicable performance test requirements and procedures of §63.997; and the monitoring, recordkeeping and reporting requirements referenced therein. Owners or operators subject to halogen reduction device requirements under a referencing subpart must also comply with §63.994 and the monitoring, recordkeeping, and reporting requirements referenced therein. The requirements of §§63.984 through 63.986 do not apply to process vents or high throughput transfer racks.

(3) For equipment leaks, owners or operators shall meet the requirements in §63.986 for nonflare control devices used for equipment leak emissions and the monitoring, recordkeeping, and reporting requirements referenced therein. No other provisions of this subpart apply to equipment leak emissions vented through a closed vent system to a nonflare control device.

(d) *Route to a fuel gas system or process.* Owners or operators that route emissions to a fuel gas system or to a process shall meet the requirements in §63.984, the monitoring, recordkeeping, and reporting requirements referenced therein, and the applicable recordkeeping and reporting requirements of §§63.998 and 63.999. No other provisions of this subpart apply to emissions being routed to a fuel gas system or process.

(e) *Final recovery devices.* Owners or operators who use a final recovery device to maintain a TRE above a level specified in a referencing subpart shall meet the requirements in §63.993 and the monitoring, recordkeeping, and reporting requirements referenced therein that are applicable to the recovery device being used; the applicable monitoring requirements in §63.996 and the recordkeeping and reporting requirements referenced therein; and the applicable recordkeeping and reporting requirements of §§63.998 and 63.999. No other provisions of this subpart apply to process vent emissions routed to a final recovery device.

(f) *Combined emissions.* When emissions from different emission types (e.g., emissions from process vents, transfer racks, and/or storage vessels) are combined, an owner or operator shall comply with the requirements of either paragraph (f)(1) or (2) of this section.

(1) Comply with the applicable requirements of this subpart for each kind of emissions in the stream (e.g., the requirements of paragraph (a)(2) of this section for process vents, and the requirements of paragraph (a)(3) of this section for transfer racks); or

(2) Comply with the first set of requirements identified in paragraphs (f)(2)(i) through (iii) of this section which applies to any individual emission stream that is included in the combined stream. Compliance with paragraphs (f)(2)(i) through (iii) of this section constitutes compliance with all other emissions requirements for other emission streams.

(i) The requirements of §63.982(a)(2) for process vents, including applicable monitoring, recordkeeping, and reporting;

(ii) The requirements of §63.982(a)(3)(ii) for high throughput transfer racks, including applicable monitoring, recordkeeping, and reporting;

(iii) The requirements of §63.982(a)(1) or (a)(3)(i) for control of emissions from storage vessels or low throughput transfer racks, including applicable monitoring, recordkeeping, and reporting.

[64 FR 34866, June 29, 1999, as amended at 64 FR 63705, Nov. 22, 1999]

§ 63.983 Closed vent systems.

(a) *Closed vent system equipment and operating requirements.* Except for closed vent systems operated and maintained under negative pressure, the provisions of this paragraph apply to closed vent systems collecting regulated material from a regulated source.

(1) *Collection of emissions.* Each closed vent system shall be designed and operated to collect the regulated material vapors from the emission point, and to route the collected vapors to a control device.

(2) *Period of operation.* Closed vent systems used to comply with the provisions of this subpart shall be operated at all times when emissions are vented to, or collected by, them.

(3) *Bypass monitoring.* Except for equipment needed for safety purposes such as pressure relief devices, low leg drains, high point bleeds, analyzer vents, and open-ended valves or lines, the owner or operator shall comply with the provisions of either paragraphs (a)(3)(i) or (ii) of this section for each closed vent system that contains bypass lines that could divert a vent stream to the atmosphere.

(i) Properly install, maintain, and operate a flow indicator that is capable of taking periodic readings. Records shall be generated as specified in §63.998(d)(1)(ii)(A). The flow indicator shall be installed at the entrance to any bypass line.

(ii) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. Records shall be generated as specified in §63.998(d)(1)(ii)(B).

(4) *Loading arms at transfer racks.* Each closed vent system collecting regulated material from a transfer rack shall be designed and operated so that regulated material vapors collected at one loading arm will not pass through another loading arm in the rack to the atmosphere.

(5) *Pressure relief devices in a transfer rack's closed vent system.* The owner or operator of a transfer rack subject to the provisions of this subpart shall ensure that no pressure relief device in the transfer rack's closed vent system shall open to the atmosphere during loading. Pressure relief devices needed for safety purposes are not subject to this paragraph.

(b) *Closed vent system inspection and monitoring requirements.* The provisions of this subpart apply to closed vent systems collecting regulated material from a regulated source. Inspection records shall be generated as specified in §63.998(d)(1)(iii) and (iv) of this section.

(1) Except for any closed vent systems that are designated as unsafe or difficult to inspect as provided in paragraphs (b)(2) and (3) of this section, each closed vent system shall be inspected as specified in paragraph (b)(1)(i) or (ii) of this section.

(i) If the closed vent system is constructed of hard-piping, the owner or operator shall comply with the requirements specified in paragraphs (b)(1)(i)(A) and (B) of this section.

(A) Conduct an initial inspection according to the procedures in paragraph (c) of this section; and

(B) Conduct annual inspections for visible, audible, or olfactory indications of leaks.

(ii) If the closed vent system is constructed of ductwork, the owner or operator shall conduct an initial and annual inspection according to the procedures in paragraph (c) of this section.

(2) Any parts of the closed vent system that are designated, as described in §63.998(d)(1)(i), as unsafe to inspect are exempt from the inspection requirements of paragraph (b)(1) of this section if the conditions of paragraphs (b)(2)(i) and (ii) of this section are met.

(i) The owner or operator determines that the equipment is unsafe-to-inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraph (b)(1) of this section; and

(ii) The owner or operator has a written plan that requires inspection of the equipment as frequently as practical during safe-to-inspect times. Inspection is not required more than once annually.

(3) Any parts of the closed vent system that are designated, as described in §63.998(d)(1)(i), as difficult-to-inspect are exempt from the inspection requirements of paragraph (b)(1) of this section if the provisions of paragraphs (b)(3)(i) and (ii) of this section apply.

(i) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters (7 feet) above a support surface; and

(ii) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years.

(4) For each bypass line, the owner or operator shall comply with paragraph (b)(4)(i) or (ii) of this section.

(i) If a flow indicator is used, take a reading at least once every 15 minutes.

(ii) If the bypass line valve is secured in the non-diverting position, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the non-diverting position, and the vent stream is not diverted through the bypass line.

(c) *Closed vent system inspection procedures.* The provisions of this paragraph apply to closed vent systems collecting regulated material from a regulated source.

(1) Each closed vent system subject to this paragraph shall be inspected according to the procedures specified in paragraphs (c)(1)(i) through (vii) of this section.

(i) Inspections shall be conducted in accordance with Method 21 of 40 CFR part 60, appendix A, except as specified in this section.

(ii) Except as provided in (c)(1)(iii) of this section, the detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 must be for the representative composition of the process fluid and not of each individual VOC in the stream. For process streams that contain nitrogen, air, water, or other inerts that are not organic HAP or VOC, the representative stream response factor must be determined on an inert-free basis. The response factor may be determined at any concentration for which the monitoring for leaks will be conducted.

(iii) If no instrument is available at the plant site that will meet the performance criteria of Method 21 specified in paragraph (c)(1)(ii) of this section, the instrument readings may be adjusted by multiplying by the representative response factor of the process fluid, calculated on an inert-free basis as described in paragraph (c)(1)(ii) of this section.

(iv) The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.

(v) Calibration gases shall be as specified in paragraphs (c)(1)(v)(A) through (C) of this section.

(A) Zero air (less than 10 parts per million hydrocarbon in air); and

(B) Mixtures of methane in air at a concentration less than 10,000 parts per million. A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified in paragraph (c)(1)(ii) of this section. In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air.

(C) If the detection instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,500 parts per million.

(vi) An owner or operator may elect to adjust or not adjust instrument readings for background. If an owner or operator elects not to adjust readings for background, all such instrument readings shall be compared directly to 500 parts per million to determine whether there is a leak. If an owner or operator elects to adjust instrument readings for background, the owner or operator shall measure background concentration using the procedures in this section. The owner or operator shall subtract the background reading from the maximum concentration indicated by the instrument.

(vii) If the owner or operator elects to adjust for background, the arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared with 500 parts per million for determining whether there is a leak.

(2) The instrument probe shall be traversed around all potential leak interfaces as described in Method 21 of 40 CFR part 60, appendix A.

(3) Except as provided in paragraph (c)(4) of this section, inspections shall be performed when the equipment is in regulated material service, or in use with any other detectable gas or vapor.

(4) Inspections of the closed vent system collecting regulated material from a transfer rack shall be performed only while a tank truck or railcar is being loaded or is otherwise pressurized to normal operating conditions with regulated material or any other detectable gas or vapor.

(d) *Closed vent system leak repair provisions.* The provisions of this paragraph apply to closed vent systems collecting regulated material from a regulated source.

(1) If there are visible, audible, or olfactory indications of leaks at the time of the annual visual inspections required by paragraph (b)(1)(i)(B) of this section, the owner or operator shall follow the procedure specified in either paragraph (d)(1)(i) or (ii) of this section.

(i) The owner or operator shall eliminate the leak.

(ii) The owner or operator shall monitor the equipment according to the procedures in paragraph (c) of this section.

(2) Leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practical, except as provided in paragraph (d)(3) of this section. Records shall be generated as specified in §63.998(d)(1)(iii) when a leak is detected.

(i) A first attempt at repair shall be made no later than 5 days after the leak is detected.

(ii) Except as provided in paragraph (d)(3) of this section, repairs shall be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later.

(3) Delay of repair of a closed vent system for which leaks have been detected is allowed if repair within 15 days after a leak is detected is technically infeasible or unsafe without a closed vent system shutdown, as defined in §63.981, or if the owner or operator determines that emissions resulting from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of such equipment shall be completed as soon as practical, but not later than the end of the next closed vent system shutdown.

[64 FR 34866, June 29, 1999, as amended at 64 FR 63705, Nov. 22, 1999; 67 FR 46277, July 12, 2002]

§ 63.984 Fuel gas systems and processes to which storage vessel, transfer rack, or equipment leak regulated material emissions are routed.

(a) *Equipment and operating requirements for fuel gas systems and processes.* (1) Except during periods of start-up, shutdown and malfunction as specified in the referencing subpart, the fuel gas system or process shall be operating at all times when regulated material emissions are routed to it.

(2) The owner or operator of a transfer rack subject to the provisions of this subpart shall ensure that no pressure relief device in the transfer rack's system returning vapors to a fuel gas system or process shall open to the atmosphere during loading. Pressure relief devices needed for safety purposes are not subject to this paragraph.

(b) *Fuel gas system and process compliance assessment.* (1) If emissions are routed to a fuel gas system, there is no requirement to conduct a performance test or design evaluation.

(2) If emissions are routed to a process, the regulated material in the emissions shall meet one or more of the conditions specified in paragraphs (b)(2)(i) through (iv) of this section. The owner or operator of storage vessels subject to this paragraph shall comply with the compliance demonstration requirements in paragraph (b)(3) of this section.

(i) Recycled and/or consumed in the same manner as a material that fulfills the same function in that process;

(ii) Transformed by chemical reaction into materials that are not regulated materials;

(iii) Incorporated into a product; and/or

(iv) Recovered.

(3) To demonstrate compliance with paragraph (b)(2) of this section for a storage vessel, the owner or operator shall prepare a design evaluation (or engineering assessment) that demonstrates the extent to which one or more of the conditions specified in paragraphs (b)(2)(i) through (iv) of this section are being met.

(c) *Statement of connection.* For storage vessels and transfer racks, the owner or operator shall submit the statement of connection reports for fuel gas systems specified in §63.999(b)(1)(ii), as appropriate.

§ 63.985 Nonflare control devices used to control emissions from storage vessels and low throughput transfer racks.

(a) *Nonflare control device equipment and operating requirements.* The owner or operator shall operate and maintain the nonflare control device so that the monitored parameters defined as required in paragraph (c) of this section remain within the ranges specified in the Notification of Compliance Status whenever emissions of regulated material are routed to the control device except during periods of start-up, shutdown, and malfunction as specified in the referencing subpart.

(b) *Nonflare control device design evaluation or performance test requirements.* When using a control device other than a flare, the owner or operator shall comply with the requirements in

paragraphs (b)(1)(i) or (ii) of this section, except as provided in paragraphs (b)(2) and (3) of this section.

(1) *Design evaluation or performance test results.* The owner or operator shall prepare and submit with the Notification of Compliance Status, as specified in §63.999(b)(2), either a design evaluation that includes the information specified in paragraph (b)(1)(i) of this section, or the results of the performance test as described in paragraph (b)(1)(ii) of this section.

(i) *Design evaluation.* The design evaluation shall include documentation demonstrating that the control device being used achieves the required control efficiency during the reasonably expected maximum storage vessel filling or transfer loading rate. This documentation is to include a description of the gas stream that enters the control device, including flow and regulated material content, and the information specified in paragraphs (b)(1)(i)(A) through (E) of this section, as applicable. For storage vessels, the description of the gas stream that enters the control device shall be provided for varying liquid level conditions. This documentation shall be submitted with the Notification of Compliance Status as specified in §63.999(b)(2).

(A) The efficiency determination is to include consideration of all vapors, gases, and liquids, other than fuels, received by the control device.

(B) If an enclosed combustion device with a minimum residence time of 0.5 seconds and a minimum temperature of 760 °C is used to meet an emission reduction requirement specified in a referencing subpart for storage vessels and transfer racks, documentation that those conditions exist is sufficient to meet the requirements of paragraph (b)(1)(i) of this section.

(C) Except as provided in paragraph (b)(1)(i)(B) of this section for enclosed combustion devices, the design evaluation shall include the estimated autoignition temperature of the stream being combusted, the flow rate of the stream, the combustion temperature, and the residence time at the combustion temperature.

(D) For carbon adsorbers, the design evaluation shall include the estimated affinity of the regulated material vapors for carbon, the amount of carbon in each bed, the number of beds, the humidity, the temperature, the flow rate of the inlet stream and, if applicable, the desorption schedule, the regeneration stream pressure or temperature, and the flow rate of the regeneration stream. For vacuum desorption, pressure drop shall be included.

(E) For condensers, the design evaluation shall include the final temperature of the stream vapors, the type of condenser, and the design flow rate of the emission stream.

(ii) *Performance test.* A performance test, whether conducted to meet the requirements of this section, or to demonstrate compliance for a process vent or high throughput transfer rack as required by §63.988(b), §63.990(b), or §63.995(b), is acceptable to demonstrate compliance with emission reduction requirements for storage vessels and transfer racks. The owner or operator is not required to prepare a design evaluation for the control device as described in paragraph (b)(1)(i) of this section if a performance test will be performed that meets the criteria specified in paragraphs (b)(1)(ii)(A) and (B) of this section.

(A) The performance test will demonstrate that the control device achieves greater than or equal to the required control device performance level specified in a referencing subpart for storage vessels or transfer racks; and

(B) The performance test meets the applicable performance test requirements and the results are submitted as part of the Notification of Compliance Status as specified in §63.999(b)(2).

(2) *Exceptions.* A design evaluation or performance test is not required if the owner or operator uses a combustion device meeting the criteria in paragraph (b)(2)(i), (ii), (iii), or (iv) of this section.

(i) A boiler or process heater with a design heat input capacity of 44 megawatts (150 million British thermal units per hour) or greater.

(ii) A boiler or process heater burning hazardous waste for which the owner or operator meets the requirements specified in paragraph (b)(2)(ii)(A) or (B) of this section.

(A) The boiler or process heater has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 266, subpart H, or

(B) The boiler or process heater has certified compliance with the interim status requirements of 40 CFR part 266, subpart H.

(iii) A hazardous waste incinerator for which the owner or operator meets the requirements specified in paragraph (b)(2)(iii)(A) or (B) of this section.

(A) The incinerator has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 264, subpart O; or

(B) The incinerator has certified compliance with the interim status requirements of 40 CFR part 265, subpart O; or

(iv) A boiler or process heater into which the vent stream is introduced with the primary fuel.

(3) *Prior design evaluations or performance tests.* If a design evaluation or performance test is required in the referencing subpart or was previously conducted and submitted for a storage vessel or low throughput transfer rack, then a performance test or design evaluation is not required.

(c) *Nonflare control device monitoring requirements.* (1) The owner or operator shall submit with the Notification of Compliance Status, a monitoring plan containing the information specified in §63.999(b)(2)(i) and (ii) to identify the parameters that will be monitored to assure proper operation of the control device.

(2) The owner or operator shall monitor the parameters specified in the Notification of Compliance Status or in the operating permit application or amendment. Records shall be generated as specified in §63.998(d)(2)(i).

§ 63.986 Nonflare control devices used for equipment leaks only.

(a) *Equipment and operating requirements.* (1) Owners or operators using a nonflare control device to meet the applicable requirements of a referencing subpart for equipment leaks shall meet the requirements of this section.

(2) Control devices used to comply with the provisions of this subpart shall be operated at all times when emissions are vented to them.

(b) *Performance test requirements.* A performance test is not required for any nonflare control device used only to control emissions from equipment leaks.

(c) *Monitoring requirements.* Owners or operators of control devices that are used to comply only with the provisions of a referencing subpart for control of equipment leak emissions shall monitor

these control devices to ensure that they are operated and maintained in conformance with their design. The owner or operator shall maintain the records as specified in §63.998(d)(4).

§ 63.987 Flare requirements.

(a) *Flare equipment and operating requirements.* Flares subject to this subpart shall meet the performance requirements in 40 CFR 63.11(b) (General Provisions).

(b) *Flare compliance assessment.* (1) The owner or operator shall conduct an initial flare compliance assessment of any flare used to comply with the provisions of this subpart. Flare compliance assessment records shall be kept as specified in §63.998(a)(1) and a flare compliance assessment report shall be submitted as specified in §63.999(a)(2). An owner or operator is not required to conduct a performance test to determine percent emission reduction or outlet regulated material or total organic compound concentration when a flare is used.

(2) [Reserved]

(3) Flare compliance assessments shall meet the requirements specified in paragraphs (b)(3)(i) through (iv) of this section.

(i) Method 22 of appendix A of part 60 shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours, except for transfer racks as provided in (b)(3)(i)(A) or (B) of this section.

(A) For transfer racks, if the loading cycle is less than 2 hours, then the observation period for that run shall be for the entire loading cycle.

(B) For transfer racks, if additional loading cycles are initiated within the 2-hour period, then visible emissions observations shall be conducted for the additional cycles.

(ii) The net heating value of the gas being combusted in a flare shall be calculated using Equation 1:

$$H_T = K_1 \sum_{j=1}^{n} D_j H_j \quad [Eq.\ 1]$$

Where:

H_T= Net heating value of the sample, megajoules per standard cubic meter; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 millimeters of mercury (30 inches of mercury), but the standard temperature for determining the volume corresponding to one mole is 20 °C;

K_1= 1.740×10^{-7}(parts per million by volume)$^{-1}$(gram-mole per standard cubic meter) (megajoules per kilocalories), where the standard temperature for gram mole per standard cubic meter is 20 °C;

n = number of sample components;

D_j= Concentration of sample component j, in parts per million by volume on a wet basis, as measured for organics by Method 18 of 40 CFR part 60, appendix A, or by American Society for Testing and Materials (ASTM) D6420–99 (available for purchase from at least one of the following addresses: 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959; or University

Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106) under the conditions specified in §63.997(e)(2)(iii)(D)(*1*) through (*3*). Hydrogen and carbon monoxide are measured by ASTM D1946–90; and

H_j= Net heat of combustion of sample component j, kilocalories per gram mole at 25 °C and 760 millimeters of mercury (30 inches of mercury).

(iii) The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate (in unit of standard temperature and pressure), as determined by Method 2, 2A, 2C, 2D, 2F, or 2G of 40 CFR part 60, appendix A, as appropriate, by the unobstructed (free) cross sectional area of the flare tip.

(iv) Flare flame or pilot monitors, as applicable, shall be operated during any flare compliance assessment.

(c) *Flare monitoring requirements.* Where a flare is used, the following monitoring equipment is required: a device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting that at least one pilot flame or the flare flame is present. Flare flame monitoring and compliance records shall be kept as specified in §63.998(a)(1) and reported as specified in §63.999(a).

[64 FR 34866, June 29, 1999, as amended at 64 FR 63705, Nov. 22, 1999; 67 FR 46277, July 12, 2002]

§ 63.988 Incinerators, boilers, and process heaters.

(a) *Equipment and operating requirements.* (1) Owners or operators using incinerators, boilers, or process heaters to meet a weight-percent emission reduction or parts per million by volume outlet concentration requirement specified in a referencing subpart shall meet the requirements of this section.

(2) Incinerators, boilers, or process heaters used to comply with the provisions of a referencing subpart and this subpart shall be operated at all times when emissions are vented to them.

(3) For boilers and process heaters, the vent stream shall be introduced into the flame zone of the boiler or process heater.

(b) *Performance test requirements.* (1) Except as specified in §63.997(b), and paragraph (b)(2) of this section, the owner or operator shall conduct an initial performance test of any incinerator, boiler, or process heater used to comply with the provisions of a referencing subpart and this subpart according to the procedures in §63.997. Performance test records shall be kept as specified in §63.998(a)(2) and a performance test report shall be submitted as specified in §63.999(a)(2). As provided in §63.985(b)(1), a design evaluation may be used as an alternative to the performance test for storage vessels and low throughput transfer rack controls. As provided in §63.986(b), no performance test is required for equipment leaks.

(2) An owner or operator is not required to conduct a performance test when any of the control devices specified in paragraphs (b)(2)(i) through (iv) of this section are used.

(i) A hazardous waste incinerator for which the owner or operator has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 264, subpart O, or has certified compliance with the interim status requirements of 40 CFR part 265, subpart O;

(ii) A boiler or process heater with a design heat input capacity of 44 megawatts (150 million British thermal units per hour) or greater;

(iii) A boiler or process heater into which the vent stream is introduced with the primary fuel or is used as the primary fuel; or

(iv) A boiler or process heater burning hazardous waste for which the owner or operator meets the requirements specified in paragraph (b)(2)(iv)(A) or (B) of this section.

(A) The boiler or process heater has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 266, subpart H; or

(B) The boiler or process heater has certified compliance with the interim status requirements of 40 CFR part 266, subpart H.

(c) *Incinerator, boiler, and process heater monitoring requirements.* Where an incinerator, boiler, or process heater is used, a temperature monitoring device capable of providing a continuous record that meets the provisions specified in paragraph (c)(1), (2), or (3) of this section is required. Any boiler or process heater in which all vent streams are introduced with primary fuel or are used as the primary fuel is exempt from monitoring. Monitoring results shall be recorded as specified in §63.998(b) and (c), as applicable. General requirements for monitoring and continuous parameter monitoring systems are contained in the referencing subpart and §3.996.

(1) Where an incinerator other than a catalytic incinerator is used, a temperature monitoring device shall be installed in the fire box or in the ductwork immediately downstream of the fire box in a position before any substantial heat exchange occurs.

(2) Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(3) Where a boiler or process heater of less than 44 megawatts (150 million British thermal units per hour) design heat input capacity is used and the regulated vent stream is not introduced as or with the primary fuel, a temperature monitoring device shall be installed in the fire box.

§ 63.989 [Reserved]

§ 63.990 Absorbers, condensers, and carbon adsorbers used as control devices.

(a) *Equipment and operating requirements.* (1) Owners or operators using absorbers, condensers, or carbon adsorbers to meet a weight-percent emission reduction or parts per million by volume outlet concentration requirement specified in a referencing subpart shall meet the requirements of this section.

(2) Absorbers, condensers, and carbon adsorbers used to comply with the provisions of a referencing subpart and this subpart shall be operated at all times when emissions are vented to them.

(b) *Performance test requirements.* Except as specified in §63.997(b), the owner or operator shall conduct an initial performance test of any absorber, condenser, or carbon adsorber used as a control device to comply with the provisions of the referencing subpart and this subpart according to the procedures in §63.997. Performance test records shall be kept as specified in §63.998(a)(2) and a performance test report shall be submitted as specified in §63.999(a)(2). As provided in §63.985(b)(1), a design evaluation may be used as an alternative to the performance test for storage vessels and low throughput transfer rack controls. As provided in §63.986(b), no performance test is required to demonstrate compliance for equipment leaks.

(c) *Monitoring requirements.* Where an absorber, condenser, or carbon adsorber is used as a control device, either an organic monitoring device capable of providing a continuous record, or

the monitoring devices specified in paragraphs (c)(1) through (3), as applicable, shall be used. Monitoring results shall be recorded as specified in §63.998(b) and (c), as applicable. General requirements for monitoring and continuous parameter monitoring systems are contained in a referencing subpart and §63.996.

(1) Where an absorber is used, a scrubbing liquid temperature monitoring device and a specific gravity monitoring device, each capable of providing a continuous record, shall be used. If the difference between the specific gravity of the saturated scrubbing fluid and specific gravity of the fresh scrubbing fluid is less than 0.02 specific gravity units, an organic monitoring device capable of providing a continuous record shall be used.

(2) Where a condenser is used, a condenser exit (product side) temperature monitoring device capable of providing a continuous record shall be used.

(3) Where a carbon adsorber is used, an integrating regeneration stream flow monitoring device having an accuracy of ±10 percent or better, capable of recording the total regeneration stream mass or volumetric flow for each regeneration cycle; and a carbon bed temperature monitoring device, capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle, shall be used.

§ 63.991 [Reserved]

§ 63.992 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority such as the applicable State, local, or tribal agency. If the EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. Contact the applicable EPA Regional Office to find out if this subpart is delegated to a State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under section 40 CFR part 63, subpart E, the authorities contained in paragraphs (b)(1) through (5) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(1) Approval of alternatives to the nonopacity emissions standards in §§63.983(a) and (d), 63.984, 63.985(a), 63.986(a), 63.987(a), 63.988(a), 63.990(a), 63.993(a), 63.994(a), and 63.995(a) under §63.6(g). Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart.

(2) [Reserved]

(3) Approval of major changes to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(4) Approval of major changes to monitoring under §63.8(f) and as defined in §63.90.

(5) Approval of major changes to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

[67 FR 46277, July 12, 2002]

§ 63.993 Absorbers, condensers, carbon adsorbers and other recovery devices used as final recovery devices.

(a) *Final recovery device equipment and operating requirements.* (1) Owners or operators using a final recovery device to maintain a TRE above a level specified in a referencing subpart shall meet the requirements of this section.

(2) Recovery devices used to comply with the provisions of a referencing subpart and this subpart shall be operated at all times when emissions are vented to them.

(b) *Recovery device performance test requirements.* There are no performance test requirements for recovery devices. TRE index value determination information shall be recorded as specified in §63.998(a)(3).

(c) *Recovery device monitoring requirements.* (1) Where an absorber is the final recovery device in the recovery system and the TRE index value is between the level specified in a referencing subpart and 4.0, either an organic monitoring device capable of providing a continuous record or a scrubbing liquid temperature monitoring device and a specific gravity monitoring device, each capable of providing a continuous record, shall be used. If the difference between the specific gravity of the saturated scrubbing fluid and specific gravity of the fresh scrubbing fluid is less than 0.02 specific gravity units, an organic monitoring device capable of providing a continuous record shall be used. Monitoring results shall be recorded as specified in §63.998(b) and (c), as applicable. General requirements for monitoring and continuous parameter monitoring systems are contained in §63.996.

(2) Where a condenser is the final recovery device in the recovery system and the TRE index value is between the level specified in a referencing subpart and 4.0, an organic monitoring device capable of providing a continuous record or a condenser exit (product side) temperature monitoring device capable of providing a continuous record shall be used. Monitoring results shall be recorded as specified in §63.998(b) and (c), as applicable. General requirements for monitoring and continuous parameter monitoring systems are contained in a referencing subpart and §63.996.

(3) Where a carbon adsorber is the final recovery device in the recovery system and the TRE index value is between the level specified in a referencing subpart and 4.0, an organic monitoring device capable of providing a continuous record or an integrating regeneration stream flow monitoring device having an accuracy of ±10 percent or better, capable of recording the total regeneration stream mass or volumetric flow for each regeneration cycle; and a carbon-bed temperature monitoring device, capable of recording the carbon-bed temperature after each regeneration and within 15 minutes of completing any cooling cycle shall be used. Monitoring results shall be recorded as specified in §63.998(b) and (c), as applicable. General requirements for monitoring and continuous parameter monitoring systems are contained in a referencing subpart and §63.996.

(4) If an owner or operator uses a recovery device other than those listed in this subpart, the owner or operator shall submit a description of planned monitoring, reporting and recordkeeping procedures as specified in a referencing subpart. The Administrator will approve, deny, or modify based on the reasonableness of the proposed monitoring, reporting and recordkeeping requirements as part of the review of the submission or permit application or by other appropriate means.

§ 63.994 Halogen scrubbers and other halogen reduction devices.

(a) *Halogen scrubber and other halogen reduction device equipment and operating requirements.* (1) An owner or operator of a halogen scrubber or other halogen reduction device subject to this subpart shall reduce the overall emissions of hydrogen halides and halogens by the control device performance level specified in a referencing subpart.

(2) Halogen scrubbers and other halogen reduction devices used to comply with the provisions of a referencing subpart and this subpart shall be operated at all times when emissions are vented to them.

(b) *Halogen scrubber and other halogen reduction device performance test requirements.* (1) An owner or operator of a combustion device followed by a halogen scrubber or other halogen reduction device to control halogenated vent streams in accordance with a referencing subpart and this subpart shall conduct an initial performance test to determine compliance with the control efficiency or emission limits for hydrogen halides and halogens according to the procedures in §63.997. Performance test records shall be kept as specified in §63.998(a)(2) and a performance test report shall be submitted as specified in §63.999(a)(2).

(2) An owner or operator of a halogen scrubber or other halogen reduction technique used to reduce the vent stream halogen atom mass emission rate prior to a combustion device to comply with a performance level specified in a referencing subpart shall determine the halogen atom mass emission rate prior to the combustion device according to the procedures specified in the referencing subpart. Records of the halogen concentration in the vent stream shall be generated as specified in §63.998(a)(4).

(c) *Halogen scrubber and other halogen reduction device monitoring requirements.* (1) Where a halogen scrubber is used, the monitoring equipment specified in paragraphs (c)(1)(i) and (ii) of this section is required for the scrubber. Monitoring results shall be recorded as specified in §63.998(b) and (c), as applicable. General requirements for monitoring and continuous parameter monitoring systems are contained in a referencing subpart and §63.996.

(i) A pH monitoring device capable of providing a continuous record shall be installed to monitor the pH of the scrubber effluent.

(ii) A flow meter capable of providing a continuous record shall be located at the scrubber influent for liquid flow. Gas stream flow shall be determined using one of the procedures specified in paragraphs (c)(1)(ii)(A) through (D) of this section.

(A) The owner or operator may determine gas stream flow using the design blower capacity, with appropriate adjustments for pressure drop.

(B) The owner or operator may measure the gas stream flow at the scrubber inlet.

(C) If the scrubber is subject to regulations in 40 CFR parts 264 through 266 that have required a determination of the liquid to gas (L/G) ratio prior to the applicable compliance date for the process unit of which it is part as specified in a referencing subpart, the owner or operator may determine gas stream flow by the method that had been utilized to comply with those regulations. A determination that was conducted prior to that compliance date may be utilized to comply with this subpart if it is still representative.

(D) The owner or operator may prepare and implement a gas stream flow determination plan that documents an appropriate method that will be used to determine the gas stream flow. The plan shall require determination of gas stream flow by a method that will at least provide a value for either a representative or the highest gas stream flow anticipated in the scrubber during representative operating conditions other than start-ups, shutdowns, or malfunctions. The plan shall include a description of the methodology to be followed and an explanation of how the selected methodology will reliably determine the gas stream flow, and a description of the records that will be maintained to document the determination of gas stream flow. The owner or operator shall maintain the plan as specified in a referencing subpart.

(2) Where a halogen reduction device other than a scrubber is used, the owner or operator shall follow the procedures specified in a referencing subpart in order to establish monitoring parameters.

§ 63.995 Other control devices.

(a) *Other control device equipment and operating requirements.* (1) Owners or operators using a control device other than one listed in §§63.985 through 63.990 to meet a weight-percent emission reduction or parts per million by volume outlet concentration requirement specified in a referencing subpart shall meet the requirements of this section.

(2) Other control devices used to comply with the provisions of a referencing subpart and this subpart shall be operated at all times when emissions are vented to them.

(b) *Other control device performance test requirements.* An owner or operator using a control device other than those specified in §§63.987 through 63.990 to comply with a performance level specified in a referencing subpart, shall perform an initial performance test according to the procedures in §63.997. Performance test records shall be kept as specified in §63.998(a)(2) and a performance test report shall be submitted as specified in §63.999(a)(2).

(c) *Other control device monitoring requirements.* If an owner or operator uses a control device other than those listed in this subpart, the owner or operator shall submit a description of planned monitoring, recordkeeping and reporting procedures as specified in a referencing subpart. The Administrator will approve, deny, or modify based on the reasonableness of the proposed monitoring, reporting and recordkeeping requirements as part of the review of the submission or permit application or by other appropriate means.

§ 63.996 General monitoring requirements for control and recovery devices.

(a) *General monitoring requirements applicability.* (1) This section applies to the owner or operator of a regulated source required to monitor under this subpart.

(2) Flares subject to §63.987(c) are not subject to the requirements of this section.

(3) Flow indicators are not subject to the requirements of this section.

(b) *Conduct of monitoring.* (1) Monitoring shall be conducted as set forth in this section and in the relevant sections of this subpart unless the provision in either paragraph (b)(1)(i) or (ii) of this section applies.

(i) The Administrator specifies or approves the use of minor changes in methodology for the specified monitoring requirements and procedures; or

(ii) The Administrator approves the use of alternatives to any monitoring requirements or procedures as provided in the referencing subpart or paragraph (d) of this section.

(2) When one CPMS is used as a backup to another CPMS, the owner or operator shall report the results from the CPMS used to meet the monitoring requirements of this subpart. If both such CPMS's are used during a particular reporting period to meet the monitoring requirements of this subpart, then the owner or operator shall report the results from each CPMS for the time during the six month period that the instrument was relied upon to demonstrate compliance.

(c) *Operation and maintenance of continuous parameter monitoring systems.* (1) All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's

specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(2) The owner or operator of a regulated source shall maintain and operate each CPMS as specified in this section, or in a relevant subpart, and in a manner consistent with good air pollution control practices.

(i) The owner or operator of a regulated source shall ensure the immediate repair or replacement of CPMS parts to correct “routine” or otherwise predictable CPMS malfunctions. The necessary parts for routine repairs of the affected equipment shall be readily available.

(ii) If under the referencing subpart, an owner or operator has developed a start-up, shutdown, and malfunction plan, the plan is followed, and the CPMS is repaired immediately, this action shall be recorded as specified in §63.998(c)(1)(ii)(E).

(iii) The Administrator's determination of whether acceptable operation and maintenance procedures are being used for the CPMS will be based on information that may include, but is not limited to, review of operation and maintenance procedures, operation and maintenance records as specified in §63.998(c)(1)(i) and (ii), manufacturer's recommendations and specifications, and inspection of the CPMS.

(3) All CPMS's shall be installed and operational, and the data verified as specified in this subpart either prior to or in conjunction with conducting performance tests. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(4) All CPMS's shall be installed such that representative measurements of parameters from the regulated source are obtained.

(5) In accordance with the referencing subpart, except for system breakdowns, repairs, maintenance periods, instrument adjustments, or checks to maintain precision and accuracy, calibration checks, and zero and span adjustments, all continuous parameter monitoring systems shall be in continuous operation when emissions are being routed to the monitored device.

(6) The owner or operator shall establish a range for monitored parameters that indicates proper operation of the control or recovery device. In order to establish the range, the information required in §63.999(b)(3) shall be submitted in the Notification of Compliance Status or the operating permit application or amendment. The range may be based upon a prior performance test meeting the specifications of §63.997(b)(1) or a prior TRE index value determination, as applicable, or upon existing ranges or limits established under a referencing subpart. Where the regeneration stream flow and carbon bed temperature are monitored, the range shall be in terms of the total regeneration stream flow per regeneration cycle and the temperature of the carbon bed determined within 15 minutes of the completion of the regeneration cooling cycle.

(d) *Alternatives to monitoring requirements* —(1) *Alternatives to the continuous operating parameter monitoring and recordkeeping provisions.* An owner or operator may request approval to use alternatives to the continuous operating parameter monitoring and recordkeeping provisions listed in §§63.988(c), 63.990(c), 63.993(c), 63.994(c), 63.998(a)(2) through (4), 63.998(c)(2) and (3), as specified in §63.999(d)(1).

(2) *Monitoring a different parameter than those listed.* An owner or operator may request approval to monitor a different parameter than those established in paragraph (c)(6) of this section or to set

unique monitoring parameters if directed by §63.994(c)(2) or §63.995(c), as specified in §63.999(d)(2).

§ 63.997 Performance test and compliance assessment requirements for control devices.

(a) *Performance tests and flare compliance assessments.* Where §§63.985 through 63.995 require, or the owner or operator elects to conduct, a performance test of a control device or a halogen reduction device, or a compliance assessment for a flare, the requirements of paragraphs (b) through (d) of this section apply.

(b) *Prior test results and waivers.* Initial performance tests and initial flare compliance assessments are required only as specified in this subpart or a referencing subpart.

(1) Unless requested by the Administrator, an owner or operator is not required to conduct a performance test or flare compliance assessment under this subpart if a prior performance test or compliance assessment was conducted using the same methods specified in §63.997(e) or §63.987(b)(3), as applicable, and either no process changes have been made since the test, or the owner or operator can demonstrate that the results of the performance test or compliance demonstration, with or without adjustments, reliably demonstrate compliance despite process changes. An owner or operator may request permission to substitute a prior performance test or compliance assessment by written application to the Administrator as specified in §63.999(a)(1)(iv).

(2) Individual performance tests and flare compliance assessments may be waived upon written application to the Administrator, per §63.999(a)(1)(iii), if, in the Administrator's judgment, the source is meeting the relevant standard(s) on a continuous basis, the source is being operated under an extension or waiver of compliance, or the owner or operator has requested an extension or waiver of compliance and the Administrator is still considering that request.

(3) Approval of any waiver granted under this section shall not abrogate the Administrator's authority under the Act or in any way prohibit the Administrator from later canceling the waiver. The cancellation will be made only after notification is given to the owner or operator of the source.

(c) *Performance tests and flare compliance assessments schedule.* (1) Unless a waiver of performance testing or flare compliance assessment is obtained under this section or the conditions of a referencing subpart, the owner or operator shall perform such tests as specified in paragraphs (c)(1)(i) through (vii) of this section.

(i) Within 180 days after the effective date of a relevant standard for a new source that has an initial start-up date before the effective date of that standard; or

(ii) Within 180 days after initial start-up for a new source that has an initial start-up date after the effective date of a relevant standard; or

(iii) Within 180 days after the compliance date specified in a referencing subpart for an existing source, or within 180 days after start-up of an existing source if the source begins operation after the effective date of the relevant emission standard; or

(iv) Within 180 days after the compliance date for an existing source subject to an emission standard established pursuant to section 112(f) of the Act; or

(v) Within 180 days after the termination date of the source's extension of compliance or a waiver of compliance for an existing source that obtains an extension of compliance under §63.1112(a), or waiver of compliance under 40 CFR 61.11; or

(vi) Within 180 days after the compliance date for a new source, subject to an emission standard established pursuant to section 112(f) of the Act, for which construction or reconstruction is commenced after the proposal date of a relevant standard established pursuant to section 112(d) of the Act but before the proposal date of the relevant standard established pursuant to section 112(f); or

(vii) When the promulgated emission standard in a referencing subpart is more stringent than the standard that was proposed, the owner or operator of a new or reconstructed source subject to that standard for which construction or reconstruction is commenced between the proposal and promulgation dates of the standard shall comply with performance testing requirements within 180 days after the standard's effective date, or within 180 days after start-up of the source, whichever is later. If a promulgated standard in a referencing subpart is more stringent than the proposed standard, the owner or operator may choose to demonstrate compliance initially with either the proposed or the promulgated standard. If the owner or operator chooses to comply with the proposed standard initially, the owner or operator shall conduct a second performance test within 3 years and 180 days after the effective date of the standard, or after start-up of the source, whichever is later, to demonstrate compliance with the promulgated standard.

(2) The Administrator may require an owner or operator to conduct performance tests and compliance assessments at the regulated source at any time when the action is authorized by section 114 of the Act.

(3) Unless already permitted by the applicable title V permit, if an owner or operator elects to use a recovery device to replace an existing control device at a later date, or elects to use a different flare, nonflare control device or recovery device to replace an existing flare, nonflare control device or final recovery device at a later date, the owner or operator shall notify the Administrator, either by amendment of the regulated source's title V permit or, if title V is not applicable, by submission of the notice specified in §63.999(c)(7) before implementing the change. Upon implementing the change, a compliance demonstration or performance test shall be performed according to the provisions of paragraphs (c)(3)(i) through (v) of this section, as applicable, within 180 days. The compliance assessment report shall be submitted to the Administrator within 60 days of completing the determination, as provided in §63.999(a)(1)(ii).

(i) For flares used to replace an existing control device, a flare compliance demonstration shall be performed using the methods specified in §63.987(b);

(ii) For flares used to replace an existing final recovery device that is used on an applicable process vent, the owner or operator shall comply with the applicable provisions in a referencing subpart and in this subpart;

(iii) For incinerators, boilers, or process heaters used to replace an existing control device, a performance test shall be performed, using the methods specified in §63.997;

(iv) For absorbers, condensers, or carbon adsorbers used to replace an existing control device on a process vent or a transfer rack, a performance test shall be performed, using the methods specified in §63.997;

(v) For absorbers, condensers, or carbon adsorbers used to replace an existing final recovery device on a process vent, the owner or operator shall comply with the applicable provisions of a referencing subpart and this subpart;

(d) *Performance testing facilities.* If required to do performance testing, the owner or operator of each new regulated source and, at the request of the Administrator, the owner or operator of each existing regulated source, shall provide performance testing facilities as specified in paragraphs (d)(1) through (5) of this section.

(1) Sampling ports adequate for test methods applicable to such source. This includes, as applicable, the requirements specified in (d)(1)(i) and (ii) of this section.

(i) Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures; and

(ii) Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures;

(2) Safe sampling platform(s);

(3) Safe access to sampling platform(s);

(4) Utilities for sampling and testing equipment; and

(5) Any other facilities that the Administrator deems necessary for safe and adequate testing of a source.

(e) *Performance test procedures.* Where §§63.985 through 63.995 require the owner or operator to conduct a performance test of a control device or a halogen reduction device, the owner or operator shall follow the requirements of paragraphs (e)(1)(i) through (v) of this section, as applicable.

(1) *General procedures.* (i) *Continuous unit operations.* For continuous unit operations, performance tests shall be conducted at maximum representative operating conditions for the process, unless the Administrator specifies or approves alternate operating conditions. During the performance test, an owner or operator may operate the control or halogen reduction device at maximum or minimum representative operating conditions for monitored control or halogen reduction device parameters, whichever results in lower emission reduction. Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

(ii) [Reserved]

(iii) *Combination of both continuous and batch unit operations.* For a combination of both continuous and batch unit operations, performance tests shall be conducted at maximum representative operating conditions. For the purpose of conducting a performance test on a combined vent stream, maximum representative operating conditions shall be when batch emission episodes are occurring that result in the highest organic HAP emission rate (for the combined vent stream) that is achievable during the 6-month period that begins 3 months before and ends 3 months after the compliance assessment (e.g. TRE calculation, performance test) without causing any of the situations described in paragraphs (e)(1)(iii)(A) through (C) of this section.

(A) Causing damage to equipment;

(B) Necessitating that the owner or operator make product that does not meet an existing specification for sale to a customer; or

(C) Necessitating that the owner or operator make product in excess of demand.

(iv) *Alternatives to performance test requirements.* Performance tests shall be conducted and data shall be reduced in accordance with the test methods and procedures set forth in this subpart, in each relevant standard, and, if required, in applicable appendices of 40 CFR parts 51,

60, 61, and 63 unless the Administrator specifies one of the provisions in paragraphs (e)(1)(iv)(A) through (E) of this section.

(A) Specifies or approves, in specific cases, the use of a test method with minor changes in methodology; or

(B) Approves the use of an alternative test method, the results of which the Administrator has determined to be adequate for indicating whether a specific regulated source is in compliance. The alternate method or data shall be validated using the applicable procedures of Method 301 of appendix A of 40 CFR part 63; or

(C) Approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors; or

(D) Waives the requirement for the performance test as specified in paragraph (b)(2) of this section because the owner or operator of a regulated source has demonstrated by other means to the Administrator's satisfaction that the regulated source is in compliance with the relevant standard; or

(E) Approves the use of an equivalent method.

(v) *Performance test runs.* Except as provided in paragraphs (e)(1)(v)(A) and (B) of this section, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for at least 1 hour and under the conditions specified in this section. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

(A) For control devices used to control emissions from transfer racks (except low throughput transfer racks that are capable of continuous vapor processing but do not handle continuous emissions or multiple loading arms of a transfer rack that load simultaneously), each run shall represent at least one complete tank truck or tank car loading period, during which regulated materials are loaded, and samples shall be collected using integrated sampling or grab samples taken at least four times per hour at approximately equal intervals of time, such as 15-minute intervals.

(B) For intermittent vapor processing systems used for controlling transfer rack emissions (except low throughput transfer racks that do not handle continuous emissions or multiple loading arms of a transfer rack that load simultaneously), each run shall represent at least one complete control device cycle, and samples shall be collected using integrated sampling or grab samples taken at least four times per hour at approximately equal intervals of time, such as 15-minute intervals.

(2) *Specific procedures.* Where §§63.985 through 63.995 require the owner or operator to conduct a performance test of a control device, or a halogen reduction device, an owner or operator shall conduct that performance test using the procedures in paragraphs (e)(2)(i) through (iv) of this section, as applicable. The regulated material concentration and percent reduction may be measured as either total organic regulated material or as TOC minus methane and ethane according to the procedures specified.

(i) *Selection of sampling sites.* Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling sites.

(A) For determination of compliance with a percent reduction requirement of total organic regulated material or TOC, sampling sites shall be located as specified in paragraphs (e)(2)(i)(A)(*1*) and (e)(2)(i)(A)(*2*) of this section, and at the outlet of the control device.

(*1*) With the exceptions noted below in paragraphs (e)(2)(i)(A)(*2*) and (*3*), the control device inlet sampling site shall be located at the exit from the unit operation before any control device.

(*2*) For process vents from continuous unit operations at affected sources in subcategories where the applicability criteria includes a TRE index value, the control device inlet sampling site shall be located after the final recovery device.

(*3*) If a vent stream is introduced with the combustion air or as a secondary fuel into a boiler or process heater with a design capacity less than 44 megawatts, selection of the location of the inlet sampling sites shall ensure the measurement of total organic regulated material or TOC (minus methane and ethane) concentrations, as applicable, in all vent streams and primary and secondary fuels introduced into the boiler or process heater.

(B) For determination of compliance with a parts per million by volume total regulated material or TOC limit in a referencing subpart, the sampling site shall be located at the outlet of the control device.

(ii) *Gas volumetric flow rate.* The gas volumetric flow rate shall be determined using Method 2, 2A, 2C, 2D, 2F, or 2G of 40 CFR part 60, appendix A, as appropriate.

(iii) *Total organic regulated material or TOC concentration.* To determine compliance with a parts per million by volume total organic regulated material or TOC limit, the owner or operator shall use Method 18 or 25A of 40 CFR part 60, appendix A, as applicable. The ASTM D6420–99 may be used in lieu of Method 18 of 40 CFR part 60, appendix A, under the conditions specified in paragraphs (e)(2)(iii)(D)(1) through (3) of this section. Alternatively, any other method or data that have been validated according to the applicable procedures in Method 301 of appendix A of 40 CFR part 63 may be used. The procedures specified in paragraphs (e)(2)(iii)(A), (B), (D), and (E) of this section shall be used to calculate parts per million by volume concentration. The calculated concentration shall be corrected to 3 percent oxygen using the procedures specified in paragraph (e)(2)(iii)(C) of this section if a combustion device is the control device and supplemental combustion air is used to combust the emissions.

(A) *Sampling time.* For continuous unit operations and for a combination of both continuous and batch unit operations, the minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15 minute intervals during the run.

(B) *Concentration calculation.* The concentration of either TOC (minus methane or ethane) or total organic regulated material shall be calculated according to paragraph (e)(2)(iii)(B) (*1*) or (*2*) of this section.

(*1*) The TOC concentration (C_{TOC}) is the sum of the concentrations of the individual components and shall be computed for each run using Equation 2.

$$C_{TOC} = \sum_{i=1}^{x} \frac{\left(\sum_{j=1}^{n} C_{ji} \right)}{x} \qquad [Eq.\ 2]$$

Where:

C_{TOC}= Concentration of TOC (minus methane and ethane), dry basis, parts per million by volume.

x = Number of samples in the sample run.

n = Number of components in the sample.

C_{ji}= Concentration of sample components j of sample I, dry basis, parts per million by volume.

(*2*) The total organic regulated material (C_{REG}) shall be computed according to Equation 2 in paragraph (e)(2)(iii)(B)(*1*) of this section except that only the regulated species shall be summed.

(C) *Concentration correction calculation.* The concentration of TOC or total organic regulated material, as applicable, shall be corrected to 3 percent oxygen if a combustion device is the control device and supplemental combustion air is used to combust the emissions.

(*1*) The emission rate correction factor (or excess air), integrated sampling and analysis procedures of Method 3B of 40 CFR part 60, appendix A, or American Society of Mechanical Engineers (ASME) PTC 19–10–1981-Part 10 (available for purchase from: ASME International, Three Park Avenue, New York, NY 10016–5990, 800–843–2763 or 212–591–7722), shall be used to determine the oxygen concentration. The sampling site shall be the same as that of the organic regulated material or organic compound samples, and the samples shall be taken during the same time that the organic regulated material or organic compound samples are taken.

(*2*) The concentration corrected to 3 percent oxygen (C_c) shall be computed using Equation 3.

$$C_c = C_m \left(\frac{17.9}{20.9 - \%O_{2d}} \right) \quad [Eq.\ 3]$$

Where:

C_c= Concentration of TOC or organic regulated material corrected to 3 percent oxygen, dry basis, parts per million by volume.

C_m= Concentration of TOC (minus methane and ethane) or organic regulated material, dry basis, parts per million by volume.

$\%O_{2d}$= Concentration of oxygen, dry basis, percentage by volume.

(D) To measure the total organic regulated material concentration at the outlet of a control device, use Method 18 of 40 CFR part 60, appendix A, or ASTM D6420–99. If you have a combustion control device, you must first determine which regulated material compounds are present in the inlet gas stream using process knowledge or the screening procedure described in Method 18. In conducting the performance test, analyze samples collected at the outlet of the combustion control device as specified in Method 18 or ASTM D6420–99 for the regulated material compounds present at the inlet of the control device. The method ASTM D6420–99 may be used only under the conditions specified in paragraphs (e)(2)(iii)(D)(*1*) through (*3*) of this section.

(*1*) If the target compound(s) is listed in Section 1.1 of ASTM D6420–99 and the target concentration is between 150 parts per billion by volume and 100 parts per million by volume.

(*2*) If the target compound(s) is not listed in Section 1.1 of ASTM D6420–99 but is potentially detected by mass spectrometry, an additional system continuing calibration check after each run, as detailed in Section 10.5.3 of ASTM D6420–99, must be followed, met, documented, and submitted with the performance test report even if you do not use a moisture condenser or the compound is not considered soluble.

(*3*) If a minimum of one sample/analysis cycle is completed at least every 15 minutes.

(E) To measure the TOC concentration, use Method 18 of 40 CFR part 60, appendix A, or use Method 25A of 40 CFR part 60, appendix A, according to the procedures in paragraphs (e)(2)(iii)(E)(*1*) through (*4*) of this section.

(*1*) Calibrate the instrument on the predominant regulated material compound.

(*2*) The test results are acceptable if the response from the high level calibration gas is at least 20 times the standard deviation for the response from the zero calibration gas when the instrument is zeroed on its most sensitive scale.

(*3*) The span value of the analyzer must be less than 100 parts per million by volume.

(*4*) Report the results as carbon, calculated according to Equation 25A–1 of Method 25A of 40 CFR part 60, appendix A.

(iv) *Percent reduction calculation.* To determine compliance with a percent reduction requirement, the owner or operator shall use Method 18, 25, or 25A of 40 CFR part 60, appendix A, as applicable. The method ASTM D6420–99 may be used in lieu of Method 18 of 40 CFR part 60, appendix A, under the conditions specified in paragraphs (e)(2)(iii)(D)(*1*) through (*3*) of this section. Alternatively, any other method or data that have been validated according to the applicable procedures in Method 301 of appendix A of 40 CFR part 63 may be used. The procedures specified in paragraphs (e)(2)(iv)(A) through (I) of this section shall be used to calculate percent reduction efficiency.

(A) *Sampling time.* The minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15-minute intervals during the run.

(B) *Mass rate of TOC or total organic regulated material.* The mass rate of either TOC (minus methane and ethane) or total organic regulated material (E_I, E_o) shall be computed as applicable.

(*1*) Equations 4 and 5 shall be used.

$$E_i = K_2 \left(\sum_{j=1}^{n} C_{ij} M_{ij} \right) Q_i \qquad [Eq.\ 4]$$

$$E_o = K_2 \left(\sum_{j=1}^{n} C_{oj} M_{oj} \right) Q_o \qquad [Eq.\ 5]$$

Where:

E_I, E_o= Emission rate of TOC (minus methane and ethane) (E_{TOC}) or emission rate of total organic regulated material (E_{RM}) in the sample at the inlet and outlet of the control device, respectively, dry basis, kilogram per hour.

K_2= Constant, 2.494×10^{-6}(parts per million)$^{-1}$(gram-mole per standard cubic meter) (kilogram per gram) (minute per hour), where standard temperature (gram-mole per standard cubic meter) is 20 °C.

n = Number of components in the sample.

C_{ij}, C_{oj}= Concentration on a dry basis of organic compound j in parts per million by volume of the gas stream at the inlet and outlet of the control device, respectively. If the TOC emission rate is being calculated, $C_{ij}$and C_{oj}include all organic compounds measured minus methane and ethane; if the total organic regulated material emissions rate is being calculated, only organic regulated material are included.

M_{ij}, M_{oj}= Molecular weight of organic compound j, gram per gram-mole, of the gas stream at the inlet and outlet of the control device, respectively.

Q_I, Q_o= Process vent flow rate, dry standard cubic meter per minute, at a temperature of 20°C, at the inlet and outlet of the control device, respectively.

(*2*)–(*3*) [Reserved]

(C) *Percent reduction in TOC or total organic regulated material for continuous unit operations and a combination of both continuous and batch unit operations.* For continuous unit operations and for a combination of both continuous and batch unit operations, the percent reduction in TOC (minus methane and ethane) or total organic regulated material shall be calculated using Equation 6.

$$R = \frac{E_i - E_o}{E_i}(100) \qquad [Eq.\ 6]$$

Where:

R = Control efficiency of control device, percent.

E_I= Mass rate of TOC (minus methane and ethane) or total organic regulated material at the inlet to the control device as calculated under paragraph (e)(2)(iv)(B) of this section, kilograms TOC per hour or kilograms organic regulated material per hour.

E_o= Mass rate of TOC (minus methane and ethane) or total organic regulated material at the outlet of the control device, as calculated under paragraph (e)(2)(iv)(B) of this section, kilograms TOC per hour or kilograms total organic regulated material per hour.

(D) *Vent stream introduced with combustion air or as secondary fuel.* If the vent stream entering a boiler or process heater with a design capacity less than 44 megawatts is introduced with the combustion air or as a secondary fuel, the weight-percent reduction of total organic regulated material or TOC (minus methane and ethane) across the device shall be determined by comparing the TOC (minus methane and ethane) or total organic regulated material in all combusted vent streams and primary and secondary fuels with the TOC (minus methane and ethane) or total organic regulated material exiting the combustion device, respectively.

(E) *Transfer racks.* Method 25A of 40 CFR part 60, appendix A, may also be used for the purpose of determining compliance with the percent reduction requirement for transfer racks.

(*1*) If Method 25A of 40 CFR part 60, appendix A, is used to measure the concentration of organic compounds (C_{TOC}), the principal organic regulated material in the vent stream shall be used as the calibration gas.

(*2*) An emission testing interval shall consist of each 15-minute period during the performance test. For each interval, a reading from each measurement shall be recorded.

(*3*) The average organic compound concentration and the volume measurement shall correspond to the same emissions testing interval.

(*4*) The mass at the inlet and outlet of the control device during each testing interval shall be calculated using Equation 7.

$$M_j = FKV_sC_t \qquad [Eq.\ 7]$$

Where:

M_j= Mass of organic compounds emitted during testing interval j, kilograms.

F = 10^{-6}= Conversion factor, (cubic meters regulated material per cubic meters air) * (parts per million by volume)$^{-1}$.

K = Density, kilograms per standard cubic meter organic regulated material.

= 659 kilograms per standard cubic meter organic regulated material. (Note: The density term cancels out when the percent reduction is calculated. Therefore, the density used has no effect. The density of hexane is given so that it can be used to maintain the units of M_j.)

V_s= Volume of air-vapor mixture exhausted at standard conditions, 20 °C and 760 millimeters mercury, standard cubic meters.

C_t= Total concentration of organic compounds (as measured) at the exhaust vent, parts per million by volume, dry basis.

(*5*) The organic compound mass emission rates at the inlet and outlet of the control device shall be calculated using Equations 8 and 9 as follows:

$$E_i = \frac{\sum_{j=1}^{n} M_{ij}}{T} \qquad [Eq.\ 8] \quad E_o = \frac{\sum_{j=1}^{n} M_{oj}}{T} \qquad [Eq.\ 9]$$

Where:

E_i, E_o= Mass flow rate of organic compounds at the inlet (i) and outlet (o) of the control device, kilograms per hour.

n = Number of testing intervals.

M_{ij}, M_{oj}= Mass of organic compounds at the inlet (i) or outlet (o) during testing interval j, kilograms.

T = Total time of all testing intervals, hours.

(F) To measure inlet and outlet concentrations of total organic regulated material, use Method 18 of 40 CFR part 60, appendix A, or ASTM D6420–99, under the conditions specified in paragraphs (e)(2)(iii)(D)(*1*) through (*3*) of this section. In conducting the performance test, collect and analyze samples as specified in Method 18 or ASTM D6420–99. You must collect samples simultaneously at the inlet and outlet of the control device. If the performance test is for a combustion control device, you must first determine which regulated material compounds are present in the inlet gas stream (i.e., uncontrolled emissions) using process knowledge or the screening procedure described in Method 18. Quantify the emissions for the regulated material compounds present in the inlet gas stream for both the inlet and outlet gas streams for the combustion device.

(G) To determine inlet and outlet concentrations of TOC, use Method 25 of 40 CFR part 60, appendix A. Measure the total gaseous non-methane organic (TGNMO) concentration of the inlet and outlet vent streams using the procedures of Method 25. Use the TGNMO concentration in Equations 4 and 5 of paragraph (e)(2)(iv)(B) of this section.

(H) Method 25A of 40 CFR part 60, appendix A, may be used instead of Method 25 to measure inlet and outlet concentrations of TOC if the condition in either paragraph (e)(2)(iv)(H)(*1*) or (*2*) of this section is met.

(*1*) The concentration at the inlet to the control system and the required level of control would result in exhaust TGNMO concentrations of 50 parts per million by volume or less.

(*2*) Because of the high efficiency of the control device, the anticipated TGNMO concentration of the control device exhaust is 50 parts per million by volume or less, regardless of the inlet concentration.

(I) If the uncontrolled or inlet gas stream to the control device contains formaldehyde, you must conduct emissions testing according to paragraph (e)(2)(iv)(I)(*1*) or (*2*) of this section.

(*1*) If you elect to comply with a percent reduction requirement and formaldehyde is the principal regulated material compound (i.e., greater than 50 percent of the regulated material compounds in the stream by volume), you must use Method 316 or 320 of 40 CFR part 63, appendix A, to measure formaldehyde at the inlet and outlet of the control device. Use the percent reduction in formaldehyde as a surrogate for the percent reduction in total regulated material emissions.

(*2*) If you elect to comply with an outlet total organic regulated material concentration or TOC concentration limit, and the uncontrolled or inlet gas stream to the control device contains greater than 10 percent (by volume) formaldehyde, you must use Method 316 or 320 of 40 CFR part 63, appendix A, to separately determine the formaldehyde concentration. Calculate the total organic regulated material concentration or TOC concentration by totaling the formaldehyde emissions measured using Method 316 or 320 and the other regulated material compound emissions measured using Method 18 or 25/25A.

(3) An owner or operator using a halogen scrubber or other halogen reduction device to control process vent and transfer rack halogenated vent streams in compliance with a referencing subpart, who is required to conduct a performance test to determine compliance with a control efficiency or emission limit for hydrogen halides and halogens, shall follow the procedures specified in paragraphs (e)(3) (i) through (iv) of this section.

(i) For an owner or operator determining compliance with the percent reduction of total hydrogen halides and halogens, sampling sites shall be located at the inlet and outlet of the scrubber or other halogen reduction device used to reduce halogen emissions. For an owner or operator determining compliance with a kilogram per hour outlet emission limit for total hydrogen halides

and halogens, the sampling site shall be located at the outlet of the scrubber or other halogen reduction device and prior to any releases to the atmosphere.

(ii) Except as provided in paragraph (e)(1)(iv) of this section, Method 26 or Method 26A of 40 CFR part 60, appendix A, shall be used to determine the concentration, in milligrams per dry standard cubic meter, of total hydrogen halides and halogens that may be present in the vent stream. The mass emissions of each hydrogen halide and halogen compound shall be calculated from the measured concentrations and the gas stream flow rate.

(iii) To determine compliance with the percent removal efficiency, the mass emissions for any hydrogen halides and halogens present at the inlet of the halogen reduction device shall be summed together. The mass emissions of the compounds present at the outlet of the scrubber or other halogen reduction device shall be summed together. Percent reduction shall be determined by comparison of the summed inlet and outlet measurements.

(iv) To demonstrate compliance with a kilogram per hour outlet emission limit, the test results must show that the mass emission rate of total hydrogen halides and halogens measured at the outlet of the scrubber or other halogen reduction device is below the kilogram per hour outlet emission limit specified in a referencing subpart.

[64 FR 34866, June 29, 1999, as amended at 67 FR 46277, July 12, 2002]

§ 63.998 Recordkeeping requirements.

(a) *Compliance assessment, monitoring, and compliance records* —(1) *Conditions of flare compliance assessment, monitoring, and compliance records.* Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of flare compliance assessments performed pursuant to §63.987(b).

(i) *Flare compliance assessment records.* When using a flare to comply with this subpart, record the information specified in paragraphs (a)(1)(i)(A) through (C) of this section for each flare compliance assessment performed pursuant to §63.987(b). As specified in §63.999(a)(2)(iii)(A), the owner or operator shall include this information in the flare compliance assessment report.

(A) Flare design (i.e., steam-assisted, air-assisted, or non-assisted);

(B) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the flare compliance assessment; and

(C) All periods during the flare compliance assessment when all pilot flames are absent or, if only the flare flame is monitored, all periods when the flare flame is absent.

(ii) *Monitoring records.* Each owner or operator shall keep up to date and readily accessible hourly records of whether the monitor is continuously operating and whether the flare flame or at least one pilot flame is continuously present. For transfer racks, hourly records are required only while the transfer rack vent stream is being vented.

(iii) *Compliance records.* (A) Each owner or operator shall keep records of the times and duration of all periods during which the flare flame or all the pilot flames are absent. This record shall be submitted in the periodic reports as specified in §63.999(c)(3).

(B) Each owner or operator shall keep records of the times and durations of all periods during which the monitor is not operating.

(2) *Nonflare control device performance test records.* (i) *Availability of performance test records.* Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests performed pursuant to §63.988(b), §63.990(b), §63.994(b), or §63.995(b).

(ii) *Nonflare control device and halogen reduction device performance test records.*

(A) *General requirements.* Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the data specified in paragraphs (a)(2)(ii)(B) through (C) of this section, as applicable, measured during each performance test performed pursuant to §63.988(b), §63.990(b), §63.994(b), or §63.995(b), and also include that data in the Notification of Compliance Status required under §63.999(b). The same data specified in this section shall be submitted in the reports of all subsequently required performance tests where either the emission control efficiency of a combustion device, or the outlet concentration of TOC or regulated material is determined.

(B) *Nonflare combustion device.* Where an owner or operator subject to the provisions of this paragraph seeks to demonstrate compliance with a percent reduction requirement or a parts per million by volume requirement using a nonflare combustion device the information specified in (a)(2)(ii)(B)(*1*) through (*6*) of this section shall be recorded.

(*1*) For thermal incinerators, record the fire box temperature averaged over the full period of the performance test.

(*2*) For catalytic incinerators, record the upstream and downstream temperatures and the temperature difference across the catalyst bed averaged over the full period of the performance test.

(*3*) For a boiler or process heater with a design heat input capacity less than 44 megawatts and a vent stream that is not introduced with or as the primary fuel, record the fire box temperature averaged over the full period of the performance test.

(*4*) For an incinerator, record the percent reduction of organic regulated material, if applicable, or TOC achieved by the incinerator determined as specified in §63.997(e)(2)(iv), as applicable, or the concentration of organic regulated material (parts per million by volume, by compound) determined as specified in §63.997(e)(2)(iii) at the outlet of the incinerator.

(*5*) For a boiler or process heater, record a description of the location at which the vent stream is introduced into the boiler or process heater.

(*6*) For a boiler or process heater with a design heat input capacity of less than 44 megawatts and where the process vent stream is introduced with combustion air or used as a secondary fuel and is not mixed with the primary fuel, record the percent reduction of organic regulated material or TOC, or the concentration of regulated material or TOC (parts per million by volume, by compound) determined as specified in §63.997(e)(2)(iii) at the outlet of the combustion device.

(C) *Other nonflare control devices.* Where an owner or operator seeks to use an absorber, condenser, or carbon adsorber as a control device, the information specified in paragraphs (a)(2)(ii)(C)(*1*) through (*5*) of this section shall be recorded, as applicable.

(*1*) Where an absorber is used as the control device, the exit specific gravity and average exit temperature of the absorbing liquid averaged over the same time period as the performance test (both measured while the vent stream is normally routed and constituted); or

(*2*) Where a condenser is used as the control device, the average exit (product side) temperature averaged over the same time period as the performance test while the vent stream is routed and constituted normally; or

(*3*) Where a carbon adsorber is used as the control device, the total regeneration stream mass flow during each carbon-bed regeneration cycle during the period of the performance test, and temperature of the carbon-bed after each regeneration during the period of the performance test (and within 15 minutes of completion of any cooling cycle or cycles; or

(*4*) As an alternative to paragraph (a)(2)(ii)(C)(*1*), (*2*), or (*3*) of this section, the concentration level or reading indicated by an organics monitoring device at the outlet of the absorber, condenser, or carbon adsorber averaged over the same time period as the performance test while the vent stream is normally routed and constituted.

(*5*) For an absorber, condenser, or carbon adsorber used as a control device, the percent reduction of regulated material achieved by the control device or concentration of regulated material (parts per million by volume, by compound) at the outlet of the control device.

(D) *Halogen reduction devices.* When using a scrubber following a combustion device to control a halogenated vent stream, record the information specified in paragraphs (a)(2)(ii)(D)(*1*) through (*3*) of this section.

(*1*) The percent reduction or scrubber outlet mass emission rate of total hydrogen halides and halogens as specified in §63.997(e)(3).

(*2*) The pH of the scrubber effluent averaged over the time period of the performance test; and

(*3*) The scrubber liquid-to-gas ratio averaged over the time period of the performance test.

(3) *Recovery device monitoring records during TRE index value determination.* For process vents that require control of emissions under a referencing subpart, owners or operators using a recovery device to maintain a TRE above a level specified in the referencing subpart shall maintain the continuous records specified in paragraph (a)(3)(i) through (v) of this section, as applicable, and submit reports as specified in §63.999(a)(2)(iii)(C).

(i) Where an absorber is the final recovery device in the recovery system and the saturated scrubbing fluid and specific gravity of the scrubbing fluid is greater than or equal to 0.02 specific gravity units, the exit specific gravity (or alternative parameter that is a measure of the degree of absorbing liquid saturation if approved by the Administrator) and average exit temperature of the absorbing liquid averaged over the same time period as the TRE index value determination (both measured while the vent stream is normally routed and constituted); or

(ii) Where a condenser is the final recovery device in the recovery system, the average exit (product side) temperature averaged over the same time period as the TRE index value determination while the vent stream is routed and constituted normally; or

(iii) Where a carbon adsorber is the final recovery device in the recovery system, the total regeneration stream mass flow during each carbon-bed regeneration cycle during the period of the TRE index value determination, and temperature of the carbon-bed after each regeneration during the period of the TRE index value determination (and within 15 minutes of completion of any cooling cycle or cycles); or

(iv) As an alternative to paragraph (a)(3)(i), (ii), or (iii) of this section, the concentration level or reading indicated by an organics monitoring device at the outlet of the absorber, condenser, or

carbon adsorber averaged over the same time period as the TRE index value determination while the vent stream is normally routed and constituted.

(v) All measurements and calculations performed to determine the TRE index value of the vent stream as specified in a referencing subpart.

(4) *Halogen concentration records.* Record the halogen concentration in the vent stream determined according to the procedures specified in a referencing subpart. Submit this record in the Notification of Compliance Status, as specified in §63.999(b)(4). If the owner or operator designates the vent stream as halogenated, then this shall be recorded and reported in the Notification of Compliance Status report.

(b) *Continuous records and monitoring system data handling* —(1) *Continuous records.* Where this subpart requires a continuous record, the owner or operator shall maintain a record as specified in paragraphs (b)(1)(i) through (iv) of this section, as applicable:

(i) A record of values measured at least once every 15 minutes or each measured value for systems which measure more frequently than once every 15 minutes; or

(ii) A record of block average values for 15-minute or shorter periods calculated from all measured data values during each period or from at least one measured data value per minute if measured more frequently than once per minute.

(iii) Where data is collected from an automated continuous parameter monitoring system, the owner or operator may calculate and retain block hourly average values from each 15-minute block average period or from at least one measured value per minute if measured more frequently than once per minute, and discard all but the most recent three valid hours of continuous (15-minute or shorter) records, if the hourly averages do not exclude periods of CPMS breakdown or malfunction. An automated CPMS records the measured data and calculates the hourly averages through the use of a computerized data acquisition system.

(iv) A record as required by an alternative approved under a referencing subpart.

(2) *Excluded data.* Monitoring data recorded during periods identified in paragraphs (b)(2)(i) through (iii) of this section shall not be included in any average computed to determine compliance with an emission limit in a referencing subpart.

(i) Monitoring system breakdowns, repairs, preventive maintenance, calibration checks, and zero (low-level) and high-level adjustments;

(ii) Periods of non-operation of the process unit (or portion thereof), resulting in cessation of the emissions to which the monitoring applies; and

(iii) Startups, shutdowns, and malfunctions, if the owner or operator operates the source during such periods in accordance with §63.1111(a) and maintains the records specified in paragraph (d)(3) of this section.

(3) *Records of daily averages.* In addition to the records specified in paragraph (a), owners or operators shall keep records as specified in paragraphs (b)(3)(i) and (ii) of this section and submit reports as specified in §63.999(c), unless an alternative recordkeeping system has been requested and approved under a referencing subpart.

(i) Except as specified in paragraph (b)(3)(ii) of this section, daily average values of each continuously monitored parameter shall be calculated from data meeting the specifications of paragraph (b)(2) of this section for each operating day and retained for 5 years.

(A) The daily average shall be calculated as the average of all values for a monitored parameter recorded during the operating day. The average shall cover a 24-hour period if operation is continuous, or the period of operation per operating day if operation is not continuous (e.g., for transfer racks the average shall cover periods of loading). If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the daily average instead of all measured values.

(B) The operating day shall be the period defined in the operating permit or in the Notification of Compliance Status. It may be from midnight to midnight or another daily period.

(ii) If all recorded values for a monitored parameter during an operating day are within the range established in the Notification of Compliance Status or in the operating permit, the owner or operator may record that all values were within the range and retain this record for 5 years rather than calculating and recording a daily average for that operating day. In such cases, the owner or operator may not discard the recorded values as allowed in paragraph (b)(1)(iii) of this section.

(4) [Reserved]

(5) *Alternative recordkeeping.* For any parameter with respect to any item of equipment associated with a process vent or transfer rack (except low throughput transfer loading racks), the owner or operator may implement the recordkeeping requirements in paragraphs (b)(5)(i) or (ii) of this section as alternatives to the recordkeeping provisions listed in paragraphs (b)(1) through (3) of this section. The owner or operator shall retain each record required by paragraphs (b)(5)(i) or (ii) of this section as provided in a referencing subpart.

(i) The owner or operator may retain only the daily average value, and is not required to retain more frequently monitored operating parameter values, for a monitored parameter with respect to an item of equipment, if the requirements of paragraphs (b)(5)(i)(A) through (F) of this section are met. The owner or operator shall notify the Administrator in the Notification of Compliance Status as specified in §63.999(b)(5) or, if the Notification of Compliance Status has already been submitted, in the Periodic Report immediately preceding implementation of the requirements of this paragraph, as specified in §63.999(c)(6)(iv).

(A) The monitoring system is capable of detecting unrealistic or impossible data during periods of operation other than start-ups, shutdowns or malfunctions (e.g., a temperature reading of −200°C on a boiler), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(B) The monitoring system generates a running average of the monitoring values, updated at least hourly throughout each operating day, that have been obtained during that operating day, and the capability to observe this average is readily available to the Administrator on-site during the operating day. The owner or operator shall record the occurrence of any period meeting the criteria in paragraphs (b)(5)(i)(B)(*1*) through (*3*) of this section. All instances in an operating day constitute a single occurrence.

(*1*) The running average is above the maximum or below the minimum established limits;

(*2*) The running average is based on at least six one-hour average values; and

(*3*) The running average reflects a period of operation other than a start-up, shutdown, or malfunction.

(C) The monitoring system is capable of detecting unchanging data during periods of operation other than start-ups, shutdowns or malfunctions, except in circumstances where the presence of

unchanging data is the expected operating condition based on past experience (e.g., pH in some scrubbers), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(D) The monitoring system will alert the owner or operator by an alarm, if the running average parameter value calculated under paragraph (b)(5)(i)(B) of this section reaches a set point that is appropriately related to the established limit for the parameter that is being monitored.

(E) The owner or operator shall verify the proper functioning of the monitoring system, including its ability to comply with the requirements of paragraph (b)(5)(i) of this section, at the times specified in paragraphs (b)(5)(i)(E)(*1*) through (*3*) of this section. The owner or operator shall document that the required verifications occurred.

(*1*) Upon initial installation.

(*2*) Annually after initial installation.

(*3*) After any change to the programming or equipment constituting the monitoring system that might reasonably be expected to alter the monitoring system's ability to comply with the requirements of this section.

(F) The owner or operator shall retain the records identified in paragraphs (b)(5)(i)(F)(*1*) through (*4*) of this section.

(*1*) Identification of each parameter, for each item of equipment, for which the owner or operator has elected to comply with the requirements of paragraph (b)(5)(i) of this section.

(*2*) A description of the applicable monitoring system(s), and of how compliance will be achieved with each requirement of paragraph (b)(5)(i)(A) through (E) of this section. The description shall identify the location and format (e.g., on-line storage; log entries) for each required record. If the description changes, the owner or operator shall retain both the current and the most recent superseded description. The description, and the most recent superseded description, shall be retained as provided in the subpart that references this subpart, except as provided in paragraph (b)(5)(i)(F)(*1*) of this section.

(*3*) A description, and the date, of any change to the monitoring system that would reasonably be expected to affect its ability to comply with the requirements of paragraph (b)(5)(i) of this section.

(*4*) Owners and operators subject to paragraph (b)(5)(i)(F)(*2*) of this section shall retain the current description of the monitoring system as long as the description is current, but not less than 5 years from the date of its creation. The current description shall be retained on-site at all times or be accessible from a central location by computer or other means that provides access within 2 hours after a request. The owner or operator shall retain the most recent superseded description at least until 5 years from the date of its creation. The superseded description shall be retained on-site (or accessible from a central location by computer that provides access within 2 hours after a request) at least 6 months after being superseded. Thereafter, the superseded description may be stored off-site.

(ii) If an owner or operator has elected to implement the requirements of paragraph (b)(5)(i) of this section, and a period of 6 consecutive months has passed without an excursion as defined in paragraph (b)(6)(i) of this section, the owner or operator is no longer required to record the daily average value for that parameter for that unit of equipment, for any operating day when the daily average value is less than the maximum, or greater than the minimum established limit. With

approval by the Administrator, monitoring data generated prior to the compliance date of this subpart shall be credited toward the period of 6 consecutive months, if the parameter limit and the monitoring were required and/or approved by the Administrator.

(A) If the owner or operator elects not to retain the daily average values, the owner or operator shall notify the Administrator in the next Periodic Report, as specified in §63.999(c)(6)(i). The notification shall identify the parameter and unit of equipment.

(B) If there is an excursion as defined in paragraph (b)(6)(i) of this section on any operating day after the owner or operator has ceased recording daily averages as provided in paragraph (b)(5)(ii) of this section, the owner or operator shall immediately resume retaining the daily average value for each operating day, and shall notify the Administrator in the next Periodic Report, as specified in §63.999(c). The owner or operator shall continue to retain each daily average value until another period of 6 consecutive months has passed without an excursion as defined in paragraph (b)(6)(i) of this section.

(C) The owner or operator shall retain the records specified in paragraphs (b)(5)(i)(A) through (F) of this section for the duration specified in a referencing subpart. For any week, if compliance with paragraphs (b)(5)(i)(A) through (D) of this section does not result in retention of a record of at least one occurrence or measured parameter value, the owner or operator shall record and retain at least one parameter value during a period of operation other than a start-up, shutdown, or malfunction.

(6)(i) For the purposes of this section, an excursion means that the daily average value of monitoring data for a parameter is greater than the maximum, or less than the minimum established value, except as provided in paragraphs (b)(6)(i)(A) and (B) of this section.

(A) The daily average value during any startup, shutdown, or malfunction shall not be considered an excursion if the owner or operator operates the source during such periods in accordance with §63.1111(a) and maintains the records specified in paragraph (d)(3) of this section.

(B) An excused excursion, as described in paragraph (b)(6)(ii), does not count toward the number of excursions for the purposes of this subpart.

(ii) One excused excursion for each control device or recovery device for each semiannual period is allowed. If a source has developed a startup, shutdown and malfunction plan, and a monitored parameter is outside its established range or monitoring data are not collected during periods of start-up, shutdown, or malfunction (and the source is operated during such periods in accordance with §63.1111(a)) or during periods of nonoperation of the process unit or portion thereof (resulting in cessation of the emissions to which monitoring applies), then the excursion is not a violation and, in cases where continuous monitoring is required, the excursion does not count as the excused excursion for determining compliance.

(c) *Nonflare control and recovery device regulated source monitoring records* —(1) *Monitoring system records.* For process vents and high throughput transfer racks, the owner or operator subject to this subpart shall keep the records specified in this paragraph, as well as records specified elsewhere in this subpart.

(i) For a CPMS used to comply with this part, a record of the procedure used for calibrating the CPMS.

(ii) For a CPMS used to comply with this subpart, records of the information specified in paragraphs (c)(ii)(A) through (H) of this section, as indicated in a referencing subpart.

(A) The date and time of completion of calibration and preventive maintenance of the CPMS.

(B) The “as found” and “as left” CPMS readings, whenever an adjustment is made that affects the CPMS reading and a “no adjustment” statement otherwise.

(C) The start time and duration or start and stop times of any periods when the CPMS is inoperative.

(D) Records of the occurrence and duration of each start-up, shutdown, and malfunction of CPMS used to comply with this subpart during which excess emissions (as defined in a referencing subpart) occur.

(E) For each start-up, shutdown, and malfunction during which excess emissions as defined in a referencing subpart occur, records whether the procedures specified in the source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan. These records may take the form of a “checklist,” or other form of recordkeeping that confirms conformance with the start-up, shutdown, and malfunction plan for the event.

(F) Records documenting each start-up, shutdown, and malfunction event.

(G) Records of CPMS start-up, shutdown, and malfunction event that specify that there were no excess emissions during the event, as applicable.

(H) Records of the total duration of operating time.

(2) *Combustion control and halogen reduction device monitoring records.* (i) Each owner or operator using a combustion control or halogen reduction device to comply with this subpart shall keep the following records up-to-date and readily accessible, as applicable. Continuous records of the equipment operating parameters specified to be monitored under §§63.988(c) (incinerator, boiler, and process heater monitoring), 63.994(c) (halogen reduction device monitoring), and 63.995(c) (other combustion systems used as control device monitoring) or approved by the Administrator in accordance with a referencing subpart.

(ii) Each owner or operator shall keep records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in paragraph (b)(3)(i) of this section. For catalytic incinerators, record the daily average of the temperature upstream of the catalyst bed and the daily average of the temperature differential across the bed. For halogen scrubbers record the daily average pH and the liquid-to-gas ratio.

(iii) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of periods of operation during which the parameter boundaries are exceeded. The parameter boundaries are established pursuant to §63.996(c)(6).

(3) *Monitoring records for recovery devices, absorbers, condensers, carbon adsorbers or other noncombustion systems used as control devices.* (i) Each owner or operator using a recovery device to achieve and maintain a TRE index value greater than the control applicability level specified in the referencing subpart but less than 4.0 or using an absorber, condenser, carbon adsorber or other non-combustion system as a control device shall keep readily accessible, continuous records of the equipment operating parameters specified to be monitored under §§63.990(c) (absorber, condenser, and carbon adsorber monitoring), 63.993(c) (recovery device monitoring), or 63.995(c) (other noncombustion systems used as a control device monitoring) or as approved by the Administrator in accordance with a referencing subpart. For transfer racks, continuous records are required while the transfer vent stream is being vented.

(ii) Each owner or operator shall keep records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in

paragraph (b)(3)(i) of this section. If carbon adsorber regeneration stream flow and carbon bed regeneration temperature are monitored, the records specified in paragraphs (c)(3)(ii)(A) and (B) of this section shall be kept instead of the daily averages.

(A) Records of total regeneration stream mass or volumetric flow for each carbon-bed regeneration cycle.

(B) Records of the temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycle.

(iii) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of periods of operation during which the parameter boundaries are exceeded. The parameter boundaries are established pursuant to §63.996(c)(6).

(d) *Other records* —(1) *Closed vent system records.* For closed vent systems the owner or operator shall record the information specified in paragraphs (d)(1)(i) through (iv) of this section, as applicable.

(i) For closed vent systems collecting regulated material from a regulated source, the owner or operator shall record the identification of all parts of the closed vent system, that are designated as unsafe or difficult to inspect, an explanation of why the equipment is unsafe or difficult to inspect, and the plan for inspecting the equipment required by §63.983(b)(2)(ii) or (iii) of this section.

(ii) For each closed vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the owner or operator shall keep a record of the information specified in either paragraph (d)(1)(ii)(A) or (B) of this section, as applicable.

(A) Hourly records of whether the flow indicator specified under §63.983(a)(3)(i) was operating and whether a diversion was detected at any time during the hour, as well as records of the times of all periods when the vent stream is diverted from the control device or the flow indicator is not operating.

(B) Where a seal mechanism is used to comply with §63.983(a)(3)(ii), hourly records of flow are not required. In such cases, the owner or operator shall record that the monthly visual inspection of the seals or closure mechanisms has been done, and shall record the occurrence of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has been broken.

(iii) For a closed vent system collecting regulated material from a regulated source, when a leak is detected as specified in §63.983(d)(2), the information specified in paragraphs (d)(1)(iii)(A) through (F) of this section shall be recorded and kept for 5 years.

(A) The instrument and the equipment identification number and the operator name, initials, or identification number.

(B) The date the leak was detected and the date of the first attempt to repair the leak.

(C) The date of successful repair of the leak.

(D) The maximum instrument reading measured by the procedures in §63.983(c) after the leak is successfully repaired or determined to be nonrepairable.

(E) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 days after discovery of the leak. The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(F) Copies of the Periodic Reports as specified in §63.999(c), if records are not maintained on a computerized database capable of generating summary reports from the records.

(iv) For each instrumental or visual inspection conducted in accordance with §63.983(b)(1) for closed vent systems collecting regulated material from a regulated source during which no leaks are detected, the owner or operator shall record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(2) *Storage vessel and transfer rack records.* An owner or operator shall keep readily accessible records of the information specified in paragraphs (d)(2)(i) and (ii) of this section, as applicable.

(i) A record of the measured values of the parameters monitored in accordance with §63.985(c) or §63.987(c).

(ii) A record of the planned routine maintenance performed on the control system during which the control system does not meet the applicable specifications of §63.983(a), §63.985(a), or §63.987(a), as applicable, due to the planned routine maintenance. Such a record shall include the information specified in paragraphs (d)(2)(ii)(A) through (C) of this section. This information shall be submitted in the Periodic Reports as specified in §63.999(c)(4).

(A) The first time of day and date the requirements of §63.983(a), §63.985(a), or §63.987(a), as applicable, were not met at the beginning of the planned routine maintenance, and

(B) The first time of day and date the requirements of §63.983(a), §63.985(a), or §63.987(a), as applicable, were met at the conclusion of the planned routine maintenance.

(C) A description of the type of maintenance performed.

(3) *Regulated source and control equipment start-up, shutdown and malfunction records.* (i) Records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment or of air pollution control equipment used to comply with this part during which excess emissions (as defined in a referencing subpart) occur.

(ii) For each start-up, shutdown, and malfunction during which excess emissions occur, records that the procedures specified in the source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan. For example, if a start-up, shutdown, and malfunction plan includes procedures for routing control device emissions to a backup control device (e.g., the incinerator for a halogenated stream could be routed to a flare during periods when the primary control device is out of service), records must be kept of whether the plan was followed. These records may take the form of a “checklist,” or other form of recordkeeping that confirms conformance with the start-up, shutdown, and malfunction plan for the event.

(4) *Equipment leak records.* The owner or operator shall maintain records of the information specified in paragraphs (d)(4)(i) and (ii) of this section for closed vent systems and control devices if specified by the equipment leak provisions in a referencing subpart. The records specified in paragraph (d)(4)(i) of this section shall be retained for the life of the equipment. The records specified in paragraph (d)(4)(ii) of this section shall be retained for 5 years.

(i) The design specifications and performance demonstrations specified in paragraphs (d)(4)(i)(A) through (C) of this section.

(A) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams.

(B) The dates and descriptions of any changes in the design specifications.

(C) A description of the parameter or parameters monitored, as required in a referencing subpart, 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.

(ii) Records of operation of closed vent systems and control devices, as specified in paragraphs (d)(4)(ii)(A) through (C) of this section.

(A) Dates and durations when the closed vent systems and control devices required are not operated as designed as indicated by the monitored parameters.

(B) Dates and durations during which the monitoring system or monitoring device is inoperative.

(C) Dates and durations of start-ups and shutdowns of control devices required in this subpart.

(5) *Records of monitored parameters outside of range.* The owner or operator shall record the occurrences and the cause of periods when the monitored parameters are outside of the parameter ranges documented in the Notification of Compliance Status report. This information shall also be reported in the Periodic Report.

[64 FR 34866, June 29, 1999, as amended at 64 FR 63705, Nov. 22, 1999; 71 FR 20458, Apr. 20, 2006]

§ 63.999 Notifications and other reports.

(a) *Performance test and flare compliance assessment notifications and reports* —(1) *General requirements.* General requirements for performance test and flare compliance assessment notifications and reports are specified in paragraphs (a)(1)(i) through (iii) of this section.

(i) The owner or operator shall notify the Administrator of the intention to conduct a performance test or flare compliance assessment at least 30 days before such a compliance demonstration is scheduled to allow the Administrator the opportunity to have an observer present. If after 30 days notice for such an initially scheduled compliance demonstration, there is a delay (due to operational problems, etc.) in conducting the scheduled compliance demonstration, the owner or operator of an affected facility shall notify the Administrator as soon as possible of any delay in the original demonstration date. The owner or operator shall provide at least 7 days prior notice of the rescheduled date of the compliance demonstration, or arrange a rescheduled date with the Administrator by mutual agreement.

(ii) Unless specified differently in this subpart or a referencing subpart, performance test and flare compliance assessment reports, not submitted as part of a Notification of Compliance Status report, shall be submitted to the Administrator within 60 days of completing the test or determination.

(iii) Any application for a waiver of an initial performance test or flare compliance assessment, as allowed by §63.997(b)(2), shall be submitted no later than 90 days before the performance test or compliance assessment is required. The application for a waiver shall include information

justifying the owner or operator's request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the source performing the test.

(iv) Any application to substitute a prior performance test or compliance assessment for an initial performance test or compliance assessment, as allowed by §63.997(b)(1), shall be submitted no later than 90 days before the performance test or compliance test is required. The application for substitution shall include information demonstrating that the prior performance test or compliance assessment was conducted using the same methods specified in §63.997(e) or §63.987(b)(3), as applicable. The application shall also include information demonstrating that no process changes have been made since the test, or that the results of the performance test or compliance assessment reliably demonstrate compliance despite process changes.

(2) *Performance test and flare compliance assessment report submittal and content requirements.* Performance test and flare compliance assessment reports shall be submitted as specified in paragraphs (a)(2)(i) through (iii) of this section.

(i) For performance tests or flare compliance assessments, the Notification of Compliance Status or performance test and flare compliance assessment report shall include one complete test report as specified in paragraph (a)(2)(ii) of this section for each test method used for a particular kind of emission point and other applicable information specified in (a)(2)(iii) of this section. For additional tests performed for the same kind of emission point using the same method, the results and any other information required in applicable sections of this subpart shall be submitted, but a complete test report is not required.

(ii) A complete test report shall include a brief process description, sampling site description, description of sampling and analysis procedures and any modifications to standard procedures, quality assurance procedures, record of operating conditions during the test, record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, documentation of calculations, and any other information required by the test method.

(iii) The performance test or flare compliance assessment report shall also include the information specified in (a)(2)(iii)(A) through (C) of this section, as applicable.

(A) For flare compliance assessments, the owner or operator shall submit the records specified in §63.998(a)(1)(i).

(B) For nonflare control device and halogen reduction device performance tests as required under §63.988(b), §63.990(b), §63.994(b), or §63.995(b), also submit the records specified in §63.998(a)(2)(ii), as applicable.

(C) For recovery devices also submit the records specified in §63.998(a)(3), as applicable.

(b) *Notification of Compliance Status* —(1) *Routing storage vessel or transfer rack emissions to a process or fuel gas system.* An owner or operator who elects to comply with §63.982 by routing emissions from a storage vessel or transfer rack to a process or to a fuel gas system, as specified in §63.984, shall submit as part of the Notification of Compliance Status the information specified in paragraphs (b)(1)(i) and (ii), or (iii) of this section, as applicable.

(i) If storage vessels emissions are routed to a process, the owner or operator shall submit the information specified in §63.984(b)(2) and (3).

(ii) As specified in §63.984(c), if storage vessels emissions are routed to a fuel gas system, the owner or operator shall submit a statement that the emission stream is connected to the fuel gas system and whether the conveyance system is subject to the requirements of §63.983.

(iii) As specified in §63.984(c), report that the transfer rack emission stream is being routed to a fuel gas system or process, when complying with a referencing subpart.

(2) *Routing storage vessel or low throughput transfer rack emissions to a nonflare control device.* An owner or operator who elects to comply with §63.982 by routing emissions from a storage vessel or low throughput transfer rack to a nonflare control device, as specified in §63.985, shall submit, with the Notification of Compliance Status required by a referencing subpart, the applicable information specified in paragraphs (b)(2)(i) through (vi) of this section. Owners and operators who elect to comply with §63.985(b)(1)(i) by submitting a design evaluation shall submit the information specified in paragraphs (b)(2)(i) through (iv) of this section. Owners and operators who elect to comply with §63.985(b)(1)(ii) by submitting performance test results from a control device for a storage vessel or low throughput transfer rack shall submit the information specified in paragraphs (b)(2)(i), (ii), (iv), and (v) of this section. Owners and operators who elect to comply with §63.985(b)(1)(ii) by submitting performance test results from a shared control device shall submit the information specified in paragraph (b)(2)(vi) of this section.

(i) A description of the parameter or parameters to be monitored to ensure that the control device is being properly operated and maintained, an explanation of the criteria used for selection of that parameter (or parameters), and the frequency with which monitoring will be performed (e.g., when the liquid level in the storage vessel is being raised). If continuous records are specified, indicate whether the provisions of §63.999(c)(6) apply.

(ii) The operating range for each monitoring parameter identified in the monitoring plan required by §63.985(c)(1). The specified operating range shall represent the conditions for which the control device is being properly operated and maintained.

(iii) The documentation specified in §63.985(b)(1)(i), if the owner or operator elects to prepare a design evaluation.

(iv) The provisions of paragraph (c)(6) of this section do not apply to any low throughput transfer rack for which the owner or operator has elected to comply with §63.985 or to any storage vessel for which the owner or operator is not required, by the applicable monitoring plan established under §63.985(c)(1), to keep continuous records. If continuous records are required, the owner or operator shall specify in the monitoring plan whether the provisions of paragraph (c)(6) of this section apply.

(v) A summary of the results of the performance test described in §63.985(b)(1)(ii). If such a performance test is conducted, submit the results of the performance test, including the information specified in §63.999(a)(2)(ii) and (iii).

(vi) Identification of the storage vessel or transfer rack and control device for which the performance test will be submitted, and identification of the emission point(s), if any, that share the control device with the storage vessel or transfer rack and for which the performance test will be conducted.

(3) *Operating range for monitored parameters.* The owner or operator shall submit as part of the Notification of Compliance Status, the operating range for each monitoring parameter identified for each control, recovery, or halogen reduction device as determined pursuant to §63.996(c)(6). The specified operating range shall represent the conditions for which the control, recovery, or halogen reduction device is being properly operated and maintained. This report shall include the information in paragraphs (b)(3)(i) through (iii) of this section, as applicable, unless the range and the operating day have been established in the operating permit.

(i) The specific range of the monitored parameter(s) for each emission point;

(ii) The rationale for the specific range for each parameter for each emission point, including any data and calculations used to develop the range and a description of why the range indicates proper operation of the control, recovery, or halogen reduction device, as specified in paragraphs (b)(3)(ii)(A), (B), or (C) of this section, as applicable.

(A) If a performance test or TRE index value determination is required by a referencing subpart for a control, recovery or halogen reduction device, the range shall be based on the parameter values measured during the TRE index value determination or performance test and may be supplemented by engineering assessments and/or manufacturer's recommendations. TRE index value determinations and performance testing are not required to be conducted over the entire range of permitted parameter values.

(B) If a performance test or TRE index value determination is not required by a referencing subpart for a control, recovery, or halogen reduction device, the range may be based solely on engineering assessments and/or manufacturer's recommendations.

(C) The range may be based on ranges or limits previously established under a referencing subpart.

(iii) A definition of the source's operating day for purposes of determining daily average values of monitored parameters. The definition shall specify the times at which an operating day begins and ends.

(4) *Halogen reduction device.* The owner or operator shall submit as part of the Notification of Compliance Status the information recorded pursuant to §63.998(a)(4).

(5) *Alternative recordkeeping.* The owner or operator shall notify the Administrator in the Notification of Compliance Status if the alternative recordkeeping requirements of §63.998(b)(5) are being implemented. If the Notification of Compliance Status has already been submitted, the notification must be in the periodic report submitted immediately preceding implementation of the alternative, as specified in paragraph (c)(6)(iv) of this section.

(c) *Periodic reports.* (1) Periodic reports shall include the reporting period dates, the total source operating time for the reporting period, and, as applicable, all information specified in this section and in the referencing subpart, including reports of periods when monitored parameters are outside their established ranges.

(2) For closed vent systems subject to the requirements of §63.983, the owner or operator shall submit as part of the periodic report the information specified in paragraphs (c)(2)(i) through (iii) of this section, as applicable.

(i) The information recorded in §63.998(d)(1)(iii)(B) through (E);

(ii) Reports of the times of all periods recorded under §63.998(d)(1)(ii)(A) when the vent stream is diverted from the control device through a bypass line; and

(iii) Reports of all times recorded under §63.998(d)(1)(ii)(B) when maintenance is performed in car-sealed valves, when the seal is broken, when the bypass line valve position is changed, or the key for a lock-and-key type configuration has been checked out.

(3) For flares subject to this subpart, report all periods when all pilot flames were absent or the flare flame was absent as recorded in §63.998(a)(1)(i)(C).

(4) For storage vessels, the owner or operator shall include in each periodic report required the information specified in paragraphs (c)(4)(i) through (iii) of this section.

(i) For the 6-month period covered by the periodic report, the information recorded in §63.998(d)(2)(ii)(A) through (C).

(ii) For the time period covered by the periodic report and the previous periodic report, the total number of hours that the control system did not meet the requirements of §63.983(a), §63.985(a), or §63.987(a) due to planned routine maintenance.

(iii) A description of the planned routine maintenance during the next 6-month periodic reporting period that is anticipated to be performed for the control system when it is not expected to meet the required control efficiency. This description shall include the type of maintenance necessary, planned frequency of maintenance, and expected lengths of maintenance periods.

(5) If a control device other than a flare is used to control emissions from storage vessels or low throughput transfer racks, the periodic report shall describe each occurrence when the monitored parameters were outside of the parameter ranges documented in the Notification of Compliance Status in accordance with paragraph (b)(3) of this section. The description shall include the information specified in paragraphs (c)(5)(i) and (ii) of this section.

(i) Identification of the control device for which the measured parameters were outside of the established ranges, and

(ii) The cause for the measured parameters to be outside of the established ranges.

(6) For process vents and transfer racks (except low throughput transfer racks), periodic reports shall include the information specified in paragraphs (c)(6)(i) through (iv) of this section.

(i) Periodic reports shall include the daily average values of monitored parameters, calculated as specified in §63.998(b)(3)(i) for any days when the daily average value is outside the bounds as defined in §63.998(c)(2)(iii) or (c)(3)(iii), or the data availability requirements defined in paragraphs (c)(6)(i)(A) through (D) of this section are not met, whether these excursions are excused or unexcused excursions. For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified. An excursion means any of the cases listed in paragraphs (c)(6)(i)(A) through (C) of this section. If the owner or operator elects not to retain the daily average values pursuant to §63.998(b)(5)(ii)(A), the owner or operator shall report this in the Periodic Report.

(A) When the daily average value of one or more monitored parameters is outside the permitted range.

(B) When the period of control or recovery device operation is 4 hours or greater in an operating day and monitoring data are insufficient to constitute a valid hour of data for at least 75 percent of the operating hours.

(C) When the period of control or recovery device operation is less than 4 hours in an operating day and more than one of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data.

(D) Monitoring data are insufficient to constitute a valid hour of data as used in paragraphs (c)(6)(i)(B) and (C) of this section, if measured values are unavailable for any of the 15-minute periods within the hour.

(ii) Report all carbon-bed regeneration cycles during which the parameters recorded under §63.998(a)(2)(ii)(C) were outside the ranges established in the Notification of Compliance Status or in the operating permit.

(iii) The provisions of paragraph (c)(6)(i) and (ii) of this section do not apply to any low throughput transfer rack for which the owner or operator has elected to comply with §63.985 or to any storage vessel for which the owner or operator is not required, by the applicable monitoring plan established under §63.985(c)(1), to keep continuous records. If continuous records are required, the owner or operator shall specify in the monitoring plan whether the provisions of paragraphs (c)(6)(i) and (c)(6)(ii) of this section apply.

(iv) If the owner or operator has chosen to use the alternative recordkeeping requirements of §63.998(b)(5), and has not notified the Administrator in the Notification of Compliance Status that the alternative recordkeeping provisions are being implemented as specified in paragraph (b)(5) of this section, the owner or operator shall notify the Administrator in the Periodic Report submitted immediately preceding implementation of the alternative. The notifications specified in §63.998(b)(5)(ii) shall be included in the next Periodic Report following the identified event.

(7) As specified in §63.997(c)(3), if an owner or operator at a facility not required to obtain a title V permit elects at a later date to replace an existing control or recovery device with a different control or recovery device, then the Administrator shall be notified by the owner or operator before implementing the change. This notification may be included in the facility's periodic reporting.

(d) *Requests for approval of monitoring alternatives* —(1) *Alternatives to the continuous operating parameter monitoring and recordkeeping provisions.* Requests for approval to use alternatives to continuous operating parameter monitoring and recordkeeping provisions, as provided for in §63.996(d)(1), shall be submitted as specified in a referencing subpart, and the referencing subpart will govern the review and approval of such requests. The information specified in paragraphs (d)(1)(i) and (ii) of this section shall be included.

(i) A description of the proposed alternative system; and

(ii) Information justifying the owner or operator's request for an alternative method, such as the technical or economic infeasibility, or the impracticality, of the regulated source using the required method.

(2) *Monitoring a different parameter than those listed.* Requests for approval to monitor a different parameter than those established in §63.996(c)(6) of this section or to set unique monitoring parameters, as provided for in §63.996(d)(2), shall be submitted as specified as specified in a referencing subpart, and the referencing subpart will govern the review and approval of such requests. The information specified in paragraphs (d)(2)(i) through (iii) of this section shall be included in the request.

(i) A description of the parameter(s) to be monitored to ensure the control technology or pollution prevention measure is operated in conformance with its design and achieves the specified emission limit, percent reduction, or nominal efficiency, and an explanation of the criteria used to select the parameter(s);

(ii) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device, the schedule for this demonstration, and a statement that the owner or operator will establish a range for the monitored parameter(s) as part of the Notification of Compliance Status if required under a referencing subpart, unless this information has already been submitted; and

(iii) The frequency and content of monitoring, recording, and reporting, if monitoring and recording is not continuous, or if reports of daily average values when the monitored parameter value is outside the established range will not be included in periodic reports under paragraph (c) of this

section. The rationale for the proposed monitoring, recording, and reporting system shall be included.

[64 FR 34866, June 29, 1999, as amended at 64 FR 63705, Nov. 22, 1999]

Indiana Department of Environmental Management
Office of Air Quality

Attachment F

Title 40: Protection of Environment
Subpart UU—National Emission Standards for Equipment Leaks—Control Level 2 Standards

Source: 64 FR 34899, June 29, 1999, unless otherwise noted.

§ 63.1019 Applicability.

(a) The provisions of this subpart apply to the control of air emissions from equipment leaks for which another subpart references the use of this subpart for such air emission control. These air emission standards for equipment leaks are placed here for administrative convenience and only apply to those owners and operators of facilities subject to a referencing subpart. The provisions of 40 CFR part 63, subpart A (General Provisions) do not apply to this subpart except as noted in the referencing subpart.

(b) *Equipment subject to this subpart.* The provisions of this subpart and the referencing subpart apply to equipment that contains or contacts regulated material. This subpart applies to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, and closed vent systems and control devices used to meet the requirements of this subpart.

(c) *Equipment in vacuum service.* Equipment in vacuum service is excluded from the requirements of this subpart.

(d) *Equipment in service less than 300 hours per calendar year.* Equipment intended to be in regulated material service less than 300 hours per calendar year is excluded from the requirements of §§63.1025 through 63.1034 and §63.1036 if it is identified as required in §63.1022(b)(5).

(e) *Lines and equipment not containing process fluids.* Lines and equipment not containing process fluids are not subject to the provisions of this subpart. Utilities, and other non-process lines, such as heating and cooling systems that do not combine their materials with those in the processes they serve, are not considered to be part of a process unit or affected facility.

(f) *Implementation and enforcement.* This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority such as the applicable State, local, or tribal agency. If the EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. Contact the applicable EPA Regional Office to find out if this subpart is delegated to a State, local, or tribal agency.

(1) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under section 40 CFR part 63, subpart E, the authorities contained in paragraphs (f)(i) through (v) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(i) Approval of alternatives to the nonopacity emissions standards in §§63.1022 through 62.1034, under §63.6(g), and the standards for quality improvement programs in §63.1035. Where these

standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart.

(ii) [Reserved]

(iii) Approval of major changes to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(iv) Approval of major changes to monitoring under §63.8(f) and as defined in §63.90.

(v) Approval of major changes to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

[64 FR 34899, June 29, 1999, as amended at 67 FR 46279, July 12, 2002]

§ 63.1020 Definitions.

All terms used in this part shall have the meaning given them in the Act and in this section.

Batch process means a process in which the equipment is fed intermittently or discontinuously. Processing then occurs in this equipment after which the equipment is generally emptied. Examples of industries that use batch processes include pharmaceutical production and pesticide production.

Batch product-process equipment train means the collection of equipment (e.g., connectors, reactors, valves, pumps, etc.) configured to produce a specific product or intermediate by a batch process.

Car-seal means a seal that is placed on a device that is used to change the position of a valve (e.g., from opened to closed) in such a way that the position of the valve cannot be changed without breaking the seal.

Closed-loop system means an enclosed system that returns process fluid to the process and is not vented directly to the atmosphere.

Closed-purge system means a system or combination of systems and portable containers to capture purged liquids. Containers must be covered or closed when not being filled or emptied.

Closed-vent system means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow inducing devices that transport gas or vapor from an emission point to a control device.

Combustion device means an individual unit of equipment, such as a flare, incinerator, process heater, or boiler, used for the combustion of organic emissions.

Connector means flanged, screwed, or other joined fittings used to connect two pipelines or a pipeline and a piece of equipment. A common connector is a flange. Joined fittings welded completely around the circumference of the interface are not considered connectors for the purpose of this regulation. For the purpose of reporting and recordkeeping, connector means joined fittings that are not inaccessible, ceramic, or ceramic-lined (e.g., porcelain, glass, or glass-lined) as described in §63.1027(e)(2).

Continuous parameter monitoring system (CPMS) means the total equipment that may be required to meet the data acquisition and availability requirements of this part, used to sample, condition (if applicable), analyze, and provide a record of process or control system parameters.

Control device means any combustion device, recovery device, recapture device, or any combination of these devices used to comply with this part. Such equipment or devices include, but are not limited to, absorbers, carbon adsorbers, condensers, incinerators, flares, boilers, and process heaters. Primary condensers on steam strippers or fuel gas systems are not considered control devices.

Distance piece means an open or enclosed casing through which the piston rod travels, separating the compressor cylinder from the crankcase.

Double block and bleed system means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

Equipment means each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, and instrumentation system in regulated material service; and any control devices or systems used to comply with this subpart.

First attempt at repair, for the purposes of this subpart, means to take action for the purpose of stopping or reducing leakage of organic material to the atmosphere, followed by monitoring as specified in §§63.1023(b) and (c) of this subpart in to verify whether the leak is repaired, unless the owner or operator determines by other means that the leak is not repaired.

Fuel gas means gases that are combusted to derive useful work or heat.

Fuel gas system means the offsite and onsite piping and flow and pressure control system that gathers gaseous stream(s) generated by onsite operations, may blend them with other sources of gas, and transports the gaseous stream for use a fuel gas in combustion equipment, such as furnaces and gas turbines, either singly or in combination.

In food and medical service means that a piece of equipment in regulated material service contacts a process stream used to manufacture a Food and Drug Administration regulated product where leakage of a barrier fluid into the process stream would cause any of the following:

(1) A dilution of product quality so that the product would not meet written specifications,

(2) An exothermic reaction which is a safety hazard,

(3) The intended reaction to be slowed down or stopped, or

(4) An undesired side reaction to occur.

In gas and vapor service means that a piece of equipment in regulated material service contains a gas or vapor at operating conditions.

In heavy liquid service means that a piece of equipment in regulated material service is not in gas and vapor service or in light liquid service.

In light liquid service means that a piece of equipment in regulated material service contains a liquid that meets the following conditions:

(1) The vapor pressure of one or more of the organic compounds is greater than 0.3 kilopascals at 20°C,

(2) The total concentration of the pure organic compounds constituents having a vapor pressure greater than 0.3 kilopascals at 20°C is equal to or greater than 20 percent by weight of the total process stream, and

(3) The fluid is a liquid at operating conditions.

(Note to definition of “in light liquid service”: Vapor pressures may be determined by standard reference texts or ASTM D–2879.)

In liquid service means that a piece of equipment in regulated material service is not in gas and vapor service.

In organic hazardous air pollutant or in organic HAP service means that piece of equipment either contains or contracts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP's as determined according to the provisions of §63.180(d) of subpart H. The provisions of §63.180(d) of subpart H also specify how to determine that a piece of equipment is not in organic HAP service.

In regulated material service means, for the purposes of this subpart, equipment which meets the definition of “in VOC service,” “in VHAP service,” “in organic hazardous air pollutant service,” or “in” other chemicals or groups of chemicals “service” as defined in the referencing subpart.

In-situ sampling systems means nonextractive samplers or in-line samplers.

In vacuum service means that equipment is operating at an internal pressure which is at least 5 kilopascals below ambient pressure.

Initial startup means for new sources, the first time the source begins production. For additions or changes not defined as a new source by this subpart, initial startup means the first time additional or changed equipment is put into operation. Initial startup does not include operation solely for testing of equipment. Initial startup does not include subsequent startup of process units following malfunction or process unit shutdowns. Except for equipment leaks, initial startup also does not include subsequent startups (of process units following changes in product for flexible operation units or following recharging of equipment in batch unit operations).

Instrumentation system means a group of equipment components used to condition and convey a sample of the process fluid to analyzers and instruments for the purpose of determining process operating conditions (e.g., composition, pressure, flow, etc.). Valves and connectors are the predominant type of equipment used in instrumentation systems; however, other types of equipment may also be included in these systems. Only valves nominally 1.27 centimeters (0.5 inches) and smaller, and connectors nominally 1.91 centimeters (0.75 inches) and smaller in diameter are considered instrumentation systems for the purposes of this subpart. Valves greater than nominally 1.27 centimeters (0.5 inches) and connectors greater than nominally 1.91 centimeters (0.75 inches) associated with instrumentation systems are not considered part of instrumentation systems and must be monitored individually.

Liquids dripping means any visible leakage from the seal including dripping, spraying, misting, clouding, and ice formation. Indications of liquids dripping include puddling or new stains that are indicative of an existing evaporated drip.

Nonrepairable means that it is technically infeasible to repair a piece of equipment from which a leak has been detected without a process unit or affected facility shutdown.

Open-ended valve or line means any valve, except relief valves, having one side of the valve seat in contact with process fluid and one side open to atmosphere, either directly or through open piping.

Organic monitoring device means a unit of equipment used to indicate the concentration level of organic compounds based on a detection principle such as infra-red, photoionization, or thermal conductivity.

Polymerizing monomer means a compound which may form polymer buildup in pump mechanical seals resulting in rapid mechanical seal failure.

Pressure release means the emission of materials resulting from the system pressure being greater than the set pressure of the relief device. This release can be one release or a series of releases over a short time period due to a malfunction in the process.

Pressure relief device or valve means a safety device used to prevent operating pressures from exceeding the maximum allowable working pressure of the process equipment. A common pressure relief device is a spring-loaded pressure relief valve. Devices that are actuated either by a pressure of less than or equal to 2.5 pounds per square inch gauge or by a vacuum are not pressure relief devices.

Process unit means the equipment specified in the definitions of process unit in the applicable referencing subpart. If the referencing subpart does not define process unit, then for the purposes of this part, process unit means the equipment assembled and connected by pipes or ducts to process raw materials and to manufacture an intended product.

Process unit shutdown means a work practice or operational procedure that stops production from a process unit, or part of a process unit during which it is technically feasible to clear process material from a process unit, or part of a process unit, consistent with safety constraints and during which repairs can be affected. The following are not considered process unit shutdowns:

(1) An unscheduled work practice or operations procedure that stops production from a process unit, or part of a process unit, for less than 24 hours.

(2) An unscheduled work practice or operations procedure that would stop production from a process unit, or part of a process unit, for a shorter period of time than would be required to clear the process unit, or part of the process unit, of materials and start up the unit, and would result in greater emissions than delay of repair of leaking components until the next scheduled process unit shutdown.

(3) The use of spare equipment and technically feasible bypassing of equipment without stopping production.

Referencing subpart means the subpart that refers an owner or operator to this subpart.

Regulated material, for purposes of this part, refers to gas from volatile organic liquids (VOL), volatile organic compounds (VOC), hazardous air pollutants (HAP), or other chemicals or groups of chemicals that are regulated by the referencing subpart.

Regulated source for the purposes of this part, means the stationary source, the group of stationary sources, or the portion of a stationary source that is regulated by a referencing subpart.

Relief device or valve means a valve used only to release an unplanned, nonroutine discharge. A relief valve discharge can result from an operator error, a malfunction such as a power failure or

equipment failure, or other unexpected cause that requires immediate venting of gas from process equipment in order to avoid safety hazards or equipment damage.

Repaired, for the purposes of this subpart, means that equipment is adjusted, or otherwise altered, to eliminate a leak as defined in the applicable sections of this subpart and unless otherwise specified in applicable provisions of this subpart, is monitored as specified in §§63.1023(b) and (c) to verify that emissions from the equipment are below the applicable leak definition.

Routed to a process or route to a process means the emissions are conveyed to any enclosed portion of a process unit where the emissions are predominantly recycled and/or consumed in the same manner as a material that fulfills the same function in the process and/or transformed by chemical reaction into materials that are not regulated materials and/or incorporated into a product; and/or recovered.

Sampling connection system means an assembly of equipment within a process unit or affected facility used during periods of representative operation to take samples of the process fluid. Equipment used to take nonroutine grab samples is not considered a sampling connection system.

Screwed (threaded) connector means a threaded pipe fitting where the threads are cut on the pipe wall and the fitting requires only two pieces to make the connection (i.e., the pipe and the fitting).

Sensor means a device that measures a physical quantity or the change in a physical quantity, such as temperature, pressure, flow rate, pH, or liquid level.

Set pressure means for the purposes of this subpart, the pressure at which a properly operating pressure relief device begins to open to relieve atypical process system operating pressure.

Start-up means the setting into operation of a piece of equipment or a control device that is subject to this subpart.

§ 63.1021 Alternative means of emission limitation.

(a) *Performance standard exemption.* The provisions of paragraph (b) of this section do not apply to the performance standards of §63.1030(b) for pressure relief devices or §63.1031(f) for compressors operating under the alternative compressor standard.

(b) *Requests by owners or operators.* An owner or operator may request a determination of alternative means of emission limitation to the requirements of §§63.1025 through 63.1034 as provided in paragraph (d) of this section. If the Administrator makes a determination that a means of emission limitation is a permissible alternative, the owner or operator shall either comply with the alternative or comply with the requirements of §§63.1025 through 63.1034.

(c) *Requests by manufacturers of equipment.* (1) Manufacturers of equipment used to control equipment leaks of the regulated material may apply to the Administrator for permission for an alternative means of emission limitation that achieves a reduction in emissions of the regulated material achieved by the equipment, design, and operational requirements of this subpart.

(2) The Administrator will grant permission according to the provisions of paragraph (d) of this section.

(d) *Permission to use an alternative means of emission limitation.* Permission to use an alternative means of emission limitation shall be governed by the procedures in paragraphs (d)(1) through (d)(4) of this section.

(1) Where the standard is an equipment, design, or operational requirement, the requirements of paragraphs (d)(1)(i) through (d)(1)(iii) of this section apply.

(i) Each owner or operator applying for permission to use an alternative means of emission limitation shall be responsible for collecting and verifying emission performance test data for an alternative means of emission limitation.

(ii) The Administrator will compare test data for the means of emission limitation to test data for the equipment, design, and operational requirements.

(iii) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve at least the same emission reduction as the equipment, design, and operational requirements of this subpart.

(2) Where the standard is a work practice, the requirements of paragraphs (d)(2)(i) through (d)(2)(vi) of this section apply.

(i) Each owner or operator applying for permission to use an alternative means of emission limitation shall be responsible for collecting and verifying test data for the alternative.

(ii) For each kind of equipment for which permission is requested, the emission reduction achieved by the required work practices shall be demonstrated for a minimum period of 12 months.

(iii) For each kind of equipment for which permission is requested, the emission reduction achieved by the alternative means of emission limitation shall be demonstrated.

(iv) Each owner or operator applying for such permission shall commit, in writing, for each kind of equipment to work practices that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practices.

(v) The Administrator will compare the demonstrated emission reduction for the alternative means of emission limitation to the demonstrated emission reduction for the required work practices and will consider the commitment in paragraph (d)(2)(iv) of this section.

(vi) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same or greater emission reduction as the required work practices of this subpart.

(3) An owner or operator may offer a unique approach to demonstrate the alternative means of emission limitation.

(4) If, in the judgement of the Administrator, an alternative means of emission limitation will be approved, the Administrator will publish a notice of the determination in theFederal Registerusing the procedures specified in the referencing subpart.

§ 63.1022 Equipment identification.

(a) *General equipment identification.* Equipment subject to this subpart shall be identified. Identification of the equipment does not require physical tagging of the equipment. For example,

the equipment may be identified on a plant site plan, in log entries, by designation of process unit or affected facility boundaries by some form of weatherproof identification, or by other appropriate methods.

(b) *Additional equipment identification.* In addition to the general identification required by paragraph (a) of this section, equipment subject to any of the provisions in §§63.1023 through 63.1034 shall be specifically identified as required in paragraphs (b)(1) through (b)(5) of this section, as applicable. This paragraph does not apply to an owner or operator of a batch product process who elects to pressure test the batch product process equipment train pursuant to §63.1036.

(1) *Connectors.* Except for inaccessible, ceramic, or ceramic-lined connectors meeting the provision of §63.1027(e)(2) and instrumentation systems identified pursuant to paragraph (b)(4) of this section, identify the connectors subject to the requirements of this subpart. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this subpart are identified as a group, and the number of connectors subject is indicated. With respect to connectors, the identification shall be complete no later than the completion of the initial survey required by paragraph (a) of this section.

(2) *Routed to a process or fuel gas system or equipped with a closed vent system and control device.* Identify the equipment that the owner or operator elects to route to a process or fuel gas system or equip with a closed vent system and control device, under the provisions of §63.1026(e)(3) (pumps in light liquid service), §63.1028(e)(3) (agitators), §63.1030(d) (pressure relief devices in gas and vapor service), §63.1031(e) (compressors), or §63.1037(a) (alternative means of emission limitation for enclosed-vented process units).

(3) *Pressure relief devices.* Identify the pressure relief devices equipped with rupture disks, under the provisions of §63.1030(e).

(4) *Instrumentation systems.* Identify instrumentation systems subject to the provisions of §63.1029 of this subpart. Individual components in an instrumentation system need not be identified.

(5) *Equipment in service less than 300 hours per calendar year.* The identity, either by list, location (area or group), or other method, of equipment in regulated material service less than 300 hours per calendar year within a process unit or affected facilities subject to the provisions of this subpart shall be recorded.

(c) *Special equipment designations: Equipment that is unsafe or difficult-to-monitor* —(1) *Designation and criteria for unsafe-to-monitor.* Valves meeting the provisions of §63.1025(e)(1), pumps meeting the provisions of §63.1026(e)(6), connectors meeting the provisions of §63.1027(e)(1), and agitators meeting the provisions of §63.1028(e)(7) may be designated unsafe-to-monitor if the owner or operator determines that monitoring personnel would be exposed to an immediate danger as a consequence of complying with the monitoring requirements of this subpart. Examples of unsafe-to-monitor equipment include, but is not limited to, equipment under extreme pressure or heat.

(2) *Designation and criteria for difficult-to-monitor.* Valves meeting the provisions of §63.1025(e)(2) may be designated difficult-to-monitor if the provisions of paragraph (c)(2)(i) apply. Agitators meeting the provisions of §63.1028(e)(5) may be designated difficult-to-monitor if the provisions of paragraph (c)(2)(ii) apply.

(i) *Valves.* (A) The owner or operator of the valve determines that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters (7 feet) above a support surface or it is not accessible in a safe manner when it is in regulated material service; and

(B) The process unit or affected facility within which the valve is located is an existing source, or the owner or operator designates less than 3 percent of the total number of valves in a new source as difficult-to-monitor.

(ii) *Agitators.* The owner or operator determines that the agitator cannot be monitored without elevating the monitoring personnel more than 2 meters (7 feet) above a support surface or it is not accessible in a safe manner when it is in regulated material service.

(3) *Identification of unsafe or difficult-to-monitor equipment.* The owner or operator shall record the identity of equipment designated as unsafe-to-monitor according to the provisions of paragraph (c)(1) of this section and the planned schedule for monitoring this equipment. The owner or operator shall record the identity of equipment designated as difficult-to-monitor according to the provisions of paragraph (c)(2) of this section, the planned schedule for monitoring this equipment, and an explanation why the equipment is unsafe or difficult-to-monitor. This record must be kept at the plant and be available for review by an inspector.

(4) *Written plan requirements.* (i) The owner or operator of equipment designated as unsafe-to-monitor according to the provisions of paragraph (c)(1) of this section shall have a written plan that requires monitoring of the equipment as frequently as practical during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in §63.1024 if a leak is detected.

(ii) The owner or operator of equipment designated as difficult-to-monitor according to the provisions of paragraph (c)(2) of this section shall have a written plan that requires monitoring of the equipment at least once per calendar year and repair of the equipment according to the procedures in §63.1024 if a leak is detected.

(d) *Special equipment designations: Equipment that is unsafe-to-repair* —(1) *Designation and criteria.* Connectors subject to the provisions of §63.1024(e) may be designated unsafe-to-repair if the owner or operator determines that repair personnel would be exposed to an immediate danger as a consequence of complying with the repair requirements of this subpart, and if the connector will be repaired before the end of the next process unit or affected facility shutdown as specified in §63.1024(e)(2).

(2) *Identification of equipment.* The identity of connectors designated as unsafe-to-repair and an explanation why the connector is unsafe-to-repair shall be recorded.

(e) *Special equipment designations: Compressors operating with an instrument reading of less than 500 parts per million above background.* Identify the compressors that the owner or operator elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of §63.1031(f).

(f) *Special equipment designations: Equipment in heavy liquid service.* The owner or operator of equipment in heavy liquid service shall comply with the requirements of either paragraph (f)(1) or (f)(2) of this section, as provided in paragraph (f)(3) of this section.

(1) Retain information, data, and analyses used to determine that a piece of equipment is in heavy liquid service.

(2) When requested by the Administrator, demonstrate that the piece of equipment or process is in heavy liquid service.

(3) A determination or demonstration that a piece of equipment or process is in heavy liquid service shall include an analysis or demonstration that the process fluids do not meet the definition of “in light liquid service.” Examples of information that could document this include, but

are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.

§ 63.1023 Instrument and sensory monitoring for leaks.

(a) *Monitoring for leaks.* The owner or operator of a regulated source subject to this subpart shall monitor regulated equipment as specified in paragraph (a)(1) of this section for instrument monitoring and paragraph (a)(2) of this section for sensory monitoring.

(1) *Instrument monitoring for leaks.* (i) Valves in gas and vapor service and in light liquid service shall be monitored pursuant to §63.1025(b).

(ii) Pumps in light liquid service shall be monitored pursuant to §63.1026(b).

(iii) Connectors in gas and vapor service and in light liquid service shall be monitored pursuant to §63.1027(b).

(iv) Agitators in gas and vapor service and in light liquid service shall be monitored pursuant to §63.1028(c).

(v) Pressure relief devices in gas and vapor service shall be monitored pursuant to §63.1030(c).

(vi) Compressors designated to operate with an instrument reading less than 500 parts per million above background, as described in §63.1022(e), shall be monitored pursuant to §63.1031(f).

(2) *Sensory monitoring for leaks.* (i) Pumps in light liquid service shall be observed pursuant to §§63.1026(b)(4) and (e)(1)(v).

(ii) [Reserved]

(iii) Agitators in gas and vapor service and in light liquid service shall be observed pursuant to §63.1028(c)(3) or (e)(1)(iv).

(iv) [Reserved]

(b) *Instrument monitoring methods.* Instrument monitoring, as required under this subpart, shall comply with the requirements specified in paragraphs (b)(1) through (b)(6) of this section.

(1) *Monitoring method.* Monitoring shall comply with Method 21 of 40 CFR part 60, appendix A, except as otherwise provided in this section.

(2) *Detection instrument performance criteria.* (i) Except as provided for in paragraph (b)(2)(ii) of this section, the detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2, paragraph (a) of Method 21 shall be for the representative composition of the process fluid not each individual VOC in the stream. For process streams that contain nitrogen, air, water or other inerts that are not HAP or VOC, the representative stream response factor shall be determined on an inert-free basis. The response factor may be determined at any concentration for which monitoring for leaks will be conducted.

(ii) If there is no instrument commercially available that will meet the performance criteria specified in paragraph (b)(2)(i) of this section, the instrument readings may be adjusted by multiplying by the representative response factor of the process fluid, calculated on an inert-free basis as described in paragraph (b)(2)(i) of this section.

(3) *Detection instrument calibration procedure.* The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.

(4) *Detection instrument calibration gas.* Calibration gases shall be zero air (less than 10 parts per million of hydrocarbon in air); and the gases specified in paragraph (b)(4)(i) of this section except as provided in paragraph (b)(4)(ii) of this section.

(i) Mixtures of methane in air at a concentration no more than 2,000 parts per million greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 parts per million above the concentration specified as a leak, and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 parts per million. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.

(ii) A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified in paragraph (b)(2)(i) of this section. In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air.

(5) *Monitoring performance.* Monitoring shall be performed when the equipment is in regulated material service or is in use with any other detectable material.

(6) *Monitoring data.* Monitoring data obtained prior to the regulated source becoming subject to the referencing subpart that do not meet the criteria specified in paragraphs (b)(1) through (b)(5) of this section may still be used to qualify initially for less frequent monitoring under the provisions in §63.1025(a)(2), (b)(3) or (b)(4) for valves or §63.1027(b)(3) for connectors provided the departures from the criteria or from the specified monitoring frequency of §63.1025(b)(3) or (b)(4) or §63.1027(b)(3) are minor and do not significantly affect the quality of the data. Examples of minor departures are monitoring at a slightly different frequency (such as every 6 weeks instead of monthly or quarterly), following the performance criteria of section 3.1.2, paragraph (a) of Method 21 of appendix A of 40 CFR part 60 instead of paragraph (b)(2) of this section, or monitoring using a different leak definition if the data would indicate the presence or absence of a leak at the concentration specified in this subpart. Failure to use a calibrated instrument is not considered a minor departure.

(c) *Instrument monitoring using background adjustments.* The owner or operator may elect to adjust or not to adjust the instrument readings for background. If an owner or operator elects not to adjust instrument readings for background, the owner or operator shall monitor the equipment according to the procedures specified in paragraphs (b)(1) through (b)(5) of this section. In such cases, all instrument readings shall be compared directly to the applicable leak definition for the monitored equipment to determine whether there is a leak or to determine compliance with §63.1030(b) (pressure relief devices) or §63.1031(f) (alternative compressor standard). If an owner or operator elects to adjust instrument readings for background, the owner or operator shall monitor the equipment according to the procedures specified in paragraphs (c)(1) through (c)(4) of this section.

(1) The requirements of paragraphs (b)(1) through (b)(5) of this section shall apply.

(2) The background level shall be determined, using the procedures in Method 21 of 40 CFR part 60, appendix A.

(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21 of 40 CFR part 60, appendix A.

(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared to the applicable leak definition for the monitored equipment to determine whether there is a leak or to determine compliance with §63.1030(b) (pressure relief devices) or §63.1031(f) (alternative compressor standard).

(d) *Sensory monitoring methods.* Sensory monitoring consists of visual, audible, olfactory, or any other detection method used to determine a potential leak to the atmosphere.

(e) *Leaking equipment identification and records.* (1) When each leak is detected pursuant to the monitoring specified in paragraph (a) of this section, a weatherproof and readily visible identification, shall be attached to the leaking equipment.

(2) When each leak is detected, the information specified in §63.1024(f) shall be recorded and kept pursuant to the referencing subpart, except for the information for connectors complying with the 8 year monitoring period allowed under §63.1027(b)(3)(iii) shall be kept 5 years beyond the date of its last use.

§ 63.1024 Leak repair.

(a) *Leak repair schedule.* The owner or operator shall repair each leak detected as soon as practical, but not later than 15 calendar days after it is detected, except as provided in paragraphs (d) and (e) of this section. A first attempt at repair as defined in this subpart shall be made no later than 5 calendar days after the leak is detected. First attempt at repair for pumps includes, but is not limited to, tightening the packing gland nuts and/or ensuring that the seal flush is operating at design pressure and temperature. First attempt at repair for valves includes, but is not limited to, tightening the bonnet bolts, and/or replacing the bonnet bolts, and/or tightening the packing gland nuts, and/or injecting lubricant into the lubricated packing.

(b) [Reserved]

(c) *Leak identification removal* —(1) *Valves and connectors in gas/vapor and light liquid service.* The leak identification on a valve in gas/vapor or light liquid service may be removed after it has been monitored as specified in §63.1025(d)(2), and no leak has been detected during that monitoring. The leak identification on a connector in gas/vapor or light liquid service may be removed after it has been monitored as specified in §63.1027(b)(3)(iv) and no leak has been detected during that monitoring.

(2) *Other equipment.* The identification that has been placed, pursuant to §63.1023(e)(1), on equipment determined to have a leak, except for a valve or for a connector in gas/vapor or light liquid service that is subject to the provisions of §63.1027(b)(3)(iv), may be removed after it is repaired.

(d) *Delay of repair.* Delay of repair is allowed for any of the conditions specified in paragraphs (d)(1) through (d)(5) of this section. The owner or operator shall maintain a record of the facts that explain any delay of repairs and, where appropriate, why the repair was technically infeasible without a process unit shutdown.

(1) Delay of repair of equipment for which leaks have been detected is allowed if repair within 15 days after a leak is detected is technically infeasible without a process unit or affected facility shutdown. Repair of this equipment shall occur as soon as practical, but no later than the end of the next process unit or affected facility shutdown, except as provided in paragraph (d)(5) of this section.

(2) Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in regulated material service.

(3) Delay of repair for valves, connectors, and agitators is also allowed if the provisions of paragraphs (d)(3)(i) and (d)(3)(ii) of this section are met.

(i) The owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair, and

(ii) When repair procedures are effected, the purged material is collected and destroyed, collected and routed to a fuel gas system or process, or recovered in a control device complying with either §63.1034 or §63.1021(b) of this part.

(4) Delay of repair for pumps is also allowed if the provisions of paragraphs (d)(4)(i) and (d)(4)(ii) of this section are met.

(i) Repair requires replacing the existing seal design with a new system that the owner or operator has determined under the provisions of §63.1035(d) will provide better performance or one of the specifications of paragraphs (d)(4)(i)(A) through (d)(4)(i)(C) of this section are met.

(A) A dual mechanical seal system that meets the requirements of §63.1026(e)(1) will be installed;

(B) A pump that meets the requirements of §63.1026(e)(2) will be installed; or

(C) A system that routes emissions to a process or a fuel gas system or a closed vent system and control device that meets the requirements of §63.1026(e)(3) will be installed; and

(ii) Repair is completed as soon as practical, but not later than 6 months after the leak was detected.

(5) Delay of repair beyond a process unit or affected facility shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit or affected facility shutdown, and valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit or affected facility shutdown will not be allowed unless the third process unit or affected facility shutdown occurs sooner than 6 months after the first process unit or affected facility shutdown.

(e) *Unsafe-to-repair—connectors.* Any connector that is designated, as described in §63.1022(d), as an unsafe-to-repair connector is exempt from the requirements of §63.1027(d), and paragraph (a) of this section.

(f) *Leak repair records.* For each leak detected, the information specified in paragraphs (f)(1) through (f)(5) of this section shall be recorded and maintained pursuant to the referencing subpart.

(1) The date of first attempt to repair the leak.

(2) The date of successful repair of the leak.

(3) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A at the time the leak is successfully repaired or determined to be nonrepairable.

(4) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak as specified in paragraphs (f)(4)(i) and (f)(4)(ii) of this section.

(i) The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures may be included as part of the startup, shutdown, and malfunction plan, as required by the referencing subpart for the source, or may be part of a separate document that is maintained at the plant site. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(ii) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

(5) Dates of process unit or affected facility shutdowns that occur while the equipment is unrepaired.

§ 63.1025 Valves in gas and vapor service and in light liquid service standards.

(a) *Compliance schedule.* (1) The owner or operator shall comply with this section no later than the compliance dates specified in the referencing subpart.

(2) The use of monitoring data generated before the regulated source became subject to the referencing subpart to qualify initially for less frequent monitoring is governed by the provisions of §63.1023(b)(6).

(b) *Leak detection.* Unless otherwise specified in §63.1021(b) or paragraph (e) of this section, or the referencing subpart, the owner or operator shall monitor all valves at the intervals specified in paragraphs (b)(3) and/or (b)(4) of this section and shall comply with all other provisions of this section.

(1) *Monitoring method.* The valves shall be monitored to detect leaks by the method specified in §63.1023(b) and, as applicable, §63.1023(c).

(2) *Instrument reading that defines a leak.* The instrument reading that defines a leak is 500 parts per million or greater.

(3) *Monitoring frequency.* The owner or operator shall monitor valves for leaks at the intervals specified in paragraphs (b)(3)(i) through (b)(3)(v) of this section and shall keep the record specified in paragraph (b)(3)(vi) of this section.

(i) If at least the greater of 2 valves or 2 percent of the valves in a process unit leak, as calculated according to paragraph (c) of this section, the owner or operator shall monitor each valve once per month.

(ii) At process units with less than the greater of 2 leaking valves or 2 percent leaking valves, the owner or operator shall monitor each valve once each quarter, except as provided in paragraphs (b)(3)(iii) through (b)(3)(v) of this section. Monitoring data generated before the regulated source became subject to the referencing subpart and meeting the criteria of either §63.1023(b)(1) through (b)(5), or §63.1023(b)(6), may be used to qualify initially for less frequent monitoring under paragraphs (b)(3)(iii) through (b)(3)(v) of this section.

(iii) At process units with less than 1 percent leaking valves, the owner or operator may elect to monitor each valve once every two quarters

(iv) At process units with less than 0.5 percent leaking valves, the owner or operator may elect to monitor each valve once every four quarters.

(v) At process units with less than 0.25 percent leaking valves, the owner or operator may elect to monitor each valve once every 2 years.

(vi) The owner or operator shall keep a record of the monitoring schedule for each process unit.

(4) *Valve subgrouping.* For a process unit or a group of process units to which this subpart applies, an owner or operator may choose to subdivide the valves in the applicable process unit or group of process units and apply the provisions of paragraph (b)(3) of this section to each subgroup. If the owner or operator elects to subdivide the valves in the applicable process unit or group of process units, then the provisions of paragraphs (b)(4)(i) through (b)(4)(viii) of this section apply.

(i) The overall performance of total valves in the applicable process unit or group of process units to be subdivided shall be less than 2 percent leaking valves, as detected according to paragraphs (b)(1) and (b)(2) of this section and as calculated according to paragraphs (c)(1)(ii) and (c)(2) of this section.

(ii) The initial assignment or subsequent reassignment of valves to subgroups shall be governed by the provisions of paragraphs (b)(4)(ii)(A) through (b)(4)(ii)(C) of this section.

(A) The owner or operator shall determine which valves are assigned to each subgroup. Valves with less than one year of monitoring data or valves not monitored within the last twelve months must be placed initially into the most frequently monitored subgroup until at least one year of monitoring data have been obtained.

(B) Any valve or group of valves can be reassigned from a less frequently monitored subgroup to a more frequently monitored subgroup provided that the valves to be reassigned were monitored during the most recent monitoring period for the less frequently monitored subgroup. The monitoring results must be included with that less frequently monitored subgroup's associated percent leaking valves calculation for that monitoring event.

(C) Any valve or group of valves can be reassigned from a more frequently monitored subgroup to a less frequently monitored subgroup provided that the valves to be reassigned have not leaked for the period of the less frequently monitored subgroup (e.g., for the last 12 months, if the valve or group of valves is to be reassigned to a subgroup being monitored annually). Nonrepairable valves may not be reassigned to a less frequently monitored subgroup.

(iii) The owner or operator shall determine every 6 months if the overall performance of total valves in the applicable process unit or group of process units is less than 2 percent leaking valves and so indicate the performance in the next Periodic Report. If the overall performance of total valves in the applicable process unit or group of process units is 2 percent leaking valves or greater, the owner or operator shall no longer subgroup and shall revert to the program required in paragraphs (b)(1) through (b)(3) of this section for that applicable process unit or group of process units. An owner or operator can again elect to comply with the valve subgrouping procedures of paragraph (b)(4) of this section if future overall performance of total valves in the process unit or group of process units is again less than 2 percent. The overall performance of total valves in the applicable process unit or group of process units shall be calculated as a weighted average of the percent leaking valves of each subgroup according to Equation number 1:

$$\%V_{LO} = \frac{\sum_{i=1}^{n}\left(\%V_{Li} \times V_i\right)}{\sum_{i=1}^{n} V_i} \qquad \text{[Eq. 1]}$$

where:

$\%V_{LO}$= Overall performance of total valves in the applicable process unit or group of process units

$\%V_{Li}$= Percent leaking valves in subgroup i, most recent value calculated according to the procedures in paragraphs (c)(1)(ii) and (c)(2) of this section.

V_i= Number of valves in subgroup i.

n = Number of subgroups.

(iv) The owner or operator shall maintain records specified in paragraphs (b)(4)(iv)(A) through (b)(4)(iv)(D) of this section.

(A) Which valves are assigned to each subgroup,

(B) Monitoring results and calculations made for each subgroup for each monitoring period,

(C) Which valves are reassigned, the last monitoring result prior to reassignment, and when they were reassigned, and

(D) The results of the semiannual overall performance calculation required in paragraph (b)(4)(iii) of this section.

(v) The owner or operator shall notify the Administrator no later than 30 days prior to the beginning of the next monitoring period of the decision to subgroup valves. The notification shall identify the participating process units and the number of valves assigned to each subgroup, if applicable, and may be included in the next Periodic Report.

(vi) The owner or operator shall submit in the periodic reports the information specified in paragraphs (b)(4)(vi)(A) and (b)(4)(vi)(B).

(A) Total number of valves in each subgroup, and

(B) Results of the semiannual overall performance calculation required by paragraph (b)(4)(iii) of this section.

(vii) To determine the monitoring frequency for each subgroup, the calculation procedures of paragraph (c)(2) of this section shall be used.

(viii) Except for the overall performance calculations required by paragraphs (b)(4)(i) and (iii) of this section, each subgroup shall be treated as if it were a process unit for the purposes of applying the provisions of this section.

(c) *Percent leaking valves calculation* —(1) *Calculation basis and procedures.* (i) The owner or operator shall decide no later than the compliance date of this part or upon revision of an operating permit whether to calculate percent leaking valves on a process unit or group of process units basis. Once the owner or operator has decided, all subsequent percentage calculations shall be made on the same basis and this shall be the basis used for comparison with the subgrouping criteria specified in paragraph (b)(4)(i) of this section.

(ii) The percent leaking valves for each monitoring period for each process unit or valve subgroup, as provided in paragraph (b)(4) of this section, shall be calculated using the following equation:

$$\%V_L = (V_L / V_T) \times 100 \qquad \text{[Eq. 2]}$$

where:

$\%V_L$= Percent leaking valves.

V_L= Number of valves found leaking, excluding nonrepairable valves, as provided in paragraph (c)(3) of this section, and including those valves found leaking pursuant to paragraphs (d)(2)(iii)(A) and (d)(2)(iii)(B) of this section.

V_T= The sum of the total number of valves monitored.

(2) *Calculation for monitoring frequency.* When determining monitoring frequency for each process unit or valve subgroup subject to monthly, quarterly, or semiannual monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last two monitoring periods. When determining monitoring frequency for each process unit or valve subgroup subject to annual or biennial (once every 2 years) monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last three monitoring periods.

(3) *Nonrepairable valves.* (i) Nonrepairable valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and nonrepairable and as required to comply with paragraph (c)(3)(ii) of this section. Otherwise, a number of nonrepairable valves (identified and included in the percent leaking valves calculation in a previous period) up to a maximum of 1 percent of the total number of valves in regulated material service at a process unit or affected facility may be excluded from calculation of percent leaking valves for subsequent monitoring periods.

(ii) If the number of nonrepairable valves exceeds 1 percent of the total number of valves in regulated material service at a process unit or affected facility, the number of nonrepairable valves exceeding 1 percent of the total number of valves in regulated material service shall be included in the calculation of percent leaking valves.

(d) *Leak repair.* (1) If a leak is determined pursuant to paragraph (b), (e)(1), or (e)(2) of this section, then the leak shall be repaired using the procedures in §63.1024, as applicable.

(2) After a leak has been repaired, the valve shall be monitored at least once within the first 3 months after its repair. The monitoring required by this paragraph is in addition to the monitoring required to satisfy the definition of repaired and first attempt at repair.

(i) The monitoring shall be conducted as specified in §63.1023(b) and (c) of this section, as appropriate, to determine whether the valve has resumed leaking.

(ii) Periodic monitoring required by paragraph (b) of this section may be used to satisfy the requirements of this paragraph, if the timing of the monitoring period coincides with the time specified in this paragraph. Alternatively, other monitoring may be performed to satisfy the requirements of this paragraph, regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time specified in this paragraph.

(iii) If a leak is detected by monitoring that is conducted pursuant to paragraph (d)(2) of this section, the owner or operator shall follow the provisions of paragraphs (d)(2)(iii)(A) and (d)(2)(iii)(B) of this section, to determine whether that valve must be counted as a leaking valve for purposes of paragraph (c)(1)(ii) of this section.

(A) If the owner or operator elected to use periodic monitoring required by paragraph (b) of this section to satisfy the requirements of paragraph (d)(2) of this section, then the valve shall be counted as a leaking valve.

(B) If the owner or operator elected to use other monitoring, prior to the periodic monitoring required by paragraph (b) of this section, to satisfy the requirements of paragraph (d)(2) of this section, then the valve shall be counted as a leaking valve unless it is repaired and shown by periodic monitoring not to be leaking.

(e) *Special provisions for valves* —(1) *Unsafe-to-monitor valves.* Any valve that is designated, as described in §63.1022(c)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraphs (b) and (d)(2) of this section and the owner or operator shall monitor the valve according to the written plan specified in §63.1022(c)(4).

(2) *Difficult-to-monitor valves.* Any valve that is designated, as described in §63.1022(c)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (b) of this section and the owner or operator shall monitor the valve according to the written plan specified in §63.1022(c)(4).

(3) *Fewer than 250 valves.* Any equipment located at a plant site with fewer than 250 valves in regulated material service is exempt from the requirements for monthly monitoring specified in paragraph (b)(3)(i) of this section. Instead, the owner or operator shall monitor each valve in regulated material service for leaks once each quarter, as provided in paragraphs (e)(1) and (e)(2) of this section.

§ 63.1026 Pumps in light liquid service standards.

(a) *Compliance schedule.* The owner or operator shall comply with this section no later than the compliance dates specified in the referencing subpart.

(b) *Leak detection.* Unless otherwise specified in §63.1021(b), §63.1036, §63.1037, or paragraph (e) of this section, the owner or operator shall monitor each pump to detect leaks and shall comply with all other provisions of this section.

(1) *Monitoring method and frequency.* The pumps shall be monitored monthly to detect leaks by the method specified in §63.1023(b) and, as applicable, §63.1023(c).

(2) *Instrument reading that defines a leak.* The instrument reading that defines a leak is specified in paragraphs (b)(2)(i) through (b)(2)(iii) of this section.

(i) 5,000 parts per million or greater for pumps handling polymerizing monomers;

(ii) 2,000 parts per million or greater for pumps in food/medical service; and

(iii) 1,000 parts per million or greater for all other pumps.

(3) *Leak repair exception.* For pumps to which a 1,000 parts per million leak definition applies, repair is not required unless an instrument reading of 2,000 parts per million or greater is detected.

(4) *Visual inspection.* Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. The owner or operator shall document that the inspection was conducted and the date of the inspection. If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the owner or operator shall follow the procedure specified in either paragraph (b)(4)(i) or (b)(4)(ii) of this section.

(i) The owner or operator shall monitor the pump as specified in §63.1023(b) and, as applicable, §63.1023(c). If the instrument reading indicates a leak as specified in paragraph (b)(2) of this section, a leak is detected and it shall be repaired using the procedures in §63.1024, except as specified in paragraph (b)(3) of this section; or

(ii) The owner or operator shall eliminate the visual indications of liquids dripping.

(c) *Percent leaking pumps calculation.* (1) The owner or operator shall decide no later than the compliance date of this part or upon revision of an operating permit whether to calculate percent leaking pumps on a process unit basis or group of process units basis. Once the owner or operator has decided, all subsequent percentage calculations shall be made on the same basis.

(2) If, when calculated on a 6-month rolling average, at least the greater of either 10 percent of the pumps in a process unit or three pumps in a process unit leak, the owner or operator shall implement a quality improvement program for pumps that complies with the requirements of §63.1035.

(3) The number of pumps at a process unit or affected facility shall be the sum of all the pumps in regulated material service, except that pumps found leaking in a continuous process unit or affected facility within 1 month after start-up of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only.

(4) Percent leaking pumps shall be determined by the following equation:

$$\%P_L = \left((P_L - P_S)/(P_T - P_S)\right) \times 100 \qquad [Eq.\ 3]$$

Where:

$\%P_L$= Percent leaking pumps

P_L= Number of pumps found leaking as determined through monthly monitoring as required in paragraph (b)(1) of this section. Do not include results from inspection of unsafe-to-monitor pumps pursuant to paragraph (e)(6) of this section.

P_S= Number of pumps leaking within 1 month of start-up during the current monitoring period.

P_T= Total pumps in regulated material service, including those meeting the criteria in paragraphs (e)(1), (e)(2), (e)(3), and (e)(6) of this section.

(d) *Leak repair.* If a leak is detected pursuant to paragraph (b) of this section, then the leak shall be repaired using the procedures in §63.1024, as applicable, unless otherwise specified in paragraph (b)(5) of this section for leaks identified by visual indications of liquids dripping.

(e) *Special provisions for pumps* —(1) *Dual mechanical seal pumps.* Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (b) of this section, provided the requirements specified in paragraphs (e)(1)(i) through (e)(1)(viii) of this section are met.

(i) 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. The owner or operator shall keep records at the plant of the design criteria and an explanation of the design criteria; and any changes to these criteria and the reasons for the changes. This record must be available for review by an inspector.

(ii) Each dual mechanical seal system shall meet the requirements specified in paragraph (e)(1)(ii)(A), (e)(1)(ii)(B), or (e)(1)(ii)(C) of this section.

(A) Each dual mechanical seal system is operated with the barrier fluid at a pressure that is at all times (except periods of startup, shutdown, or malfunction) greater than the pump stuffing box pressure; or

(B) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of either §63.1034 or §63.1021(b) of this part; or

(C) Equipped with a closed-loop system that purges the barrier fluid into a process stream.

(iii) The barrier fluid is not in light liquid service.

(iv) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(v) Each pump is checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. The owner or operator shall document that the inspection was conducted and the date of the inspection. If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the owner or operator shall follow the procedure specified in paragraphs (e)(1)(v)(A) or (e)(1)(v)(B) of this section prior to the next required inspection.

(A) The owner or operator shall monitor the pump as specified in §63.1023(b) and, as applicable, §63.1023 (c), to determine if there is a leak of regulated material in the barrier fluid. If an instrument reading of 1,000 parts per million or greater is measured, a leak is detected and it shall be repaired using the procedures in §63.1024; or

(B) The owner or operator shall eliminate the visual indications of liquids dripping.

(vi) If indications of liquids dripping from the pump seal exceed the criteria established in paragraph (e)(1)(i) of this section, or if based on the criteria established in paragraph (e)(1)(i) of this section the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.

(vii) Each sensor as described in paragraph (e)(1)(iv) of this section is observed daily or is equipped with an alarm unless the pump is located within the boundary of an unmanned plant site.

(viii) When a leak is detected pursuant to paragraph (e)(1)(vi) of this section, it shall be repaired as specified in §63.1024.

(2) *No external shaft.* Any pump that is designed with no externally actuated shaft penetrating the pump housing is exempt from the requirements of paragraph (b) of this section.

(3) *Routed to a process or fuel gas system or equipped with a closed vent system.* Any pump that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage from the pump to a control device meeting the requirements of §63.1034 of this part or §63.1021(b) is exempt from the requirements of paragraph (b) of this section.

(4) *Unmanned plant site.* Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (b)(4) and (e)(1)(v) of this section, and the daily requirements of paragraph (e)(1)(vii) of this section, provided that each pump is visually inspected as often as practical and at least monthly.

(5) *90 percent exemption.* If more than 90 percent of the pumps at a process unit or affected facility meet the criteria in either paragraph (e)(1) or (e)(2) of this section, the process unit or affected facility is exempt from the percent leaking calculation in paragraph (c) of this section.

(6) *Unsafe-to-monitor pumps.* Any pump that is designated, as described in §63.1022(c)(1), as an unsafe-to-monitor pump is exempt from the requirements of paragraph (b) of this section, the monitoring and inspection requirements of paragraphs (e)(1)(v) through (viii) of this section, and the owner or operator shall monitor and inspect the pump according to the written plan specified in §63.1022(c)(4).

[64 FR 34899, June 29, 1999, as amended at 64 FR 63706, Nov. 22, 1999]

§ 63.1027 Connectors in gas and vapor service and in light liquid service standards.

(a) *Compliance schedule.* The owner or operator shall monitor all connectors in each process unit initially for leaks by the later of either 12 months after the compliance date as specified in a referencing subpart or 12 months after initial startup. If all connectors in each process unit have been monitored for leaks prior to the compliance date specified in the referencing subpart, no initial monitoring is required provided either no process changes have been made since the monitoring or the owner or operator can determine that the results of the monitoring, with or without adjustments, reliably demonstrate compliance despite process changes. If required to monitor because of a process change, the owner or operator is required to monitor only those connectors involved in the process change.

(b) *Leak detection.* Except as allowed in §63.1021(b), §63.1036, §63.1037, or as specified in paragraph (e) of this section, the owner or operator shall monitor all connectors in gas and vapor and light liquid service as specified in paragraphs (a) and (b)(3) of this section.

(1) *Monitoring method.* The connectors shall be monitored to detect leaks by the method specified in §63.1023(b) and, as applicable, §63.1023(c).

(2) *Instrument reading that defines a leak.* If an instrument reading greater than or equal to 500 parts per million is measured, a leak is detected.

(3) *Monitoring periods.* The owner or operator shall perform monitoring, subsequent to the initial monitoring required in paragraph (a) of this section, as specified in paragraphs (b)(3)(i) through (b)(3)(iii) of this section, and shall comply with the requirements of paragraphs (b)(3)(iv) and (b)(3)(v) of this section. The required period in which monitoring must be conducted shall be determined from paragraphs (b)(3)(i) through (b)(3)(iii) of this section using the monitoring results from the preceding monitoring period. The percent leaking connectors shall be calculated as specified in paragraph (c) of this section.

(i) If the percent leaking connectors in the process unit was greater than or equal to 0.5 percent, then monitor within 12 months (1 year).

(ii) If the percent leaking connectors in the process unit was greater than or equal to 0.25 percent but less than 0.5 percent, then monitor within 4 years. An owner or operator may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors within 2 years of the start of the monitoring period, provided all connectors have been monitored by the end of the 4 year monitoring period.

(iii) If the percent leaking connectors in the process unit was less than 0.25 percent, then monitor as provided in paragraph (b)(3)(iii)(A) of this section and either paragraph (b)(3)(iii)(B) or (b)(3)(iii)(C) of this section, as appropriate.

(A) An owner or operator shall monitor at least 50 percent of the connectors within 4 years of the start of the monitoring period.

(B) If the percent leaking connectors calculated from the monitoring results in paragraph (b)(3)(iii)(A) of this section is greater than or equal to 0.35 percent of the monitored connectors, the owner or operator shall monitor as soon as practical, but within the next 6 months, all connectors that have not yet been monitored during the monitoring period. At the conclusion of monitoring, a new monitoring period shall be started pursuant to paragraph (b)(3) of this section, based on the percent leaking connectors of the total monitored connectors.

(C) If the percent leaking connectors calculated from the monitoring results in paragraph (b)(3)(iii)(A) of this section is less than 0.35 percent of the monitored connectors, the owner or operator shall monitor all connectors that have not yet been monitored within 8 years of the start of the monitoring period.

(iv) If, during the monitoring conducted pursuant to paragraph (b)(3)(i) through (b)(3)(iii) of this section, a connector is found to be leaking, it shall be re-monitored once within 90 days after repair to confirm that it is not leaking.

(v) The owner or operator shall keep a record of the start date and end date of each monitoring period under this section for each process unit.

(c) *Percent leaking connectors calculation.* For use in determining the monitoring frequency, as specified in paragraphs (a) and (b)(3) of this section, the percent leaking connectors as used in paragraphs (a) and (b)(3) of this section shall be calculated by using equation number 4.

$$\%C_L = C_L / C_t \times 100 \qquad \text{[Eq. 4]}$$

Where:

$\%C_L$= Percent leaking connectors as determined through periodic monitoring required in paragraphs (a) and (b)(3)(i) through (b)(3)(iii) of this section.

C_L= Number of connectors measured at 500 parts per million or greater, by the method specified in §63.1023(b).

C_t= Total number of monitored connectors in the process unit or affected facility.

(d) *Leak repair.* If a leak is detected pursuant to paragraphs (a) and (b) of this section, then the leak shall be repaired using the procedures in §63.1024, as applicable.

(e) *Special provisions for connectors* —(1) *Unsafe-to-monitor connectors.* Any connector that is designated, as described in §63.1022(c)(1), as an unsafe-to-monitor connector is exempt from

the requirements of paragraphs (a) and (b) of this section and the owner or operator shall monitor according to the written plan specified in §63.1022(c)(4).

(2) *Inaccessible, ceramic, or ceramic-lined connectors.* (i) Any connector that is inaccessible or that is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined), is exempt from the monitoring requirements of paragraphs (a) and (b) of this section, from the leak repair requirements of paragraph (d) of this section, and from the recordkeeping and reporting requirements of §§63.1038 and 63.1039. An inaccessible connector is one that meets any of the provisions specified in paragraphs (e)(2)(i)(A) through (e)(2)(i)(F) of this section, as applicable.

(A) Buried;

(B) Insulated in a manner that prevents access to the connector by a monitor probe;

(C) Obstructed by equipment or piping that prevents access to the connector by a monitor probe;

(D) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold that would allow access to connectors up to 7.6 meters (25 feet) above the ground.

(E) Inaccessible because it would require elevating the monitoring personnel more than 2 meters (7 feet) above a permanent support surface or would require the erection of scaffold;

(F) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines, or would risk damage to equipment.

(ii) If any inaccessible, ceramic or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the visual, audible, olfactory, or other indications of a leak to the atmosphere shall be eliminated as soon as practical.

§ 63.1028 Agitators in gas and vapor service and in light liquid service standards.

(a) *Compliance schedule.* The owner or operator shall comply with this section no later than the compliance dates specified in the referencing subpart.

(b) [Reserved]

(c) *Leak detection* —(1) *Monitoring method.* Each agitator seal shall be monitored monthly to detect leaks by the methods specified in §63.1023(b) and, as applicable, §63.1023(c), except as provided in §63.1021(b), §63.1036, §63.1037, or paragraph (e) of this section.

(2) *Instrument reading that defines a leak.* If an instrument reading equivalent of 10,000 parts per million or greater is measured, a leak is detected.

(3) *Visual inspection.* (i) Each agitator seal shall be checked by visual inspection each calendar week for indications of liquids dripping from the agitator seal. The owner or operator shall document that the inspection was conducted and the date of the inspection.

(ii) If there are indications of liquids dripping from the agitator seal, the owner or operator shall follow the procedures specified in paragraphs (c)(3)(ii)(A) or (c)(3)(ii)(B) of this section prior to the next required inspection.

(A) The owner or operator shall monitor the agitator seal as specified in §63.1023(b) and, as applicable, §63.1023(c), to determine if there is a leak of regulated material. If an instrument reading of 10,000 parts per million or greater is measured, a leak is detected, and it shall be repaired according to paragraph (d) of this section; or

(B) The owner or operator shall eliminate the indications of liquids dripping from the agitator seal.

(d) *Leak repair.* If a leak is detected, then the leak shall be repaired using the procedures in §63.1024.

(e) *Special provisions for agitators* —(1) *Dual mechanical seal.* Each agitator equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (c) of this section, provided the requirements specified in paragraphs (e)(1)(i) through (e)(1)(vi) of this section are met.

(i) Each dual mechanical seal system shall meet the applicable requirements specified in paragraphs (e)(1)(i)(A), (e)(1)(i)(B), or (e)(1)(i)(C) of this section.

(A) Operated with the barrier fluid at a pressure that is at all times (except during periods of startup, shutdown, or malfunction) greater than the agitator stuffing box pressure; or

(B) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that meets the requirements of either §63.1034 or §63.1021(b); or

(C) Equipped with a closed-loop system that purges the barrier fluid into a process stream.

(ii) The barrier fluid is not in light liquid service.

(iii) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(iv) Each agitator seal is checked by visual inspection each calendar week for indications of liquids dripping from the agitator seal. If there are indications of liquids dripping from the agitator seal at the time of the weekly inspection, the owner or operator shall follow the procedure specified in paragraphs (e)(1)(iv)(A) or (e)(1)(iv)(B) of this section prior to the next required inspection.

(A) The owner or operator shall monitor the agitator seal as specified in §63.1023(b) and, as applicable, §63.1023(c), to determine the presence of regulated material in the barrier fluid. If an instrument reading equivalent to or greater than 10,000 ppm is measured, a leak is detected and it shall be repaired using the procedures in §63.1024, or

(B) The owner or operator shall eliminate the visual indications of liquids dripping.

(v) Each sensor as described in paragraph (e)(1)(iii) of this section is observed daily or is equipped with an alarm unless the agitator seal is located within the boundary of an unmanned plant site.

(vi) The owner or operator of each dual mechanical seal system shall meet the requirements specified in paragraphs (e)(1)(vi)(A) and (e)(1)(vi)(B).

(A) The owner or operator shall determine, based on design considerations and operating experience, criteria that indicates failure of the seal system, the barrier fluid system, or both and

applicable to the presence and frequency of drips. If indications of liquids dripping from the agitator seal exceed the criteria, or if, based on the criteria the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected and shall be repaired pursuant to §63.1024, as applicable.

(B) The owner or operator shall keep records of the design criteria and an explanation of the design criteria; and any changes to these criteria and the reasons for the changes.

(2) *No external shaft.* Any agitator that is designed with no externally actuated shaft penetrating the agitator housing is exempt from paragraph (c) of this section.

(3) *Routed to a process or fuel gas system or equipped with a closed vent system.* Any agitator that is routed to a process or fuel gas system that captures and transports leakage from the agitator to a control device meeting the requirements of either §63.1034 or §63.1021(b) is exempt from the requirements of paragraph (c) of this section.

(4) *Unmanned plant site.* Any agitator that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (c)(3) and (e)(1)(iv) of this section, and the daily requirements of paragraph (e)(1)(v) of this section, provided that each agitator is visually inspected as often as practical and at least monthly.

(5) *Difficult-to-monitor agitator seals.* Any agitator seal that is designated, as described in §63.1022(c)(2), as a difficult-to-monitor agitator seal is exempt from the requirements of paragraph (c) of this section and the owner or operator shall monitor the agitator seal according to the written plan specified in §63.1022(c)(4).

(6) *Equipment obstructions.* Any agitator seal that is obstructed by equipment or piping that prevents access to the agitator by a monitor probe is exempt from the monitoring requirements of paragraph (c) of this section.

(7) *Unsafe-to-monitor agitator seals.* Any agitator seal that is designated, as described in §63.1022(c)(1), as an unsafe-to-monitor agitator seal is exempt from the requirements of paragraph (c) of this section and the owner or operator of the agitator seal monitors the agitator seal according to the written plan specified in §63.1022(c)(4).

§ 63.1029 Pumps, valves, connectors, and agitators in heavy liquid service; pressure relief devices in liquid service; and instrumentation systems standards.

(a) *Compliance schedule.* The owner or operator shall comply with this section no later than the compliance dates specified in the referencing subpart.

(b) *Leak detection* —(1) *Monitoring method.* Unless otherwise specified in §63.1021(b), §63.1036, or §63.1037, the owner or operator shall comply with paragraphs (b)(1) and (b)(2) of this section. Pumps, valves, connectors, and agitators in heavy liquid service; pressure relief devices in light liquid or heavy liquid service; and instrumentation systems shall be monitored within 5 calendar days by the method specified in §63.1023(b) and, as applicable, §63.1023(c), if evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method, unless the potential leak is repaired as required in paragraph (c) of this section.

(2) *Instrument reading that defines a leak.* If an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, 2,000 parts per million or greater for pumps in food and medical service, or 2,000 parts per million or greater for all other pumps (including pumps in food/medical service), or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief

devices is measured pursuant to paragraph (b)(1) of this section, a leak is detected and shall be repaired pursuant to §63.1024, as applicable.

(c) *Leak repair.* For equipment identified in paragraph (b) of this section that is not monitored by the method specified in §63.1023(b) and, as applicable, §63.1023(c), repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure.

[64 FR 34899, June 29, 1999, as amended at 64 FR 63706, Nov. 22, 1999]

§ 63.1030 Pressure relief devices in gas and vapor service standards.

(a) *Compliance schedule.* The owner or operator shall comply with this section no later than the compliance dates specified in the referencing subpart.

(b) *Compliance standard.* Except during pressure releases as provided for in paragraph (c) of this section, or as otherwise specified in §§63.1036, 63.1037, or paragraphs (d) and (e) of this section, each pressure relief device in gas and vapor service shall be operated with an instrument reading of less than 500 parts per million as measured by the method specified in §63.1023(b) and, as applicable, §63.1023(c).

(c) *Pressure relief requirements.* (1) After each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 parts per million, as soon as practical, but no later than 5 calendar days after each pressure release, except as provided in §63.1024(d).

(2) The pressure relief device shall be monitored no later than five calendar days after the pressure to confirm the condition indicated by an instrument reading of less than 500 parts per million above background, as measured by the method specified in §63.1023(b) and, as applicable, §63.1023(c).

(3) The owner or operator shall record the dates and results of the monitoring required by paragraph (c)(2) of this section following a pressure release including the background level measured and the maximum instrument reading measured during the monitoring.

(d) *Pressure relief devices routed to a process or fuel gas system or equipped with a closed vent system and control device.* Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage from the pressure relief device to a control device meeting the requirements of §63.1034 is exempt from the requirements of paragraphs (b) and (c) of this section.

(e) *Rupture disk exemption.* Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (b) and (c) of this section provided the owner or operator installs a replacement rupture disk upstream of the pressure relief device as soon as practical after each pressure release but no later than 5 calendar days after each pressure release, except as provided in §63.1024(d).

§ 63.1031 Compressors standards.

(a) *Compliance schedule.* The owner or operator shall comply with this section no later than the compliance dates specified in the referencing subpart.

(b) *Seal system standard.* Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere, except as

provided in §§63.1021(b), 63.1036, 63.1037, and paragraphs (e) and (f) of this section. Each compressor seal system shall meet the applicable requirements specified in paragraph (b)(1), (b)(2), or (b)(3) of this section.

(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure at all times (except during periods of startup, shutdown, or malfunction); or

(2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that meets the requirements of either §63.1034 or §63.1021(b); or

(3) Equipped with a closed-loop system that purges the barrier fluid directly into a process stream.

(c) *Barrier fluid system.* The barrier fluid shall not be in light liquid service. Each barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both. Each sensor shall be observed daily or shall be equipped with an alarm unless the compressor is located within the boundary of an unmanned plant site.

(d) *Failure criterion and leak detection.* (1) 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. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion, a leak is detected and shall be repaired pursuant to §63.1024, as applicable.

(2) The owner or operator shall keep records of the design criteria and an explanation of the design criteria; and any changes to these criteria and the reasons for the changes.

(e) *Routed to a process or fuel gas system or equipped with a closed vent system.* A compressor is exempt from the requirements of paragraphs (b) through (d) of this section if it is equipped with a system to capture and transport leakage from the compressor drive shaft seal to a process or a fuel gas system or to a closed vent system that captures and transports leakage from the compressor to a control device meeting the requirements of either §63.1034 or §63.1021(b).

(f) *Alternative compressor standard.* (1) Any compressor that is designated, as described in §63.1022(e), as operating with an instrument reading of less than 500 parts per million above background shall operate at all times with an instrument reading of less than 500 parts per million. A compressor so designated is exempt from the requirements of paragraphs (b) through (d) of this section if the compressor is demonstrated, initially upon designation, annually, and at other times requested by the Administrator to be operating with an instrument reading of less than 500 parts per million above background, as measured by the method specified in §63.1023(b) and, as applicable, §63.1023(c).

(2) The owner or operator shall record the dates and results of each compliance test including the background level measured and the maximum instrument reading measured during each compliance test.

§ 63.1032 Sampling connection systems standards.

(a) *Compliance schedule.* The owner or operator shall comply with this section no later than the compliance dates specified in the referencing subpart.

(b) *Equipment requirement.* Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed vent system, except as provided in §§63.1021(b), 63.1036,

63.1037, or paragraph (d) of this section. Gases displaced during filling of the sample container are not required to be collected or captured.

(c) *Equipment design and operation.* Each closed-purge, closed-loop, or closed vent system as required in paragraph (b) of this section shall meet the applicable requirements specified in paragraphs (c)(1) through (c)(5) of this section.

(1) The system shall return the purged process fluid directly to a process line or to a fuel gas system that meets the requirements of either §63.1034 or §63.1021(b); or

(2) [Reserved]

(3) Be designed and operated to capture and transport all the purged process fluid to a control device that meets the requirements of either §63.1034 or §63.1021(b); or

(4) Collect, store, and transport the purged process fluid to a system or facility identified in paragraph (c)(4)(i), (c)(4)(ii), or (c)(4)(iii) of this section.

(i) A waste management unit as defined in 40 CFR 63.111 or subpart G, if the waste management unit is subject to and operating in compliance with the provisions of 40 CFR part 63, subpart G, applicable to group 1 wastewater streams. If the purged process fluid does not contain any regulated material listed in Table 9 of 40 CFR part 63, subpart G, the waste management unit need not be subject to, and operated in compliance with the requirements of 40 CFR part 63, subpart G, applicable to group 1 wastewater steams provided the facility has a National Pollution Discharge Elimination System (NPDES) permit or sends the wastewater to an NPDES-permitted facility.

(ii) A treatment, storage, or disposal facility subject to regulation under 40 CFR parts 262, 264, 265, or 266; or

(iii) A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261.

(5) Containers that are part of a closed purge system must be covered or closed when not being filled or emptied.

(d) *In-situ sampling systems.* In-situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (b) and (c) of this section.

§ 63.1033 Open-ended valves or lines standards.

(a) *Compliance schedule.* The owner or operator shall comply with this section no later than the compliance date specified in the referencing subpart.

(b) *Equipment and operational requirements.* (1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §§63.1021(b), 63.1036, 63.1037, and paragraphs (c) and (d) of this section. 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, or during maintenance. The operational provisions of paragraphs (b)(2) and (b)(3) of this section also apply.

(2) 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.

(3) 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 (b)(1) of this section at all other times.

(c) *Emergency shutdown exemption.* Open-ended valves or lines in an emergency shutdown system that are designed to open automatically in the event of a process upset are exempt from the requirements of paragraph (b) of this section.

(d) *Polymerizing materials exemption.* Open-ended valves or lines containing materials that would autocatalytically polymerize or, would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraph (b) of this section are exempt from the requirements of paragraph (b) of this section.

§ 63.1034 Closed vent systems and control devices; or emissions routed to a fuel gas system or process standards.

(a) *Compliance schedule.* The owner or operator shall comply with this section no later than the compliance date specified in the referencing subpart.

(b) *Compliance standard.* (1) Owners or operators routing emissions from equipment leaks to a fuel gas system or process shall comply with the provisions of subpart SS of this part, except as provided in §63.1002(b).

(2) Owners or operators of closed vent systems and control devices used to comply with the provisions of this subpart shall comply with the provisions of subpart SS of this part and (b)(2)(i) through (b)(2)(iii) of this section, except as provided in §63.1002(b).

(i) Nonflare control devices shall be designed and operated to reduce emissions of regulated material vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, whichever is less stringent. The 20 parts per million by volume standard is not applicable to the provisions of §63.1016.

(ii) Enclosed combustion devices shall be designed and operated to reduce emissions of regulated material vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent, or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760°C (1400°F).

(iii) Flares used to comply with the provisions of this subpart shall comply with the requirements of subpart SS of this part.

§ 63.1035 Quality improvement program for pumps.

(a) *Criteria.* If, on a 6-month rolling average, at least the greater of either 10 percent of the pumps in a process unit or affected facility (or plant site) or three pumps in a process unit or affected facility (or plant site) leak, the owner or operator shall comply with the requirements specified in paragraphs (a)(1) and (a)(2) of this section.

(1) Pumps that are in food and medical service or in polymerizing monomer service shall comply with all requirements except for those specified in paragraph (d)(8) of this section.

(2) Pumps that are not in food and medical or polymerizing monomer service shall comply with all of the requirements of this section.

(b) *Exiting the QIP.* The owner or operator shall comply with the requirements of this section until the number of leaking pumps is less than the greater of either 10 percent of the pumps or three pumps, calculated as a 6-month rolling average, in the process unit or affected facility (or plant site). Once the performance level is achieved, the owner or operator shall comply with the requirements in §63.1026.

(c) *Resumption of QIP.* If, in a subsequent monitoring period, the process unit or affected facility (or plant site) has greater than either 10 percent of the pumps leaking or three pumps leaking (calculated as a 6-month rolling average), the owner or operator shall resume the quality improvement program starting at performance trials.

(d) *QIP requirements.* The quality improvement program shall meet the requirements specified in paragraphs (d)(1) through (d)(8) of this section.

(1) The owner or operator shall comply with the requirements in §63.1026.

(2) *Data collection.* The owner or operator shall collect the data specified in paragraphs (d)(2)(i) through (d)(2)(v) of this section and maintain records for each pump in each process unit or affected facility (or plant site) subject to the quality improvement program. The data may be collected and the records may be maintained on a process unit, affected facility, or plant site basis.

(i) Pump type (e.g., piston, horizontal or vertical centrifugal, gear, bellows); pump manufacturer; seal type and manufacturer; pump design (e.g., external shaft, flanged body); materials of construction; if applicable, barrier fluid or packing material; and year installed.

(ii) Service characteristics of the stream such as discharge pressure, temperature, flow rate, corrosivity, and annual operating hours.

(iii) The maximum instrument readings observed in each monitoring observation before repair, response factor for the stream if appropriate, instrument model number, and date of the observation.

(iv) If a leak is detected, the repair methods used and the instrument readings after repair.

(v) If the data will be analyzed as part of a larger analysis program involving data from other plants or other types of process units or affected facilities, a description of any maintenance or quality assurance programs used in the process unit or affected facility that are intended to improve emission performance.

(3) The owner or operator shall continue to collect data on the pumps as long as the process unit or affected facility (or plant site) remains in the quality improvement program.

(4) *Pump or pump seal inspection.* The owner or operator shall inspect all pumps or pump seals that exhibited frequent seal failures and were removed from the process unit or affected facility due to leaks. The inspection shall determine the probable cause of the pump seal failure or of the pump leak and shall include recommendations, as appropriate, for design changes or changes in specifications to reduce leak potential.

(5)(i) *Data analysis.* The owner or operator shall analyze the data collected to comply with the requirements of paragraph (d)(2) of this section to determine the services, operating or maintenance practices, and pump or pump seal designs or technologies that have poorer than average emission performance and those that have better than average emission performance. The analysis shall determine if specific trouble areas can be identified on the basis of service,

operating conditions or maintenance practices, equipment design, or other process-specific factors.

(ii) The analysis shall also be used to determine if there are superior performing pump or pump seal technologies that are applicable to the service(s), operating conditions, or pump or pump seal designs associated with poorer than average emission performance. A superior performing pump or pump seal technology is one with a leak frequency of less than 10 percent for specific applications in the process unit, affected facility, or plant site. A candidate superior performing pump or pump seal technology is one demonstrated or reported in the available literature or through a group study as having low emission performance and as being capable of achieving less than 10 percent leaking pumps in the process unit or affected facility (or plant site).

(iii) The analysis shall include consideration of the information specified in paragraphs (d)(5)(iii)(A) through (d)(5)(iii)(C) of this section.

(A) The data obtained from the inspections of pumps and pump seals removed from the process unit or affected facility due to leaks;

(B) Information from the available literature and from the experience of other plant sites that will identify pump designs or technologies and operating conditions associated with low emission performance for specific services; and

(C) Information on limitations on the service conditions for the pump seal technology operating conditions as well as information on maintenance procedures to ensure continued low emission performance.

(iv) The data analysis may be conducted through an inter- or intra-company program (or through some combination of the two approaches) and may be for a single process unit, a plant site, a company, or a group of process units.

(v) The first analysis of the data shall be completed no later than 18 months after the start of the quality improvement program. The first analysis shall be performed using data collected for a minimum of 6 months. An analysis of the data shall be done each year the process unit or affected facility is in the quality improvement program.

(6) *Trial evaluation program.* A trial evaluation program shall be conducted at each plant site for which the data analysis does not identify use of superior performing pump seal technology or pumps that can be applied to the areas identified as having poorer than average performance, except as provided in paragraph (d)(6)(v) of this section. The trial program shall be used to evaluate the feasibility of using in the process unit or affected facility (or plant site) the pump designs or seal technologies, and operating and maintenance practices that have been identified by others as having low emission performance.

(i) The trial evaluation program shall include on-line trials of pump seal technologies or pump designs and operating and maintenance practices that have been identified in the available literature or in analysis by others as having the ability to perform with leak rates below 10 percent in similar services, as having low probability of failure, or as having no external actuating mechanism in contact with the process fluid. If any of the candidate superior performing pump seal technologies or pumps is not included in the performance trials, the reasons for rejecting specific technologies from consideration shall be documented as required in paragraph (e)(3)(ii) of this section.

(ii) The number of pump seal technologies or pumps in the trial evaluation program shall be the lesser of 1 percent or two pumps for programs involving single process units or affected facilities and the lesser of 1 percent or five pumps for programs involving a plant site or groups of process

units or affected facilities. The minimum number of pumps or pump seal technologies in a trial program shall be one.

(iii) The trial evaluation program shall specify and include documentation of the information specified in paragraphs (d)(6)(iii)(A) through (d)(6)(iii)(D) of this section.

(A) The candidate superior performing pump seal designs or technologies to be evaluated, the stages for evaluating the identified candidate pump designs or pump seal technologies, including the time period necessary to test the applicability;

(B) The frequency of monitoring or inspection of the equipment;

(C) The range of operating conditions over which the component will be evaluated; and

(D) Conclusions regarding the emission performance and the appropriate operating conditions and services for the trial pump seal technologies or pumps.

(iv) The performance trials shall initially be conducted, at least, for a 6-month period beginning not later than 18 months after the start of the quality improvement program. No later than 24 months after the start of the quality improvement program, the owner or operator shall have identified pump seal technologies or pump designs that, combined with appropriate process, operating, and maintenance practices, operate with low emission performance for specific applications in the process unit or affected facility. The owner or operator shall continue to conduct performance trials as long as no superior performing design or technology has been identified, except as provided in paragraph (d)(6)(vi) of this section. The initial list of superior emission performance pump designs or pump seal technologies shall be amended in the future, as appropriate, as additional information and experience are obtained.

(v) Any plant site with fewer than 400 valves and owned by a corporation with fewer than 100 employees shall be exempt from trial evaluations of pump seals or pump designs. Plant sites exempt from the trial evaluations of pumps shall begin the pump seal or pump replacement program at the start of the fourth year of the quality improvement program.

(vi) An owner or operator who has conducted performance trials on all alternative superior emission performance technologies suitable for the required applications in the process unit or affected facility may stop conducting performance trials provided that a superior performing design or technology has been demonstrated or there are no technically feasible alternative superior technologies remaining. The owner or operator shall prepare an engineering evaluation documenting the physical, chemical, or engineering basis for the judgment that the superior emission performance technology is technically infeasible or demonstrating that it would not reduce emissions.

(7) *Quality assurance program.* Each owner or operator shall prepare and implement a pump quality assurance program that details purchasing specifications and maintenance procedures for all pumps and pump seals in the process unit or affected facility. The quality assurance program may establish any number of categories, or classes, of pumps as needed to distinguish among operating conditions and services associated with poorer than average emission performance as well as those associated with better than average emission performance. The quality assurance program shall be developed considering the findings of the data analysis required under paragraph (d)(5) of this section; and, if applicable, the findings of the trial evaluation required in paragraph (d)(6) of this section; and the operating conditions in the process unit or affected facility. The quality assurance program shall be updated each year as long as the process unit or affected facility has the greater of either 10 percent or more leaking pumps or has three leaking pumps.

(i) The quality assurance program shall meet the requirements specified in paragraphs (d)(7)(i)(A) through (d)(7)(i)(D) of this section.

(A) Establish minimum design standards for each category of pumps or pump seal technology. The design standards shall specify known critical parameters such as tolerance, manufacturer, materials of construction, previous usage, or other applicable identified critical parameters;

(B) Require that all equipment orders specify the design standard (or minimum tolerances) for the pump or the pump seal;

(C) Provide for an audit procedure for quality control of purchased equipment to ensure conformance with purchase specifications. The audit program may be conducted by the owner or operator of the plant site or process unit or affected facility, or by a designated representative; and

(D) Detail off-line pump maintenance and repair procedures. These procedures shall include provisions to ensure that rebuilt or refurbished pumps and pump seals will meet the design specifications for the pump category and will operate so that emissions are minimized.

(ii) The quality assurance program shall be established no later than the start of the third year of the quality improvement program for plant sites with 400 or more valves or 100 or more employees; and no later than the start of the fourth year of the quality improvement program for plant sites with less than 400 valves and less than 100 employees.

(8) *Pump or pump seal replacement.* Three years after the start of the quality improvement program for plant sites with 400 or more valves or 100 or more employees and at the start of the fourth year of the quality improvement program for plant sites with less than 400 valves and less than 100 employees, the owner or operator shall replace, as described in paragraphs (d)(8)(i) and (d)(8)(ii) of this section, the pumps or pump seals that are not superior emission performance technology with pumps or pump seals that have been identified as superior emission performance technology and that comply with the quality assurance standards for the pump category. Superior emission performance technology is that category or design of pumps or pump seals with emission performance that when combined with appropriate process, operating, and maintenance practices, will result in less than 10 percent leaking pumps for specific applications in the process unit, affected facility, or plant site. Superior emission performance technology includes material or design changes to the existing pump, pump seal, seal support system, installation of multiple mechanical seals or equivalent, or pump replacement.

(i) Pumps or pump seals shall be replaced at the rate of 20 percent per year based on the total number of pumps in light liquid service. The calculated value shall be rounded to the nearest nonzero integer value. The minimum number of pumps or pump seals shall be one. Pump replacement shall continue until all pumps subject to the requirements of §63.1026 are pumps determined to be superior performance technology.

(ii) The owner or operator may delay replacement of pump seals or pumps with superior technology until the next planned process unit or affected facility shutdown, provided the number of pump seals and pumps replaced is equivalent to the 20 percent or greater annual replacement rate.

(iii) The pumps shall be maintained as specified in the quality assurance program.

(e) *QIP recordkeeping.* In addition to the records required by paragraph (d)(2) of this section, the owner or operator shall maintain records for the period of the quality improvement program for the process unit or affected facility as specified in paragraphs (e)(1) through (e)(6) of this section.

(1) When using a pump quality improvement program as specified in this section, record the information specified in paragraphs (e)(1)(i) through (e)(1)(iii) of this section.

(i) The rolling average percent leaking pumps.

(ii) Documentation of all inspections conducted under the requirements of paragraph (d)(4) of this section, and any recommendations for design or specification changes to reduce leak frequency.

(iii) The beginning and ending dates while meeting the requirements of paragraph (d) of this section.

(2) If a leak is not repaired within 15 calendar days after discovery of the leak, the reason for the delay and the expected date of successful repair.

(3) Records of all analyses required in paragraph (d) of this section. The records will include the information specified in paragraphs (e)(3)(i) through (e)(3)(iv) of this section.

(i) A list identifying areas associated with poorer than average performance and the associated service characteristics of the stream, the operating conditions and maintenance practices.

(ii) The reasons for rejecting specific candidate superior emission performing pump technology from performance trials.

(iii) The list of candidate superior emission performing valve or pump technologies, and documentation of the performance trial program items required under paragraph (d)(6)(iii) of this section.

(iv) The beginning date and duration of performance trials of each candidate superior emission performing technology.

(4) All records documenting the quality assurance program for pumps as specified in paragraph (d)(7) of this section, including records indicating that all pumps replaced or modified during the period of the quality improvement program are in compliance with the quality assurance.

(5) Records documenting compliance with the 20 percent or greater annual replacement rate for pumps as specified in paragraph (d)(8) of this section.

(6) Information and data to show the corporation has fewer than 100 employees, including employees providing professional and technical contracted services.

§ 63.1036 Alternative means of emission limitation: Batch processes.

(a) *General requirement.* As an alternative to complying with the requirements of §§63.1025 through 63.1033 and §63.1035, an owner or operator of a batch process that operates in regulated material service during the calendar year may comply with one of the standards specified in paragraphs (b) and (c) of this section, or the owner or operator may petition for approval of an alternative standard under the provisions of §63.1021(b). The alternative standards of this section provide the options of pressure testing or monitoring the equipment for leaks. The owner or operator may switch among the alternatives provided the change is documented as specified in paragraph (b)(7) of this section.

(b) *Pressure testing of the batch equipment.* The following requirements shall be met if an owner or operator elects to use pressure testing of batch product-process equipment to demonstrate compliance with this subpart.

(1) *Reconfiguration.* Each time equipment is reconfigured for production of a different product or intermediate, the batch product-process equipment train shall be pressure-tested for leaks before regulated material is first fed to the equipment and the equipment is placed in regulated material service.

(i) When the batch product-process equipment train is reconfigured to produce a different product, pressure testing is required only for the new or disturbed equipment.

(ii) Each batch product process that operates in regulated material service during a calendar year shall be pressure-tested at least once during that calendar year.

(iii) Pressure testing is not required for routine seal breaks, such as changing hoses or filters, that are not part of the reconfiguration to produce a different product or intermediate.

(2) *Testing procedures.* The batch product process equipment shall be tested either using the procedures specified in paragraph (b)(5) of this section for pressure vacuum loss or with a liquid using the procedures specified in paragraph (b)(6) of this section.

(3) *Leak detection.* (i) For pressure or vacuum tests using a gas, a leak is detected if the rate of change in pressure is greater than 6.9 kilopascals (1 pound per square inch gauge) in 1 hour or if there is visible, audible, or olfactory evidence of fluid loss.

(ii) For pressure tests using a liquid, a leak is detected if there are indications of liquids dripping or if there is other evidence of fluid loss.

(4) *Leak repair.* (i) If a leak is detected, it shall be repaired and the batch product-process equipment shall be retested before start-up of the process.

(ii) If a batch product-process fails the retest (the second of two consecutive pressure tests), it shall be repaired as soon as practical, but not later than 30 calendar days after the second pressure test except as specified in paragraph (e) of this section.

(5) *Gas pressure test procedure for pressure or vacuum loss.* The procedures specified in paragraphs (b)(5)(i) through (b)(5)(v) of this section shall be used to pressure test batch product-process equipment for pressure or vacuum loss to demonstrate compliance with the requirements of paragraph (b)(3)(i) of this section.

(i) The batch product-process equipment train shall be pressurized with a gas to a pressure less than the set pressure of any safety relief devices or valves or to a pressure slightly above the operating pressure of the equipment, or alternatively the equipment shall be placed under a vacuum.

(ii) Once the test pressure is obtained, the gas source or vacuum source shall be shut off.

(iii) The test shall continue for not less than 15 minutes unless it can be determined in a shorter period of time that the allowable rate of pressure drop or of pressure rise was exceeded. The pressure in the batch product-process equipment shall be measured after the gas or vacuum source is shut off and at the end of the test period. The rate of change in pressure in the batch product-process equipment shall be calculated using the following equation:

$$\Delta(P/t) = \left(\left|P_f - P_i\right|\right)/\left(t_f - t_i\right) \qquad [Eq.\ 5]$$

Where:

Δ (P/t) = Change in pressure, pounds per square inch gauge per hour.

P_f= Final pressure, pounds per square inch gauge.

P_i= Initial pressure, pounds per square inch gauge.

$t_f - t_i$= Elapsed time, hours.

(iv) The pressure shall be measured using a pressure measurement device (gauge, manometer, or equivalent) that has a precision of ±2.5 millimeter mercury (0.10 inch of mercury) in the range of test pressure and is capable of measuring pressures up to the relief set pressure of the pressure relief device. If such a pressure measurement device is not reasonably available, the owner or operator shall use a pressure measurement device with a precision of at least ±10 percent of the test pressure of the equipment and shall extend the duration of the test for the time necessary to detect a pressure loss or rise that equals a rate of 1 pound per square inch gauge per hour (7 kilopascals per hour).

(v) An alternative procedure may be used for leak testing the equipment if the owner or operator demonstrates the alternative procedure is capable of detecting a pressure loss or rise.

(6) *Pressure test procedure using test liquid.* The procedures specified in paragraphs (b)(6)(i) through (b)(6)(iv) of this section shall be used to pressure-test batch product-process equipment using a liquid to demonstrate compliance with the requirements of paragraph (b)(3)(ii) of this section.

(i) The batch product-process equipment train, or section of the equipment train, shall be filled with the test liquid (e.g., water, alcohol) until normal operating pressure is obtained. Once the equipment is filled, the liquid source shall be shut off.

(ii) The test shall be conducted for a period of at least 60 minutes, unless it can be determined in a shorter period of time that the test is a failure.

(iii) Each seal in the equipment being tested shall be inspected for indications of liquid dripping or other indications of fluid loss. If there are any indications of liquids dripping or of fluid loss, a leak is detected.

(iv) An alternative procedure may be used for leak testing the equipment, if the owner or operator demonstrates the alternative procedure is capable of detecting losses of fluid.

(7) *Pressure testing recordkeeping.* The owner or operator of a batch product process who elects to pressure test the batch product process equipment train to demonstrate compliance with this subpart shall maintain records of the information specified in paragraphs (b)(7)(i) through (b)(7)(v) of this section.

(i) The identification of each product, or product code, produced during the calendar year. It is not necessary to identify individual items of equipment in a batch product process equipment train.

(ii) Physical tagging of the equipment to identify that it is in regulated material service and subject to the provisions of this subpart is not required. Equipment in a batch product process subject to the provisions of this subpart may be identified on a plant site plan, in log entries, or by other appropriate methods.

(iii) The dates of each pressure test required in paragraph (b) of this section, the test pressure, and the pressure drop observed during the test.

(iv) Records of any visible, audible, or olfactory evidence of fluid loss.

(v) When a batch product process equipment train does not pass two consecutive pressure tests, the information specified in paragraphs (b)(7)(v)(A) through (b)(7)(v)(E) of this section shall be recorded in a log and kept for 2 years:

(A) The date of each pressure test and the date of each leak repair attempt.

(B) Repair methods applied in each attempt to repair the leak.

(C) The reason for the delay of repair.

(D) The expected date for delivery of the replacement equipment and the actual date of delivery of the replacement equipment; and

(E) The date of successful repair.

(c) *Equipment monitoring.* The following requirements shall be met if an owner or operator elects to monitor the equipment in a batch process to detect leaks by the method specified in §63.1023(b) and, as applicable, §63.1023(c), to demonstrate compliance with this subpart.

(1) The owner or operator shall comply with the requirements of §§63.1025 through 63.1035 as modified by paragraphs (c)(2) through (c)(4) of this section.

(2) The equipment shall be monitored for leaks by the method specified in §63.1023(b) and, as applicable, §63.1023(c), when the equipment is in regulated material service or is in use with any other detectable material.

(3) The equipment shall be monitored for leaks as specified in paragraphs (c)(3)(i) through (c)(3)(iv) of this section.

(i) Each time the equipment is reconfigured for the production of a new product, the reconfigured equipment shall be monitored for leaks within 30 days of start-up of the process. This initial monitoring of reconfigured equipment shall not be included in determining percent leaking equipment in the process unit or affected facility.

(ii) Connectors shall be monitored in accordance with the requirements in §63.1027.

(iii) Equipment other than connectors shall be monitored at the frequencies specified in table 1 to this subpart. The operating time shall be determined as the proportion of the year the batch product-process that is subject to the provisions of this subpart is operating.

(iv) The monitoring frequencies specified in paragraph (c)(3)(iii) of this section are not requirements for monitoring at specific intervals and can be adjusted to accommodate process operations. An owner or operator may monitor anytime during the specified monitoring period (e.g., month, quarter, year), provided the monitoring is conducted at a reasonable interval after completion of the last monitoring campaign. For example, if the equipment is not operating during the scheduled monitoring period, the monitoring can be done during the next period when the process is operating.

(4) If a leak is detected, it shall be repaired as soon as practical but not later than 15 calendar days after it is detected, except as provided in paragraph (e) of this section.

(d) *Added equipment recordkeeping.* (1) For batch product-process units or affected facilities that the owner or operator elects to monitor as provided under paragraph (c) of this section, the owner or operator shall prepare a list of equipment added to batch product process units or affected facilities since the last monitoring period required in paragraphs (c)(3)(ii) and (c)(3)(iii) of this section.

(2) Maintain records demonstrating the proportion of the time during the calendar year the equipment is in use in a batch process that is subject to the provisions of this subpart. Examples of suitable documentation are records of time in use for individual pieces of equipment or average time in use for the process unit or affected facility. These records are not required if the owner or operator does not adjust monitoring frequency by the time in use, as provided in paragraph (c)(3)(iii) of this section.

(3) Record and keep pursuant to the referencing subpart and this subpart, the date and results of the monitoring required in paragraph (c)(3)(i) of this section for equipment added to a batch product-process unit or affected facility since the last monitoring period required in paragraphs (c)(3)(ii) and (c)(3)(iii) of this section. If no leaking equipment is found during this monitoring, the owner or operator shall record that the inspection was performed. Records of the actual monitoring results are not required.

(e) *Delay of repair.* Delay of repair of equipment for which leaks have been detected is allowed if the replacement equipment is not available providing the conditions specified in paragraphs (e)(1) and (e)(2) of this section are met.

(1) Equipment supplies have been depleted and supplies had been sufficiently stocked before the supplies were depleted.

(2) The repair is made no later than 10 calendar days after delivery of the replacement equipment.

(f) *Periodic report contents.* For owners or operators electing to meet the requirements of paragraph (b) of this section, the Periodic Report to be filed pursuant to §63.1039(b) shall include the information listed in paragraphs (f)(1) through (f)(4) of this section for each process unit.

(1) Batch product process equipment train identification;

(2) The number of pressure tests conducted;

(3) The number of pressure tests where the equipment train failed the pressure test; and (4) The facts that explain any delay of repairs.

§ 63.1037 Alternative means of emission limitation: Enclosed-vented process units or affected facilities.

(a) *Use of closed vent system and control device.* Process units or affected facilities or portions of process units at affected facilities enclosed in such a manner that all emissions from equipment leaks are vented through a closed vent system to a control device or routed to a fuel gas system or process meeting the requirements of §63.1034 are exempt from the requirements of §§63.1025 through 63.1033 and 63.1035. The enclosure shall be maintained under a negative pressure at all times while the process unit or affected facility is in operation to ensure that all emissions are routed to a control device.

(b) *Recordkeeping.* Owners and operators choosing to comply with the requirements of this section shall maintain the records specified in paragraphs (b)(1) through (b)(3) of this section.

(1) Identification of the process unit(s) or affected facilities and the regulated materials they handle.

(2) A schematic of the process unit or affected facility, enclosure, and closed vent system.

(3) A description of the system used to create a negative pressure in the enclosure to ensure that all emissions are routed to the control device.

§ 63.1038 Recordkeeping requirements.

(a) *Recordkeeping system.* An owner or operator of more than one regulated source subject to the provisions of this subpart may comply with the recordkeeping requirements for these regulated sources in one recordkeeping system. The recordkeeping system shall identify each record by regulated source and the type of program being implemented (e.g., quarterly monitoring, quality improvement) for each type of equipment. The records required by this subpart are summarized in paragraphs (b) and (c) of this section.

(b) *General equipment leak records.* (1) As specified in §63.1022(a) and (b), the owner or operator shall keep general and specific equipment identification if the equipment is not physically tagged and the owner or operator is electing to identify the equipment subject to this subpart through written documentation such as a log or other designation.

(2) The owner or operator shall keep a written plan as specified in §63.1022(c)(4) for any equipment that is designated as unsafe- or difficult-to-monitor.

(3) The owner or operator shall maintain a record of the identity and an explanation as specified in §63.1022(d)(2) for any equipment that is designated as unsafe-to-repair.

(4) As specified in §63.1022(e), the owner or operator shall maintain the identity of compressors operating with an instrument reading of less than 500 parts per million.

(5) The owner or operator shall keep records associated with the determination that equipment is in heavy liquid service as specified in §63.1022(f).

(6) The owner or operator shall keep records for leaking equipment as specified in §63.1023(e)(2).

(7) The owner or operator shall keep records for leak repair as specified in §63.1024(f) and records for delay of repair as specified in §63.1024(d).

(c) *Specific equipment leak records.* (1) For valves, the owner or operator shall maintain the records specified in paragraphs (c)(1)(i) and (c)(1)(ii) of this section.

(i) The monitoring schedule for each process unit as specified in §63.1025(b)(3)(vi).

(ii) The valve subgrouping records specified in §63.1025(b)(4)(iv), if applicable.

(2) For pumps, the owner or operator shall maintain the records specified in paragraphs (c)(2)(i) through (c)(2)(iii) of this section.

(i) Documentation of pump visual inspections as specified in §63.1026(b)(4).

(ii) Documentation of dual mechanical seal pump visual inspections as specified in §63.1026(e)(1)(v).

(iii) For the criteria as to the presence and frequency of drips for dual mechanical seal pumps, records of the design criteria and explanations and any changes and the reason for the changes, as specified in §63.1026(e)(1)(i).

(3) For connectors, the owner or operator shall maintain the monitoring schedule for each process unit as specified in §63.1027(b)(3)(v).

(4) For agitators, the owner or operator shall maintain the following records:

(i) Documentation of agitator seal visual inspections as specified in §63.1028; and

(ii) For the criteria as to the presence and frequency of drips for agitators, the owner or operator shall keep records of the design criteria and explanations and any changes and the reason for the changes, as specified in §63.1028(e)(1)(vi).

(5) For pressure relief devices in gas and vapor or light liquid service, the owner or operator shall keep records of the dates and results of monitoring following a pressure release, as specified in §63.1030(c)(3).

(6) For compressors, the owner or operator shall maintain the records specified in paragraphs (c)(6)(i) and (c)(6)(ii) of this section.

(i) For criteria as to failure of the seal system and/or the barrier fluid system, record the design criteria and explanations and any changes and the reason for the changes, as specified in §63.1031(d)(2).

(ii) For compressors operating under the alternative compressor standard, record the dates and results of each compliance test as specified in §63.1031(f)(2).

(7) For a pump QIP program, the owner or operator shall maintain the records specified in paragraphs (c)(7)(i) through (c)(7)(v) of this section.

(i) Individual pump records as specified in §63.1035(d)(2).

(ii) Trial evaluation program documentation as specified in §63.1035(d)(6)(iii).

(iii) Engineering evaluation documenting the basis for judgement that superior emission performance technology is not applicable as specified in §63.1035(d)(6)(vi).

(iv) Quality assurance program documentation as specified in §63.1035(d)(7).

(v) QIP records as specified in §63.1035(e).

(8) For process units complying with the batch process unit alternative, the owner or operator shall maintain the records specified in paragraphs (c)(8)(i) and (c)(8)(ii) of this section.

(i) Pressure test records as specified in §63.1036(b)(7).

(ii) Records for equipment added to the process unit as specified in §63.1036(d).

(9) For process units complying with the enclosed-vented process unit alternative, the owner or operator shall maintain the records for enclosed-vented process units as specified in §63.1037(b).

§ 63.1039 Reporting requirements.

(a) *Initial Compliance Status Report.* Each owner or operator shall submit an Initial Compliance Status Report according to the procedures in the referencing subpart. The notification shall include the information listed in paragraphs (a)(1) through (a)(3) of this section, as applicable.

(1) The notification shall provide the information listed in paragraphs (a)(1)(i) through (a)(1)(iv) of this section for each process unit or affected facility subject to the requirements of this subpart.

(i) Process unit or affected facility identification.

(ii) Number of each equipment type (e.g., valves, pumps) excluding equipment in vacuum service.

(iii) Method of compliance with the standard (e.g., “monthly leak detection and repair” or “equipped with dual mechanical seals”).

(iv) Planned schedule for requirements in §§63.1025 and 63.1026.

(2) The notification shall provide the information listed in paragraphs (a)(2)(i) and (a)(2)(ii) of this section for each process unit or affected facility subject to the requirements of §63.1036(b).

(i) Batch products or product codes subject to the provisions of this subpart, and

(ii) Planned schedule for pressure testing when equipment is configured for production of products subject to the provisions of this subpart.

(3) The notification shall provide the information listed in paragraphs (a)(3)(i) and (a)(3)(ii) of this section for each process unit or affected facility subject to the requirements in §63.1037.

(i) Process unit or affected facility identification.

(ii) A description of the system used to create a negative pressure in the enclosure and the control device used to comply with the requirements of §63.1034 of this part.

(b) *Periodic Reports.* The owner or operator shall report the information specified in paragraphs (b)(1) through (b)(8) of this section, as applicable, in the Periodic Report specified in the referencing subpart.

(1) For the equipment specified in paragraphs (b)(1)(i) through (b)(1)(v) of this section, report in a summary format by equipment type, the number of components for which leaks were detected and for valves, pumps and connectors show the percent leakers, and the total number of components monitored. Also include the number of leaking components that were not repaired as required by §63.1024, and for valves and connectors, identify the number of components that are determined by §63.1025(c)(3) to be nonrepairable.

(i) Valves in gas and vapor service and in light liquid service pursuant to §63.1025(b) and (c).

(ii) Pumps in light liquid service pursuant to §63.1026(b) and (c).

(iii) Connectors in gas and vapor service and in light liquid service pursuant to §63.1027(b) and (c).

(iv) Agitators in gas and vapor service and in light liquid service pursuant to §63.1028(c).

(v) Compressors pursuant to §63.1031(d).

(2) Where any delay of repair is utilized pursuant to §63.1024(d), report that delay of repair has occurred and report the number of instances of delay of repair.

(3) If applicable, report the valve subgrouping information specified in §63.1025(b)(4)(iv).

(4) For pressure relief devices in gas and vapor service pursuant to §63.1030(b) and for compressors pursuant to §63.1031(f) that are to be operated at a leak detection instrument reading of less than 500 parts per million, report the results of all monitoring to show compliance conducted within the semiannual reporting period.

(5) Report, if applicable, the initiation of a monthly monitoring program for valves pursuant to §63.1025(b)(3)(i).

(6) Report, if applicable, the initiation of a quality improvement program for pumps pursuant to §63.1035.

(7) Where the alternative means of emissions limitation for batch processes is utilized, report the information listed in §63.1036(f).

(8) Report the information listed in paragraph (a) of this section for the Initial Compliance Status Report for process units or affected facilities with later compliance dates. Report any revisions to items reported in an earlier Initial Compliance Status Report if the method of compliance has changed since the last report.

Table 1 to Subpart UU of Part 63—Batch Processes Monitoring Frequency For Equipment Other Than Connectors

Operating time (% of year)	Equivalent continuous process monitoring frequency time in use		
	Monthly	**Quarterly**	**Semiannually**
0 to <25%	Quarterly	Annually	Annually.
25 to <50%	Quarterly	Semiannually	Annually.
50 to <75%	Bimonthly	Three times	Semiannually.
75 to 100%	Monthly	Quarterly	Semiannually.

Indiana Department of Environmental Management
Office of Air Quality

Attachment G

Title 40: Protection of Environment
Subpart WW—National Emission Standards for Storage Vessels (Tanks)—Control Level 2

Source: 64 FR 34918, June 29, 1999, unless otherwise noted.

§ 63.1060 Applicability.

The provisions of this subpart apply to the control of air emissions from storage vessels for which another subpart references the use of this subpart for such air emission control. These air emission standards for storage vessels are placed here for administrative convenience and only apply to those owners and operators of facilities subject to a referencing subpart. The provisions of subpart A (General Provisions) of this part do not apply to this subpart except as noted in the referencing subpart.

§ 63.1061 Definitions.

All terms used in this subpart shall have the meaning given them in the Act and in this section.

Capacity means the volume of liquid that is capable of being stored in a vessel, determined by multiplying the vessel's internal cross-sectional area by the internal height of the shell.

Deck cover means a device which covers an opening in a floating roof deck. Some deck covers move horizontally relative to the deck (i.e., a sliding cover).

Empty or *emptying* means the partial or complete removal of stored liquid from a storage vessel. Storage vessels that contain liquid only as wall or bottom clingage, or in pools due to bottom irregularities, are considered completely empty.

External floating roof or *EFR* means a floating roof located in a storage vessel without a fixed roof.

Fill or *filling* means the introduction of liquid into a storage vessel, but not necessarily to capacity.

Fixed roof means a roof that is mounted (i.e., permanently affixed) on a storage vessel and that does not move with fluctuations in stored liquid level.

Flexible fabric sleeve seal means a seal made of an elastomeric fabric (or other material) which covers an opening in a floating roof deck, and which allows the penetration of a fixed roof support column. The seal is attached to the rim of the deck opening and extends to the outer surface of the column. The seal is draped (but does not contact the stored liquid) to allow the horizontal movement of the deck relative to the column.

Floating roof means a roof that floats on the surface of the liquid in a storage vessel. A floating roof substantially covers the stored liquid surface (but is not necessarily in contact with the entire surface), and is comprised of a deck, a rim seal, and miscellaneous deck fittings.

Initial fill or *initial filling means* the first introduction of liquid into a storage vessel that is either newly constructed or has not been in liquid service for a year or longer.

Internal floating roof or *IFR* means a floating roof located in a storage vessel with a fixed roof. For the purposes of this subpart, an external floating roof located in a storage vessel to which a fixed roof has been added is considered to be an internal floating roof.

Liquid-mounted seal means a resilient or liquid-filled rim seal designed to contact the stored liquid.

Mechanical shoe seal or *metallic shoe seal* means a rim seal consisting of a band of metal (or other suitable material) as the sliding contact with the wall of the storage vessel, and a fabric seal to close the annular space between the band and the rim of the floating roof deck. The band is typically formed as a series of sheets (shoes) that are overlapped or joined together to form a ring. The lower end of the band extends into the stored liquid.

Pole float means a float located inside a guidepole that floats on the surface of the stored liquid. The rim of the float has a wiper or seal that extends to the inner surface of the pole.

Pole sleeve means a device which extends from either the cover or the rim of an opening in a floating roof deck to the outer surface of a pole that passes through the opening. The sleeve extends into the stored liquid.

Pole wiper means a seal that extends from either the cover or the rim of an opening in a floating roof deck to the outer surface of a pole that passes through the opening.

Referencing subpart means the subpart that refers an owner or operator to this subpart.

Rim seal means a device attached to the rim of a floating roof deck that spans the annular space between the deck and the wall of the storage vessel. When a floating roof has only one such device, it is a primary seal; when there are two seals (one mounted above the other), the lower seal is the primary seal and the upper seal is the secondary seal.

Slotted guidepole means a guidepole or gaugepole that has slots or holes through the wall of the pole. The slots or holes allow the stored liquid to flow into the pole at liquid levels above the lowest operating level.

Storage vessel or *Tank* means a stationary unit that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support and is designed to hold an accumulation of liquids or other materials.

Vapor-mounted seal means a rim seal designed not to be in contact with the stored liquid. Vapor-mounted seals may include, but are not limited to, resilient seals and flexible wiper seals.

§ 63.1062 Storage vessel control requirements.

(a) For each storage vessel to which this subpart applies, the owner or operator shall comply with one of the requirements listed in paragraphs (a)(1) through (a)(3) of this section.

(1) Operate and maintain an IFR.

(2) Operate and maintain an EFR.

(3) *Equivalent requirements.* Comply with an equivalent to the requirements in paragraph (a)(1) or (a)(2) of this section, as provided in §63.1064.

(b) [Reserved]

§ 63.1063 Floating roof requirements.

The owner or operator who elects to use a floating roof to comply with the requirements of §63.1062 shall comply with the requirements in paragraphs (a) through (e) of this section.

(a) *Design requirements* —(1) *Rim seals.* (i) *Internal floating roof.* An IFR shall be equipped with one of the seal configurations listed in paragraphs (a)(1)(i)(A) through (a)(1)(i)(C) of this section.

(A) A liquid-mounted seal.

(B) A mechanical shoe seal.

(C) Two seals mounted one above the other. The lower seal may be vapor-mounted.

(D) If the IFR is equipped with a vapor-mounted seal as of the proposal date for a referencing subpart, paragraphs (a)(1)(i)(A) through (a)(1)(i)(C) of this section do not apply until the next time the storage vessel is completely emptied and degassed, or 10 years after promulgation of the referencing subpart, whichever occurs first.

(ii) *External floating roof.* An EFR shall be equipped with one of the seal configurations listed in paragraphs (a)(1)(ii)(A) and (a)(1)(ii)(B) of this section.

(A) A liquid-mounted seal and a secondary seal.

(B) A mechanical shoe seal and a secondary seal. The upper end of the shoe(s) shall extend a minimum of 61 centimeters (24 inches) above the stored liquid surface.

(C) If the EFR is equipped with a liquid-mounted seal or mechanical shoe seal, or a vapor-mounted seal and secondary seal, as of the proposal date for a referencing subpart, the seal options specified in paragraphs (a)(1)(ii)(A) and (a)(1)(ii)(B) of this section do not apply until the next time the storage vessel is completely emptied and degassed, or 10 years after the promulgation date of the referencing subpart, whichever occurs first.

(2) *Deck fittings.* Openings through the deck of the floating roof shall be equipped as described in paragraphs (a)(2)(i) through (a)(2)(viii) of this section.

(i) Each opening except those for automatic bleeder vents (vacuum breaker vents) and rim space vents shall have its lower edge below the surface of the stored liquid.

(ii) Each opening except those for automatic bleeder vents (vacuum breaker vents), rim space vents, leg sleeves, and deck drains shall be equipped with a deck cover. The deck cover shall be equipped with a gasket between the cover and the deck.

(iii) Each automatic bleeder vent (vacuum breaker vent) and rim space vent shall be equipped with a gasketed lid, pallet, flapper, or other closure device.

(iv) Each opening for a fixed roof support column may be equipped with a flexible fabric sleeve seal instead of a deck cover.

(v) Each opening for a sample well or deck drain (that empties into the stored liquid) may be equipped with a slit fabric seal or similar device that covers at least 90 percent of the opening, instead of a deck cover.

(vi) Each cover on access hatches and gauge float wells shall be designed to be bolted or fastened when closed.

(vii) Each opening for an unslotted guidepole shall be equipped with a pole wiper, and each unslotted guidepole shall be equipped with a gasketed cap on the top of the guidepole.

(viii) Each opening for a slotted guidepole shall be equipped with one of the control device configurations specified in paragraphs (a)(2)(viii)(A) and (a)(2)(viii)(B) of this section.

(A) A pole wiper and a pole float. The wiper or seal of the pole float shall be at or above the height of the pole wiper.

(B) A pole wiper and a pole sleeve.

(ix) If the floating roof does not meet the requirements listed in paragraphs (a)(2)(i) through (a)(2)(viii) of this section as of the proposal date of the referencing subpart, these requirements do not apply until the next time the vessel is completely emptied and degassed, or 10 years after the promulgation date of the referencing subpart, whichever occurs first.

(b) *Operational requirements.* (1) The floating roof shall float on the stored liquid surface at all times, except when the floating roof is supported by its leg supports or other support devices (e.g., hangers from the fixed roof).

(2) When the storage vessel is storing liquid, but the liquid depth is insufficient to float the floating roof, the process of filling to the point of refloating the floating roof shall be continuous and shall be performed as soon as practical.

(3) Each cover over an opening in the floating roof, except for automatic bleeder vents (vacuum breaker vents) and rim space vents, shall be closed at all times, except when the cover must be open for access.

(4) Each automatic bleeder vent (vacuum breaker vent) and rim space vent shall be closed at all times, except when required to be open to relieve excess pressure or vacuum, in accordance with the manufacturer's design.

(5) Each unslotted guidepole cap shall be closed at all times except when gauging the liquid level or taking liquid samples.

(c) *Inspection frequency requirements* —(1) *Internal floating roofs.* Internal floating roofs shall be inspected as specified in paragraph (d)(1) of this section before the initial filling of the storage vessel. Subsequent inspections shall be performed as specified in paragraph (c)(1)(i) or (c)(1)(ii) of this section.

(i) Internal floating roofs shall be inspected as specified in paragraphs (c)(1)(i)(A) and (c)(1)(i)(B) of this section.

(A) At least once per year the IFR shall be inspected as specified in paragraph (d)(2) of this section.

(B) Each time the storage vessel is completely emptied and degassed, or every 10 years, whichever occurs first, the IFR shall be inspected as specified in paragraph (d)(1) of this section.

(ii) Instead of the inspection frequency specified in paragraph (c)(1)(i) of this section, internal floating roofs with two rim seals may be inspected as specified in paragraph (d)(1) of this section

each time the storage vessel is completely emptied and degassed, or every 5 years, whichever occurs first.

(2) *External floating roofs.* External floating roofs shall be inspected as specified in paragraphs (c)(2)(i) through (c)(2)(iv) of this section.

(i) Within 90 days after the initial filling of the storage vessel, the primary and secondary rim seals shall be inspected as specified in paragraph (d)(3) of this section.

(ii) The secondary seal shall be inspected at least once every year, and the primary seal shall be inspected at least every 5 years, as specified in paragraph (d)(3) of this section.

(iii) Each time the storage vessel is completely emptied and degassed, or every 10 years, whichever occurs first, the EFR shall be inspected as specified in paragraph (d)(1) of this section.

(iv) If the owner or operator determines that it is unsafe to perform the floating roof inspections specified in paragraphs (c)(2)(i) and (c)(2)(ii) of this section, the owner or operator shall comply with the requirements of paragraph (c)(2)(iv)(A) or (c)(2)(iv)(B) of this section.

(A) The inspections shall be performed no later than 30 days after the determination that the floating roof is unsafe.

(B) The storage vessel shall be removed from liquid service no later than 45 days after determining the floating roof is unsafe. If the vessel cannot be emptied within 45 days, the owner or operator may utilize up to two extensions of up to 30 additional days each. If the vessel cannot be emptied within 45 days, the owner or operator may utilize up to two extensions of up to 30 additional days each. Documentation of a decision to use an extension shall include an explanation of why it was unsafe to perform the inspection, documentation that alternative storage capacity is unavailable, and a schedule of actions that will ensure that the vessel will be emptied as soon as practical.

(d) *Inspection procedure requirements.* Floating roof inspections shall be conducted as specified in paragraphs (d)(1) through (d)(3) of this section, as applicable. If a floating roof fails an inspection, the owner or operator shall comply with the repair requirements of paragraph (e) of this section.

(1) Floating roof (IFR and EFR) inspections shall be conducted by visually inspecting the floating roof deck, deck fittings, and rim seals from within the storage vessel. The inspection may be performed entirely from the top side of the floating roof, as long as there is visual access to all deck components specified in paragraph (a) of this section. Any of the conditions described in paragraphs (d)(1)(i) through (d)(1)(v) of this section constitutes inspection failure.

(i) Stored liquid on the floating roof.

(ii) Holes or tears in the primary or secondary seal (if one is present).

(iii) Floating roof deck, deck fittings, or rim seals that are not functioning as designed (as specified in paragraph (a) of this section).

(iv) Failure to comply with the operational requirements of paragraph (b) of this section.

(v) Gaps of more than 0.32 centimeters (1/8inch) between any deck fitting gasket, seal, or wiper (required by paragraph (a) of this section) and any surface that it is intended to seal.

(2) Tank-top inspections of IFR's shall be conducted by visually inspecting the floating roof deck, deck fittings, and rim seal through openings in the fixed roof. Any of the conditions described in paragraphs (d)(1)(i) through (d)(1)(iv) of this section constitutes inspection failure. Identification of holes or tears in the rim seal is required only for the seal that is visible from the top of the storage vessel.

(3) Seal gap inspections for EFR's shall determine the presence and size of gaps between the rim seals and the wall of the storage vessel by the procedures specified in paragraph (d)(3)(i) of this section. Any exceedance of the gap requirements specified in paragraphs (d)(3)(ii) and (d)(3)(iii) of this section constitutes inspection failure.

(i) Rim seals shall be measured for gaps at one or more levels while the EFR is floating, as specified in paragraphs (d)(3)(i)(A) through (d)(3)(i)(F) of this section.

(A) The inspector shall hold a 0.32 centimeter (1/8inch) diameter probe vertically against the inside of the storage vessel wall, just above the rim seal, and attempt to slide the probe down between the seal and the vessel wall. Each location where the probe passes freely (without forcing or binding against the seal) between the seal and the vessel wall constitutes a gap.

(B) The length of each gap shall be determined by inserting the probe into the gap (vertically) and sliding the probe along the vessel wall in each direction as far as it will travel freely without binding between the seal and the vessel wall. The circumferential length along which the probe can move freely is the gap length.

(C) The maximum width of each gap shall be determined by inserting probes of various diameters between the seal and the vessel wall. The smallest probe diameter should be 0.32 centimeter, and larger probes should have diameters in increments of 0.32 centimeter. The diameter of the largest probe that can be inserted freely anywhere along the length of the gap is the maximum gap width.

(D) The average width of each gap shall be determined by averaging the minimum gap width (0.32 centimeter) and the maximum gap width.

(E) The area of a gap is the product of the gap length and average gap width.

(F) The ratio of accumulated area of rim seal gaps to storage vessel diameter shall be determined by adding the area of each gap, and dividing the sum by the nominal diameter of the storage vessel. This ratio shall be determined separately for primary and secondary rim seals.

(ii) The ratio of seal gap area to vessel diameter for the primary seal shall not exceed 212 square centimeters per meter of vessel diameter (10 square inches per foot of vessel diameter), and the maximum gap width shall not exceed 3.81 centimeters (1.5 inches).

(iii) The ratio of seal gap area to vessel diameter for the secondary seal shall not exceed 21.2 square centimeters per meter (1 square inch per foot), and the maximum gap width shall not exceed 1.27 centimeters (0.5 inches), except when the secondary seal must be pulled back or removed to inspect the primary seal.

(e) *Repair requirements.* Conditions causing inspection failures under paragraph (d) of this section shall be repaired as specified in paragraph (e)(1) or (e)(2) of this section.

(1) If the inspection is performed while the storage vessel is not storing liquid, repairs shall be completed before the refilling of the storage vessel with liquid.

(2) If the inspection is performed while the storage vessel is storing liquid, repairs shall be completed or the vessel removed from service within 45 days. If a repair cannot be completed and the vessel cannot be emptied within 45 days, the owner or operator may use up to 2 extensions of up to 30 additional days each. Documentation of a decision to use an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be completely emptied as soon as practical.

§ 63.1064 Alternative means of emission limitation.

(a) An alternate control device may be substituted for a control device specified in §63.1063 if the alternate device has an emission factor less than or equal to the emission factor for the device specified in §63.1063. Requests for the use of alternate devices shall be made as specified in §63.1066(b)(3). Emission factors for the devices specified in §63.1063 are published in EPA Report No. AP–42, Compilation of Air Pollutant Emission Factors.

(b) Tests to determine emission factors for an alternate device shall accurately simulate conditions under which the device will operate, such as wind, temperature, and barometric pressure. Test methods that can be used to perform the testing required in this paragraph include, but are not limited to, the methods listed in paragraphs (b)(1) through (b)(3) of this section.

(1) American Petroleum Institute (API) Manual of Petroleum Measurement Standards, Chapter 19, Section 3, Part A, Wind Tunnel Test Method for the Measurement of Deck-Fitting Loss Factors for External Floating-Roof Tanks.

(2) API Manual of Petroleum Measurement Standards, Chapter 19, Section 3, Part B, Air Concentration Test Method for the Measurement of Rim Seal Loss Factors for Floating-Roof Tanks.

(3) API Manual of Petroleum Measurement Standards, Chapter 19, Section 3, Part E, Weight Loss Test Method for the Measurement of Deck-Fitting Loss Factors for Internal Floating-Roof Tanks.

(c) An alternate combination of control devices may be substituted for any combination of rim seal and deck fitting control devices specified in §63.1063 if the alternate combination emits no more than the combination specified in §63.1063. The emissions from an alternate combination of control devices shall be determined using AP–42 or as specified in paragraph (b) of this section. The emissions from a combination of control devices specified in §63.1063 shall be determined using AP–42. Requests for the use of alternate devices shall be made as specified in §63.1066(b)(3).

§ 63.1065 Recordkeeping requirements.

The owner or operator shall keep the records required in paragraph (a) of this section for as long as liquid is stored. Records required in paragraphs (b), (c) and (d) of this section shall be kept for at least 5 years. Records shall be kept in such a manner that they can be readily accessed within 24 hours. Records may be kept in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

(a) *Vessel dimensions and capacity.* A record shall be kept of the dimensions of the storage vessel, an analysis of the capacity of the storage vessel, and an identification of the liquid stored.

(b) *Inspection results.* Records of floating roof inspection results shall be kept as specified in paragraphs (b)(1) and (b)(2) of this section.

(1) If the floating roof passes inspection, a record shall be kept that includes the information specified in paragraphs (b)(1)(i) and (b)(1)(ii) of this section. If the floating roof fails inspection, a record shall be kept that includes the information specified in paragraphs (b)(1)(i) through (b)(1)(v) of this section.

(i) Identification of the storage vessel that was inspected.

(ii) The date of the inspection.

(iii) A description of all inspection failures.

(iv) A description of all repairs and the dates they were made.

(v) The date the storage vessel was removed from service, if applicable.

(2) A record shall be kept of EFR seal gap measurements, including the raw data obtained and any calculations performed.

(c) *Floating roof landings.* The owner or operator shall keep a record of the date when a floating roof is set on its legs or other support devices. The owner or operator shall also keep a record of the date when the roof was refloated, and the record shall indicate whether the process of refloating was continuous.

(d) An owner or operator who elects to use an extension in accordance with §63.1063(e)(2) or §63.1063(c)(2)(iv)(B) shall keep the documentation required by those paragraphs.

§ 63.1066 Reporting requirements.

(a) *Notification of initial startup.* If the referencing subpart requires that a notification of initial startup be filed, then the content of the notification of initial startup shall include (at a minimum) the information specified in the referencing subpart and the information specified in paragraphs (a)(1) and (a)(2) of this section.

(1) The identification of each storage vessel, its capacity and the liquid stored in the storage vessel.

(2) A statement of whether the owner or operator of the source can achieve compliance by the compliance date specified in referencing subpart.

(b) *Periodic reports.* Report the information specified in paragraphs (b)(1) through (b)(4) of this section, as applicable, in the periodic report specified in the referencing subpart.

(1) *Notification of inspection.* To provide the Administrator the opportunity to have an observer present, the owner or operator shall notify the Administrator at least 30 days before an inspection required by §§63.1063(d)(1) or (d)(3). If an inspection is unplanned and the owner or operator could not have known about the inspection 30 days in advance, then the owner or operator shall notify the Administrator at least 7 days before the inspection. 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 so that it is received by the Administrator at least 7 days before the inspection. If a delegated State or local agency is notified, the owner or operator is not required to notify the Administrator. A delegated State or local agency may waive the requirement for notification of inspections.

(2) *Inspection results.* The owner or operator shall submit a copy of the inspection record (required in §63.1065) when inspection failures occur.

(3) *Requests for alternate devices.* The owner or operator requesting the use of an alternate control device shall submit a written application including emissions test results and an analysis demonstrating that the alternate device has an emission factor that is less than or equal to the device specified in §63.1063.

(4) Requests for extensions. An owner or operator who elects to use an extension in accordance with §63.1063(e)(2) or §63.1063(c)(2)(iv)(B) shall submit the documentation required by those paragraphs.

§ 63.1067 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority such as the applicable State, local, or tribal agency. If the EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. Contact the applicable EPA Regional Office to find out if this subpart is delegated to a State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under section 40 CFR part 63, subpart E, the authorities contained in paragraphs (b)(1) through (5) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(1) Approval of alternatives to the nonopacity emissions standards in §§63.1062 and 63.1063(a) and (b) for alternative means of emission limitation, under §63.6(g).

(2) [Reserved]

(3) Approval of major changes to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(4) Approval of major changes to monitoring under §63.8(f) and as defined in §63.90.

(5) Approval of major changes to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

[67 FR 46279, July 12, 2002]

Indiana Department of Environmental Management
Office of Air Quality

Attachment H

Title 40: Protection of Environment
Subpart EEEE—National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)

Source: 69 FR 5063, Feb. 3, 2004, unless otherwise noted.

What This Subpart Covers

§ 63.2330 What is the purpose of this subpart?

This subpart establishes national emission limitations, operating limits, and work practice standards for organic hazardous air pollutants (HAP) emitted from organic liquids distribution (OLD) (non-gasoline) operations at major sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations, operating limits, and work practice standards.

§ 63.2334 Am I subject to this subpart?

(a) Except as provided for in paragraphs (b) and (c) of this section, you are subject to this subpart if you own or operate an OLD operation that is located at, or is part of, a major source of HAP emissions. An OLD operation may occupy an entire plant site or be collocated with other industrial (*e.g.,* manufacturing) operations at the same plant site.

(b) Organic liquid distribution operations located at research and development facilities, consistent with section 112(c)(7) of the Clean Air Act (CAA), are not subject to this subpart.

(c) Organic liquid distribution operations do not include the activities and equipment, including product loading racks, used to process, store, or transfer organic liquids at facilities listed in paragraph (c) (1) and (2) of this section.

(1) Oil and natural gas production field facilities, as the term “facility” is defined in §63.761 of subpart HH.

(2) Natural gas transmission and storage facilities, as the term “facility” is defined in §63.1271 of subpart HHH.

§ 63.2338 What parts of my plant does this subpart cover?

(a) This subpart applies to each new, reconstructed, or existing OLD operation affected source.

(b) Except as provided in paragraph (c) of this section, the affected source is the collection of activities and equipment used to distribute organic liquids into, out of, or within a facility that is a major source of HAP. The affected source is composed of:

(1) All storage tanks storing organic liquids.

(2) All transfer racks at which organic liquids are loaded into or unloaded out of transport vehicles and/or containers.

(3) All equipment leak components in organic liquids service that are associated with:

(i) Storage tanks storing organic liquids;

(ii) Transfer racks loading or unloading organic liquids;

(iii) Pipelines that transfer organic liquids directly between two storage tanks that are subject to this subpart;

(iv) Pipelines that transfer organic liquids directly between a storage tank subject to this subpart and a transfer rack subject to this subpart; and

(v) Pipelines that transfer organic liquids directly between two transfer racks that are subject to this subpart.

(4) All transport vehicles while they are loading or unloading organic liquids at transfer racks subject to this subpart.

(5) All containers while they are loading or unloading organic liquids at transfer racks subject to this subpart.

(c) The equipment listed in paragraphs (c)(1) through (4) of this section and used in the identified operations is excluded from the affected source.

(1) Storage tanks, transfer racks, transport vehicles, containers, and equipment leak components that are part of an affected source under another 40 CFR part 63 national emission standards for hazardous air pollutants (NESHAP).

(2) Non-permanent storage tanks, transfer racks, transport vehicles, containers, and equipment leak components when used in special situation distribution loading and unloading operations (such as maintenance or upset liquids management).

(3) Storage tanks, transfer racks, transport vehicles, containers, and equipment leak components when used to conduct maintenance activities, such as stormwater management, liquid removal from tanks for inspections and maintenance, or changeovers to a different liquid stored in a storage tank.

(d) An affected source is a new affected source if you commenced construction of the affected source after April 2, 2002, and you meet the applicability criteria in §63.2334 at the time you commenced operation.

(e) An affected source is reconstructed if you meet the criteria for reconstruction as defined in §63.2.

(f) An affected source is existing if it is not new or reconstructed.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42904, July 28, 2006]

§ 63.2342 When do I have to comply with this subpart?

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to the schedule identified in paragraph (a)(1), (a)(2), or (a)(3) of this section, as applicable.

(1)(i) Except as provided in paragraph (a)(1)(ii) of this section, if you startup your new affected source on or before February 3, 2004 or if you reconstruct your affected source on or before February 3, 2004, you must comply with the emission limitations, operating limits, and work practice standards for new and reconstructed sources in this subpart no later than February 3, 2004.

(ii) For any emission source listed in paragraph §63.2338(b) at an affected source that commenced construction or reconstruction after April 2, 2002, but before February 3, 2004, that is required to be controlled based on the applicability criteria in this subpart, but:

(A) Would not have been required to be controlled based on the applicability criteria as proposed for this subpart, you must comply with the emission limitations, operating limits, and work practice standards for each such emission source based on the schedule found in paragraph (b) of this section or at startup, whichever is later; or

(B) Would have been subject to a less stringent degree of control requirement as proposed for this subpart, you must comply with the emission limitations, operating limits, and work practice standards in this subpart for each such emission source based on the schedule found in paragraph (b) of this section or at startup, whichever is later, and if you start up your affected new or reconstructed source before February 5, 2007, you must comply with the emission limitations, operating limits, and work practice standards for each such emission source as proposed for this subpart, until you are required to comply with the emission limitations, operating limits, and work practice standards in this subpart for each such emission source based on the schedule found in paragraph (b) of this section.

(2) If you commence construction of or reconstruct your affected source after February 3, 2004, you must comply with the emission limitations, operating limits, and work practice standards for new and reconstructed sources in this subpart upon startup of your affected source.

(3) If, after startup of a new affected source, the total actual annual facility-level organic liquid loading volume at that source exceeds the criteria for control in Table 2 to this subpart, items 9 and 10, the owner or operator must comply with the transfer rack requirements specified in §63.2346(b) immediately; that is, be in compliance the first day of the period following the end of the 3-year period triggering the control criteria.

(b)(1) If you have an existing affected source, you must comply with the emission limitations, operating limits, and work practice standards for existing affected sources no later than February 5, 2007, except as provided in paragraphs (b)(2) and (3) of this section.

(2) Floating roof storage tanks at existing affected sources must be in compliance with the work practice standards in Table 4 to this subpart, item 1, at all times after the next degassing and cleaning activity or within 10 years after February 3, 2004, whichever occurs first. If the first degassing and cleaning activity occurs during the 3 years following February 3, 2004, the compliance date is February 5, 2007.

(3)(i) If an addition or change other than reconstruction as defined in §63.2 is made to an existing affected facility that causes the total actual annual facility-level organic liquid loading volume to exceed the criteria for control in Table 2 to this subpart, items 7 and 8, the owner or operator must comply with the transfer rack requirements specified in §63.2346(b) immediately; that is, be in compliance the first day of the period following the end of the 3-year period triggering the control criteria.

(ii) If the owner or operator believes that compliance with the transfer rack emission limits cannot be achieved immediately, as specified in paragraph (b)(3)(i) of this section, the owner or operator may submit a request for a compliance extension, as specified in paragraphs (b)(3)(ii)(A) through

(I) of this section. Subject to paragraph (b)(3)(ii)(B) of this section, until an extension of compliance has been granted by the Administrator (or a State with an approved permit program) under this paragraph (b)(3)(ii), the owner or operator of the transfer rack subject to the requirements of this section shall comply with all applicable requirements of this subpart. Advice on requesting an extension of compliance may be obtained from the Administrator (or the State with an approved permit program).

(A) *Submittal.* The owner or operator shall submit a request for a compliance extension to the Administrator (or a State, when the State has an approved 40 CFR part 70 permit program and the source is required to obtain a 40 CFR part 70 permit under that program, or a State, when the State has been delegated the authority to implement and enforce the emission standard for that source) seeking an extension allowing the source up to 1 additional year to comply with the transfer rack standard, if such additional period is necessary for the installation of controls. The owner or operator of the affected source who has requested an extension of compliance under this paragraph (b)(3)(ii)(A) and who is otherwise required to obtain a title V permit shall apply for such permit, or apply to have the source's title V permit revised to incorporate the conditions of the extension of compliance. The conditions of an extension of compliance granted under this paragraph (b)(3)(ii)(A) will be incorporated into the affected source's title V permit according to the provisions of 40 CFR part 70 or Federal title V regulations in this chapter (42 U.S.C. 7661), whichever are applicable.

(B) *When to submit.* (*1*) Any request submitted under paragraph (b)(3)(ii)(A) of this section must be submitted in writing to the appropriate authority no later than 120 days prior to the affected source's compliance date (as specified in paragraph (b)(3)(i) of this section), except as provided for in paragraph (b)(3)(ii)(B)(*2*) of this section. Nonfrivolous requests submitted under this paragraph (b)(3)(ii)(B)(*1*) will stay the applicability of the rule as to the emission points in question until such time as the request is granted or denied. A denial will be effective as of the date of denial.

(*2*) An owner or operator may submit a compliance extension request after the date specified in paragraph (b)(3)(ii)(B)(*1*) of this section provided the need for the compliance extension arose after that date, and before the otherwise applicable compliance date and the need arose due to circumstances beyond reasonable control of the owner or operator. This request must include, in addition to the information required in paragraph (b)(3)(ii)(C) of this section, a statement of the reasons additional time is needed and the date when the owner or operator first learned of the problems. Nonfrivolous requests submitted under this paragraph (b)(3)(ii)(B)(*2*) will stay the applicability of the rule as to the emission points in question until such time as the request is granted or denied. A denial will be effective as of the original compliance date.

(C) *Information required.* The request for a compliance extension under paragraph (b)(3)(ii)(A) of this section shall include the following information:

(*1*) The name and address of the owner or operator and the address of the existing source if it differs from the address of the owner or operator;

(*2*) The name, address, and telephone number of a contact person for further information;

(*3*) An identification of the organic liquid distribution operation and of the specific equipment for which additional compliance time is required;

(*4*) A description of the controls to be installed to comply with the standard;

(*5*) Justification for the length of time being requested; and

(*6*) A compliance schedule, including the date by which each step toward compliance will be reached. At a minimum, the list of dates shall include:

(*i*) The date by which on-site construction, installation of emission control equipment, or a process change is planned to be initiated;

(*ii*) The date by which on-site construction, installation of emission control equipment, or a process change is to be completed; and

(*iii*) The date by which final compliance is to be achieved.

(D) *Approval of request for extension of compliance.* Based on the information provided in any request made under paragraph (b)(3)(ii)(C) of this section, or other information, the Administrator (or the State with an approved permit program) may grant an extension of compliance with the transfer rack emission standard, as specified in paragraph (b)(3)(ii) of this section. The extension will be in writing and will—

(*1*) Identify each affected source covered by the extension;

(*2*) Specify the termination date of the extension;

(*3*) Specify the dates by which steps toward compliance are to be taken, if appropriate;

(*4*) Specify other applicable requirements to which the compliance extension applies (e.g., performance tests);

(*5*) Specify the contents of the progress reports to be submitted and the dates by which such reports are to be submitted, if required pursuant to paragraph (b)(3)(ii)(E) of this section.

(*6*) Under paragraph (b)(3)(ii) of this section, specify any additional conditions that the Administrator (or the State) deems necessary to assure installation of the necessary controls and protection of the health of persons during the extension period.

(E) *Progress reports.* The owner or operator of an existing source that has been granted an extension of compliance under paragraph (b)(3)(ii)(D) of this section may be required to submit to the Administrator (or the State with an approved permit program) progress reports indicating whether the steps toward compliance outlined in the compliance schedule have been reached.

(F) *Notification of approval or intention to deny.* (*1*) The Administrator (or the State with an approved permit program) will notify the owner or operator in writing of approval or intention to deny approval of a request for an extension of compliance within 30 calendar days after receipt of sufficient information to evaluate a request submitted under paragraph (b)(3)(ii) of this section. The Administrator (or the State) will notify the owner or operator in writing of the status of his/her application; that is, whether the application contains sufficient information to make a determination, within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted. The 30-day approval or denial period will begin after the owner or operator has been notified in writing that his/her application is complete. Failure by the Administrator to act within 30 calendar days to approve or disapprove a request submitted under paragraph (b)(3)(ii) of this section does not constitute automatic approval of the request.

(*2*) When notifying the owner or operator that his/her application is not complete, the Administrator will specify the information needed to complete the application and provide notice of opportunity for the applicant to present, in writing, within 30 calendar days after he/she is notified

of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(*3*) Before denying any request for an extension of compliance, the Administrator (or the State with an approved permit program) will notify the owner or operator in writing of the Administrator's (or the State's) intention to issue the denial, together with:

(*i*) Notice of the information and findings on which the intended denial is based; and

(*ii*) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the intended denial, additional information or arguments to the Administrator (or the State) before further action on the request.

(*4*) The Administrator's final determination to deny any request for an extension will be in writing and will set forth the specific grounds on which the denial is based. The final determination will be made within 30 calendar days after presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(G) *Termination of extension of compliance.* The Administrator (or the State with an approved permit program) may terminate an extension of compliance at an earlier date than specified if any specification under paragraph (b)(3)(ii)(D)(*3*) or paragraph (b)(3)(ii)(D)(*4*) of this section is not met. Upon a determination to terminate, the Administrator will notify, in writing, the owner or operator of the Administrator's determination to terminate, together with:

(*1*) Notice of the reason for termination; and

(*2*) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the determination to terminate, additional information or arguments to the Administrator before further action on the termination.

(*3*) A final determination to terminate an extension of compliance will be in writing and will set forth the specific grounds on which the termination is based. The final determination will be made within 30 calendar days after presentation of additional information or arguments, or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(H) The granting of an extension under this section shall not abrogate the Administrator's authority under section 114 of the CAA.

(I) *Limitation on use of compliance extension.* The owner or operator may request an extension of compliance under the provisions specified in paragraph (b)(3)(ii) of this section only once for each facility.

(c) If you have an area source that does not commence reconstruction but increases its emissions or its potential to emit such that it becomes a major source of HAP emissions and an existing affected source subject to this subpart, you must be in compliance by 3 years after the area source becomes a major source.

(d) You must meet the notification requirements in §§63.2343 and 63.2382(a), as applicable, according to the schedules in §63.2382(a) and (b)(1) through (3) and in subpart A of this part. Some of these notifications must be submitted before the compliance dates for the emission limitations, operating limits, and work practice standards in this subpart.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42905, July 28, 2006]

§ 63.2343 What are my requirements for emission sources not requiring control?

This section establishes the notification, recordkeeping, and reporting requirements for emission sources identified in §63.2338 that do not require control under this subpart (i.e., under paragraphs (a) through (e) of §63.2346). Such emission sources are not subject to any other notification, recordkeeping, or reporting sections in this subpart, including §63.2350(c), except as indicated in paragraphs (a) through (d) of this section.

(a) For each storage tank subject to this subpart having a capacity of less than 18.9 cubic meters (5,000 gallons) and for each transfer rack subject to this subpart that only unloads organic liquids (i.e., no organic liquids are loaded at any of the transfer racks), you must keep documentation that verifies that each storage tank and transfer rack identified in paragraph (a) of this section is not required to be controlled. The documentation must be kept up-to-date (i.e., all such emission sources at a facility are identified in the documentation regardless of when the documentation was last compiled) and must be in a form suitable and readily available for expeditious inspection and review according to §63.10(b)(1), including records stored in electronic form in a separate location. The documentation may consist of identification of the tanks and transfer racks identified in paragraph (a) of this section on a plant site plan or process and instrumentation diagram (P&ID).

(b) For each storage tank subject to this subpart having a capacity of 18.9 cubic meters (5,000 gallons) or more that is not subject to control based on the criteria specified in Table 2 to this subpart, items 1 through 6, you must comply with the requirements specified in paragraphs (b)(1) through (3) of this section.

(1)(i) You must submit the information in §63.2386(c)(1), (2), (3), and (10)(i) in either the Notification of Compliance Status, according to the schedule specified in Table 12 to this subpart, or in your first Compliance report, according to the schedule specified in §63.2386(b), whichever occurs first.

(ii)(A) If you submit your first Compliance report before your Notification of Compliance Status, the Notification of Compliance Status must contain the information specified in §63.2386(d)(3) and (4) if any of the changes identified in paragraph (d) of this section have occurred since the filing of the first Compliance report. If none of the changes identified in paragraph (d) of this section have occurred since the filing of the first Compliance report, you do not need to report the information specified in §63.2386(c)(10)(i) when you submit your Notification of Compliance Status.

(B) If you submit your Notification of Compliance Status before your first Compliance report, your first Compliance report must contain the information specified in §63.2386(d)(3) and (4) if any of the changes specified in paragraph (d) of this section have occurred since the filing of the Notification of Compliance Status.

(iii) If you are already submitting a Notification of Compliance Status or a first Compliance report under §63.2386(c), you do not need to submit a separate Notification of Compliance Status or first Compliance report for each storage tank that meets the conditions identified in paragraph (b) of this section (i.e., a single Notification of Compliance Status or first Compliance report should be submitted).

(2)(i) You must submit a subsequent Compliance report according to the schedule in §63.2386(b) whenever any of the events in paragraph (d) of this section occur, as applicable.

(ii) Your subsequent Compliance reports must contain the information in §63.2386(c)(1), (2), (3) and, as applicable, in §63.2386(d)(3) and (4). If you are already submitting a subsequent Compliance report under §63.2386(d), you do not need to submit a separate subsequent

Compliance report for each storage tank that meets the conditions identified in paragraph (b) of this section (i.e., a single subsequent Compliance report should be submitted).

(3) For each storage tank that meets the conditions identified in paragraph (b) of this section, you must keep documentation, including a record of the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid, that verifies the storage tank is not required to be controlled under this subpart. The documentation must be kept up-to-date and must be in a form suitable and readily available for expeditious inspection and review according to §63.10(b)(1), including records stored in electronic form in a separate location.

(c) For each transfer rack subject to this subpart that loads organic liquids but is not subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, you must comply with the requirements specified in paragraphs (c)(1) through (3) of this section.

(1)(i) You must submit the information in §63.2386(c)(1), (2), (3), and (10)(i) in either the Notification of Compliance Status, according to the schedule specified in Table 12 to this subpart, or a first Compliance report, according to the schedule specified in §63.2386(b), whichever occurs first.

(ii)(A) If you submit your first Compliance report before your Notification of Compliance Status, the Notification of Compliance Status must contain the information specified in §63.2386(d)(3) and (4) if any of the changes identified in paragraph (d) of this section have occurred since the filing of the first Compliance report. If none of the changes identified in paragraph (d) of this section have occurred since the filing of the first Compliance report, you do not need to report the information specified in §63.2386(c)(10)(i) when you submit your Notification of Compliance Status.

(B) If you submit your Notification of Compliance Status before your first Compliance report, your first Compliance report must contain the information specified in §63.2386(d)(3) and (4) if any of the changes specified in paragraph (d) of this section have occurred since the filing of the Notification of Compliance Status.

(iii) If you are already submitting a Notification of Compliance Status or a first Compliance report under §63.2386(c), you do not need to submit a separate Notification of Compliance Status or first Compliance report for each transfer rack that meets the conditions identified in paragraph (b) of this section (i.e., a single Notification of Compliance Status or first Compliance report should be submitted).

(2)(i) You must submit a subsequent Compliance report according to the schedule in §63.2386(b) whenever any of the events in paragraph (d) of this section occur, as applicable.

(ii) Your subsequent Compliance reports must contain the information in §63.2386(c)(1), (2), (3) and, as applicable, in §63.2386(d)(3) and (4). If you are already submitting a subsequent Compliance report under §63.2386(d), you do not need to submit a separate subsequent Compliance report for each transfer rack that meets the conditions identified in paragraph (c) of this section (i.e., a single subsequent Compliance report should be submitted).

(3) For each transfer rack that meets the conditions identified in paragraph (c) of this section, you must keep documentation, including the records specified in §63.2390(d), that verifies the transfer rack is not required to be controlled under this subpart. The documentation must be kept up-to-date and must be in a form suitable and readily available for expeditious inspection and review according to §63.10(b)(1), including records stored in electronic form in a separate location.

(d) If one or more of the events identified in paragraphs (d)(1) through (4) of this section occur since the filing of the Notification of Compliance Status or the last Compliance report, you must

submit a subsequent Compliance report as specified in paragraphs (b)(2) and (c)(2) of this section.

(1) Any storage tank or transfer rack became subject to control under this subpart EEEE; or

(2) Any storage tank equal to or greater than 18.9 cubic meters (5,000 gallons) became part of the affected source but is not subject to any of the emission limitations, operating limits, or work practice standards of this subpart; or

(3) Any transfer rack (except those racks at which only unloading of organic liquids occurs) became part of the affected source; or

(4) Any of the information required in §63.2386(c)(1), §63.2386(c)(2), or §63.2386(c)(3) has changed.

[71 FR 42906, July 28, 2006, as amended at 73 FR 21830, Apr. 23, 2008]

Emission Limitations, Operating Limits, and Work Practice Standards

§ 63.2346 What emission limitations, operating limits, and work practice standards must I meet?

(a) *Storage tanks.* For each storage tank storing organic liquids that meets the tank capacity and liquid vapor pressure criteria for control in Table 2 to this subpart, items 1 through 5, you must comply with paragraph (a)(1), (a)(2), (a)(3), or (a)(4) of this section. For each storage tank storing organic liquids that meets the tank capacity and liquid vapor pressure criteria for control in Table 2 to this subpart, item 6, you must comply with paragraph (a)(1), (a)(2), or (a)(4) of this section.

(1) Meet the emission limits specified in Table 2 to this subpart and comply with the applicable requirements specified in 40 CFR part 63, subpart SS, for meeting emission limits, except substitute the term “storage tank” at each occurrence of the term “storage vessel” in subpart SS.

(2) Route emissions to fuel gas systems or back into a process as specified in 40 CFR part 63, subpart SS.

(3) Comply with 40 CFR part 63, subpart WW (control level 2).

(4) Use a vapor balancing system that complies with the requirements specified in paragraphs (a)(4)(i) through (vii) of this section and with the recordkeeping requirements specified in §63.2390(e).

(i) The vapor balancing system must be designed and operated to route organic HAP vapors displaced from loading of the storage tank to the transport vehicle from which the storage tank is filled.

(ii) Transport vehicles must have a current certification in accordance with the United States Department of Transportation (U.S. DOT) pressure test requirements of 49 CFR part 180 for cargo tanks and 49 CFR 173.31 for tank cars.

(iii) Organic liquids must only be unloaded from cargo tanks or tank cars when vapor collection systems are connected to the storage tank's vapor collection system.

(iv) No pressure relief device on the storage tank, or on the cargo tank or tank car, shall open during loading or as a result of diurnal temperature changes (breathing losses).

(v) Pressure relief devices must be set to no less than 2.5 pounds per square inch guage (psig) at all times to prevent breathing losses. Pressure relief devices may be set at values less than 2.5 psig if the owner or operator provides rationale in the notification of compliance status report explaining why the alternative value is sufficient to prevent breathing losses at all times. The owner or operator shall comply with paragraphs (a)(4)(v)(A) through (C) of this section for each pressure relief valve.

(A) The pressure relief valve shall be monitored quarterly using the method described in §63.180(b).

(B) An instrument reading of 500 parts per million by volume (ppmv) or greater defines a leak.

(C) When a leak is detected, it shall be repaired as soon as practicable, but no later than 5 days after it is detected, and the owner or operator shall comply with the recordkeeping requirements of §63.181(d)(1) through (4).

(vi) Cargo tanks and tank cars that deliver organic liquids to a storage tank must be reloaded or cleaned at a facility that utilizes the control techniques specified in paragraph (a)(4)(vi)(A) or (a)(4)(vi)(B) of this section.

(A) The cargo tank or tank car must be connected to a closed-vent system with a control device that reduces inlet emissions of total organic HAP by 95 percent by weight or greater or to an exhaust concentration less than or equal to 20 ppmv, on a dry basis corrected to 3 percent oxygen for combustion devices using supplemental combustion air.

(B) A vapor balancing system designed and operated to collect organic HAP vapor displaced from the cargo tank or tank car during reloading must be used to route the collected vapor to the storage tank from which the liquid being transferred originated or to another storage tank connected to a common header.

(vii) The owner or operator of the facility where the cargo tank or tank car is reloaded or cleaned must comply with paragraphs (a)(4)(vii)(A) through (D) of this section.

(A) Submit to the owner or operator of the storage tank and to the Administrator a written certification that the reloading or cleaning facility will meet the requirements of paragraph (a)(4)(vii)(A) through (C) of this section. The certifying entity may revoke the written certification by sending a written statement to the owner or operator of the storage tank giving at least 90 days notice that the certifying entity is rescinding acceptance of responsibility for compliance with the requirements of this paragraph (a)(4)(vii) of this section.

(B) If complying with paragraph (a)(4)(vi)(A) of this section, comply with the requirements for a closed vent system and control device as specified in this subpart EEEE. The notification requirements in §63.2382 and the reporting requirements in §63.2386 do not apply to the owner or operator of the offsite cleaning or reloading facility.

(C) If complying with paragraph (a)(4)(vi)(B) of this section, keep the records specified in §63.2390(e)(3) or equivalent recordkeeping approved by the Administrator.

(D) After the compliance dates specified in §63.2342, at an offsite reloading or cleaning facility subject to §63.2346(a)(4), compliance with the monitoring, recordkeeping, and reporting provisions of any other subpart of this part 63 that has monitoring, recordkeeping, and reporting provisions constitutes compliance with the monitoring, recordkeeping and reporting provisions of §63.2346(a)(4)(vii)(B) or §63.2346(a)(4)(vii)(C). You must identify in your notification of compliance status report required by §63.2382(d) the subpart of this part 63 with which the owner or operator of the offsite reloading or cleaning facility complies.

(b) *Transfer racks.* For each transfer rack that is part of the collection of transfer racks that meets the total actual annual facility-level organic liquid loading volume criterion for control in Table 2 to this subpart, items 7 through 10, you must comply with paragraph (b)(1), (b)(2), or (b)(3) of this section for each arm in the transfer rack loading an organic liquid whose organic HAP content meets the organic HAP criterion for control in Table 2 to this subpart, items 7 through 10. For existing affected sources, you must comply with paragraph (b)(1), (b)(2), or (b)(3)(i) of this section during the loading of organic liquids into transport vehicles. For new affected sources, you must comply with paragraph (b)(1), (b)(2), or (b)(3)(i) and (ii) of this section during the loading of organic liquids into transport vehicles and containers. If the total actual annual facility-level organic liquid loading volume at any affected source is equal to or greater than the loading volume criteria for control in Table 2 to this subpart, but at a later date is less than the loading volume criteria for control, compliance with paragraph (b)(1), (b)(2), or (b)(3) of this section is no longer required. For new sources and reconstructed sources, as defined in §63.2338(d) and (e), if at a later date, the total actual annual facility-level organic liquid loading volume again becomes equal to or greater than the loading volume criteria for control in Table 2 to this subpart, the owner or operator must comply with paragraph (b)(1), (b)(2), or (b)(3)(i) and (ii) of this section immediately, as specified in §63.2342(a)(3). For existing sources, as defined in §63.2338(f), if at a later date, the total actual annual facility-level organic liquid loading volume again becomes equal to or greater than the loading volume criteria for control in Table 2 to this subpart, the owner or operator must comply with paragraph (b)(1), (b)(2), or (b)(3)(i) of this section immediately, as specified in §63.2342(b)(3)(i), unless an alternative compliance schedule has been approved under §63.2342(b)(3)(ii) and subject to the use limitation specified in §63.2342(b)(3)(ii)(I).

(1) Meet the emission limits specified in Table 2 to this subpart and comply with the applicable requirements for transfer racks specified in 40 CFR part 63, subpart SS, for meeting emission limits.

(2) Route emissions to fuel gas systems or back into a process as specified in 40 CFR part 63, subpart SS.

(3)(i) Use a vapor balancing system that routes organic HAP vapors displaced from the loading of organic liquids into transport vehicles to the storage tank from which the liquid being loaded originated or to another storage tank connected to a common header.

(ii) Use a vapor balancing system that routes the organic HAP vapors displaced from the loading of organic liquids into containers directly (e.g., no intervening tank or containment area such as a room) to the storage tank from which the liquid being loaded originated or to another storage tank connected to a common header.

(c) *Equipment leak components.* For each pump, valve, and sampling connection that operates in organic liquids service for at least 300 hours per year, you must comply with the applicable requirements under 40 CFR part 63, subpart TT (control level 1), subpart UU (control level 2), or subpart H. Pumps, valves, and sampling connectors that are insulated to provide protection against persistent sub-freezing temperatures are subject to the “difficult to monitor” provisions in the applicable subpart selected by the owner or operator. This paragraph only applies if the affected source has at least one storage tank or transfer rack that meets the applicability criteria for control in Table 2 to this subpart.

(d) *Transport vehicles.* For each transport vehicle equipped with vapor collection equipment that is loaded at a transfer rack that is subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, you must comply with paragraph (d)(1) of this section. For each transport vehicle without vapor collection equipment that is loaded at a transfer rack that is subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, you must comply with paragraph (d)(2) of this section.

(1) Follow the steps in 40 CFR 60.502(e) to ensure that organic liquids are loaded only into vapor-tight transport vehicles and comply with the provisions in 40 CFR 60.502(f) through (i), except substitute the term “transport vehicle” at each occurrence of the term “tank truck” or “gasoline tank truck” in those paragraphs.

(2) Ensure that organic liquids are loaded only into transport vehicles that have a current certification in accordance with the U.S. Department of Transportation (DOT) pressure test requirements in 49 CFR part 180 for cargo tanks or 49 CFR 173.31 for tank cars.

(e) *Operating limits.* For each high throughput transfer rack, you must meet each operating limit in Table 3 to this subpart for each control device used to comply with the provisions of this subpart whenever emissions from the loading of organic liquids are routed to the control device. For each storage tank and low throughput transfer rack, you must comply with the requirements for monitored parameters as specified in subpart SS of this part for storage vessels and, during the loading of organic liquids, for low throughput transfer racks, respectively. Alternatively, you may comply with the operating limits in Table 3 to this subpart.

(f) For noncombustion devices, if you elect to demonstrate compliance with a percent reduction requirement in Table 2 to this subpart using total organic compounds (TOC) rather than organic HAP, you must first demonstrate, subject to the approval of the Administrator, that TOC is an appropriate surrogate for organic HAP in your case; that is, for your storage tank(s) and/or transfer rack(s), the percent destruction of organic HAP is equal to or higher than the percent destruction of TOC. This demonstration must be conducted prior to or during the initial compliance test.

(g) As provided in §63.6(g), you may request approval from the Administrator to use an alternative to the emission limitations, operating limits, and work practice standards in this section. You must follow the procedures in §63.177(b) through (e) in applying for permission to use such an alternative. If you apply for permission to use an alternative to the emission limitations, operating limits, and work practice standards in this section, you must submit the information described in §63.6(g)(2).

(h) [Reserved]

(i) Opening of a safety device is allowed at any time that it is required to avoid unsafe operating conditions.

(j) If you elect to comply with this subpart by combining emissions from different emission sources subject to this subpart in a single control device, then you must comply with the provisions specified in §63.982(f).

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42908, July 28, 2006; 73 FR 40981, July 17, 2008; 73 FR 21830, Apr. 23, 2008]

General Compliance Requirements

§ 63.2350 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations, operating limits, and work practice standards in this subpart at all times when the equipment identified in §63.2338(b)(1) through (4) is in OLD operation.

(b) You must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in §63.6(e)(1)(i).

(c) Except for emission sources not required to be controlled as specified in §63.2343, you must develop a written startup, shutdown, and malfunction (SSM) plan according to the provisions in §63.6(e)(3).

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42909, July 28, 2006]

Testing and Initial Compliance Requirements

§ 63.2354 What performance tests, design evaluations, and performance evaluations must I conduct?

(a)(1) For each performance test that you conduct, you must use the procedures specified in subpart SS of this part and the provisions specified in paragraph (b) of this section.

(2) For each design evaluation you conduct, you must use the procedures specified in subpart SS of this part.

(3) For each performance evaluation of a continuous emission monitoring system (CEMS) you conduct, you must follow the requirements in §63.8(e).

(b)(1) For nonflare control devices, you must conduct each performance test according to the requirements in §63.7(e)(1), and either §63.988(b), §63.990(b), or §63.995(b), using the procedures specified in §63.997(e).

(2) You must conduct three separate test runs for each performance test on a nonflare control device as specified in §§63.7(e)(3) and 63.997(e)(1)(v). Each test run must last at least 1 hour, except as provided in §63.997(e)(1)(v)(A) and (B).

(3)(i) In addition to EPA Method 25 or 25A of 40 CFR part 60, appendix A, to determine compliance with the organic HAP or TOC emission limit, you may use EPA Method 18 of 40 CFR part 60, appendix A, as specified in paragraph (b)(3)(i) of this section. As an alternative to EPA Method 18, you may use ASTM D6420–99 (Reapproved 2004), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (incorporated by reference, see §63.14), under the conditions specified in paragraph (b)(3)(ii) of this section.

(A) If you use EPA Method 18 to measure compliance with the percentage efficiency limit, you must first determine which organic HAP are present in the inlet gas stream (i.e., uncontrolled emissions) using knowledge of the organic liquids or the screening procedure described in EPA Method 18. In conducting the performance test, you must analyze samples collected as specified in EPA Method 18, simultaneously at the inlet and outlet of the control device. Quantify the emissions for the same organic HAP identified as present in the inlet gas stream for both the inlet and outlet gas streams of the control device.

(B) If you use EPA Method 18 of 40 CFR part 60, appendix A, to measure compliance with the emission concentration limit, you must first determine which organic HAP are present in the inlet gas stream using knowledge of the organic liquids or the screening procedure described in EPA Method 18. In conducting the performance test, analyze samples collected as specified in EPA Method 18 at the outlet of the control device. Quantify the control device outlet emission concentration for the same organic HAP identified as present in the inlet or uncontrolled gas stream.

(ii) You may use ASTM D6420–99 (Reapproved 2004), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (incorporated by reference, see §63.14), as an alternative to EPA Method 18 if the target

concentration is between 150 parts per billion by volume and 100 ppmv and either of the conditions specified in paragraph (b)(2)(ii)(A) or (B) of this section exists. For target compounds not listed in Section 1.1 of ASTM D6420–99 (Reapproved 2004) and not amenable to detection by mass spectrometry, you may not use ASTM D6420–99 (Reapproved 2004).

(A) The target compounds are those listed in Section 1.1 of ASTM D6420–99 (Reapproved 2004), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (incorporated by reference, see §63.14),; or

(B) For target compounds not listed in Section 1.1 of ASTM D6420–99 (Reapproved 2004), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (incorporated by reference, see §63.14), but potentially detected by mass spectrometry, the additional system continuing calibration check after each run, as detailed in ASTM D6420–99 (Reapproved 2004), Section 10.5.3, must be followed, met, documented, and submitted with the data report, even if there is no moisture condenser used or the compound is not considered water-soluble.

(4) If a principal component of the uncontrolled or inlet gas stream to the control device is formaldehyde, you may use EPA Method 316 of appendix A of this part instead of EPA Method 18 of 40 CFR part 60, appendix A, for measuring the formaldehyde. If formaldehyde is the predominant organic HAP in the inlet gas stream, you may use EPA Method 316 alone to measure formaldehyde either at the inlet and outlet of the control device using the formaldehyde control efficiency as a surrogate for total organic HAP or TOC efficiency, or at the outlet of a combustion device for determining compliance with the emission concentration limit.

(5) You may not conduct performance tests during periods of SSM, as specified in §63.7(e)(1).

(c) To determine the HAP content of the organic liquid, you may use EPA Method 311 of 40 CFR part 63, appendix A, or other method approved by the Administrator. In addition, you may use other means, such as voluntary consensus standards, material safety data sheets (MSDS), or certified product data sheets, to determine the HAP content of the organic liquid. If the method you select to determine the HAP content provides HAP content ranges, you must use the upper end of each HAP content range in determining the total HAP content of the organic liquid. The EPA may require you to test the HAP content of an organic liquid using EPA Method 311 or other method approved by the Administrator. If the results of the EPA Method 311 (or any other approved method) are different from the HAP content determined by another means, the EPA Method 311 (or approved method) results will govern.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42909, July 28, 2006]

§ 63.2358 By what date must I conduct performance tests and other initial compliance demonstrations?

(a) You must conduct initial performance tests and design evaluations according to the schedule in §63.7(a)(2), or by the compliance date specified in any applicable State or Federal new source review construction permit to which the affected source is already subject, whichever is earlier.

(b)(1) For storage tanks and transfer racks at existing affected sources complying with the emission limitations listed in Table 2 to this subpart, you must demonstrate initial compliance with the emission limitations within 180 days after February 5, 2007.

(2) For storage tanks and transfer racks at reconstructed or new affected sources complying with the emission limitations listed in Table 2 to this subpart, you must conduct your initial compliance demonstration with the emission limitations within 180 days after the initial startup date for the affected source or February 3, 2004, whichever is later.

(c)(1) For storage tanks at existing affected sources complying with the work practice standard in Table 4 to this subpart, you must conduct your initial compliance demonstration the next time the storage tank is emptied and degassed, but not later than 10 years after February 3, 2004.

(2) For transfer racks and equipment leak components at existing affected sources complying with the work practice standards in Table 4 to this subpart, you must conduct your initial compliance demonstration within 180 days after February 5, 2007.

(d) For storage tanks, transfer racks, and equipment leak components at reconstructed or new affected sources complying with the work practice standards in Table 4 to this subpart, you must conduct your initial compliance demonstration within 180 days after the initial startup date for the affected source.

§ 63.2362 When must I conduct subsequent performance tests?

(a) For nonflare control devices, you must conduct subsequent performance testing required in Table 5 to this subpart, item 1, at any time the EPA requests you to in accordance with section 114 of the CAA.

(b)(1) For each transport vehicle that you own that is equipped with vapor collection equipment and that is loaded with organic liquids at a transfer rack that is subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, you must perform the vapor tightness testing required in Table 5 to this subpart, item 2, on that transport vehicle at least once per year.

(2) For transport vehicles that you own that do not have vapor collection equipment, you must maintain current certification in accordance with the U.S. DOT pressure test requirements in 49 CFR part 180 for cargo tanks or 49 CFR 173.31 for tank cars.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42910, July 28, 2006]

§ 63.2366 What are my monitoring installation, operation, and maintenance requirements?

(a) You must install, operate, and maintain a CMS on each control device required in order to comply with this subpart. If you use a continuous parameter monitoring system (CPMS) (as defined in §63.981), you must comply with the applicable requirements for CPMS in subpart SS of this part for the control device being used. If you use a continuous emissions monitoring system (CEMS), you must comply with the requirements in §63.8.

(b) For nonflare control devices controlling storage tanks and low throughput transfer racks, you must submit a monitoring plan according to the requirements in subpart SS of this part for monitoring plans.

§ 63.2370 How do I demonstrate initial compliance with the emission limitations, operating limits, and work practice standards?

(a) You must demonstrate initial compliance with each emission limitation and work practice standard that applies to you as specified in Tables 6 and 7 to this subpart.

(b) You demonstrate initial compliance with the operating limits requirements specified in §63.2346(e) by establishing the operating limits during the initial performance test or design evaluation.

(c) You must submit the results of the initial compliance determination in the Notification of Compliance Status according to the requirements in §63.2382(d).

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42910, July 28, 2006]

Continuous Compliance Requirements

§ 63.2374 When do I monitor and collect data to demonstrate continuous compliance and how do I use the collected data?

(a) You must monitor and collect data according to subpart SS of this part and paragraphs (b) and (c) of this section.

(b) When using a control device to comply with this subpart, you must monitor continuously or collect data at all required intervals at all times that the emission source and control device are in OLD operation, except for CMS malfunctions (including any malfunction preventing the CMS from operating properly), associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments).

(c) Do not use data recorded during CMS malfunctions, associated repairs, required quality assurance or control activities, or periods when emissions from organic liquids are not routed to the control device in data averages and calculations used to report emission or operating levels. Do not use such data in fulfilling a minimum data availability requirement, if applicable. You must use all of the data collected during all other periods, including periods of SSM, in assessing the operation of the control device.

§ 63.2378 How do I demonstrate continuous compliance with the emission limitations, operating limits, and work practice standards?

(a) You must demonstrate continuous compliance with each emission limitation, operating limit, and work practice standard in Tables 2 through 4 to this subpart that applies to you according to the methods specified in subpart SS of this part and in Tables 8 through 10 to this subpart, as applicable.

(b) You must follow the requirements in §63.6(e)(1) and (3) during periods of startup, shutdown, malfunction, or nonoperation of the affected source or any part thereof. In addition, the provisions of paragraphs (b)(1) through (3) of this section apply.

(1) The emission limitations in this subpart apply at all times except during periods of nonoperation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies. The emission limitations of this subpart apply during periods of SSM, except as provided in paragraphs (b)(2) and (3) of this section. However, if a SSM, or period of nonoperation of one portion of the affected source does not affect the ability of a particular emission source to comply with the emission limitations to which it is subject, then that emission source is still required to comply with the applicable emission limitations of this subpart during the startup, shutdown, malfunction, or period of nonoperation.

(2) The owner or operator must not shut down control devices or monitoring systems that are required or utilized for achieving compliance with this subpart during periods of SSM while emissions are being routed to such items of equipment if the shutdown would contravene requirements of this subpart applicable to such items of equipment. This paragraph (b)(2) does not apply if the item of equipment is malfunctioning. This paragraph (b)(2) also does not apply if the owner or operator shuts down the compliance equipment (other than monitoring systems) to avoid damage due to a contemporaneous SSM of the affected source or portion thereof. If the owner or operator has reason to believe that monitoring equipment would be damaged due to a

contemporaneous SSM of the affected source of portion thereof, the owner or operator must provide documentation supporting such a claim in the next Compliance report required in Table 11 to this subpart, item 1. Once approved by the Administrator, the provision for ceasing to collect, during a SSM, monitoring data that would otherwise be required by the provisions of this subpart must be incorporated into the SSM plan.

(3) During SSM, you must implement, to the extent reasonably available, measures to prevent or minimize excess emissions. For purposes of this paragraph (b)(3), the term “excess emissions” means emissions greater than those allowed by the emission limits that apply during normal operational periods. The measures to be taken must be identified in the SSM plan, and may include, but are not limited to, air pollution control technologies, recovery technologies, work practices, pollution prevention, monitoring, and/or changes in the manner of operation of the affected source. Back-up control devices are not required, but may be used if available.

(c) Periods of planned routine maintenance of a control device used to control storage tanks or transfer racks, during which the control device does not meet the emission limits in Table 2 to this subpart, must not exceed 240 hours per year.

(d) If you elect to route emissions from storage tanks or transfer racks to a fuel gas system or to a process, as allowed by §63.982(d), to comply with the emission limits in Table 2 to this subpart, the total aggregate amount of time during which the emissions bypass the fuel gas system or process during the calendar year without being routed to a control device, for all reasons (except SSM or product changeovers of flexible operation units and periods when a storage tank has been emptied and degassed), must not exceed 240 hours.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 20463, Apr. 20, 2006]

Notifications, Reports, and Records

§ 63.2382 What notifications must I submit and when and what information should be submitted?

(a) You must submit each notification in subpart SS of this part, Table 12 to this subpart, and paragraphs (b) through (d) of this section that applies to you. You must submit these notifications according to the schedule in Table 12 to this subpart and as specified in paragraphs (b) through (d) of this section.

(b)(1) *Initial Notification.* If you startup your affected source before February 3, 2004, you must submit the Initial Notification no later than 120 calendar days after February 3, 2004.

(2) If you startup your new or reconstructed affected source on or after February 3, 2004, you must submit the Initial Notification no later than 120 days after initial startup.

(c) If you are required to conduct a performance test, you must submit the Notification of Intent to conduct the test at least 60 calendar days before it is initially scheduled to begin as required in §63.7(b)(1).

(d)(1) *Notification of Compliance Status.* If you are required to conduct a performance test, design evaluation, or other initial compliance demonstration as specified in Table 5, 6, or 7 to this subpart, you must submit a Notification of Compliance Status.

(2) The Notification of Compliance Status must include the information required in §63.999(b) and in paragraphs (d)(2)(i) through (viii) of this section.

(i) The results of any applicability determinations, emission calculations, or analyses used to identify and quantify organic HAP emissions from the affected source.

(ii) The results of emissions profiles, performance tests, engineering analyses, design evaluations, flare compliance assessments, inspections and repairs, and calculations used to demonstrate initial compliance according to Tables 6 and 7 to this subpart. For performance tests, results must include descriptions of sampling and analysis procedures and quality assurance procedures.

(iii) Descriptions of monitoring devices, monitoring frequencies, and the operating limits established during the initial compliance demonstrations, including data and calculations to support the levels you establish.

(iv) Descriptions of worst-case operating and/or testing conditions for the control device(s).

(v) Identification of emission sources subject to overlapping requirements described in §63.2396 and the authority under which you will comply.

(vi) The applicable information specified in §63.1039(a)(1) through (3) for all pumps and valves subject to the work practice standards for equipment leak components in Table 4 to this subpart, item 4.

(vii) If you are complying with the vapor balancing work practice standard for transfer racks according to Table 4 to this subpart, item 3.a, include a statement to that effect and a statement that the pressure vent settings on the affected storage tanks are greater than or equal to 2.5 psig.

(viii) The information specified in §63.2386(c)(10)(i), unless the information has already been submitted with the first Compliance report. If the information specified in §63.2386(c)(10)(i) has already been submitted with the first Compliance report, the information specified in §63.2386(d)(3) and (4), as applicable, shall be submitted instead.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42910, July 28, 2006]

§ 63.2386 What reports must I submit and when and what information is to be submitted in each?

(a) You must submit each report in subpart SS of this part, Table 11 to this subpart, Table 12 to this subpart, and in paragraphs (c) through (e) of this section that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report according to Table 11 to this subpart and by the dates shown in paragraphs (b)(1) through (3) of this section, by the dates shown in subpart SS of this part, and by the dates shown in Table 12 to this subpart, whichever are applicable.

(1)(i) The first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.2342 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your affected source in §63.2342.

(ii) The first Compliance report must be postmarked no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.2342.

(2)(i) Each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(ii) Each subsequent Compliance report must be postmarked no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(3) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) and (2) of this section.

(c) *First Compliance report.* The first Compliance report must contain the information specified in paragraphs (c)(1) through (10) of this section.

(1) Company name and address.

(2) Statement by a responsible official, including the official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

(3) Date of report and beginning and ending dates of the reporting period.

(4) Any changes to the information listed in §63.2382(d)(2) that have occurred since the submittal of the Notification of Compliance Status.

(5) If you had a SSM during the reporting period and you took actions consistent with your SSM plan, the Compliance report must include the information described in §63.10(d)(5)(i).

(6) If there are no deviations from any emission limitation or operating limit that applies to you and there are no deviations from the requirements for work practice standards, a statement that there were no deviations from the emission limitations, operating limits, or work practice standards during the reporting period.

(7) If there were no periods during which the CMS was out of control as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out of control during the reporting period.

(8) For closed vent systems and control devices used to control emissions, the information specified in paragraphs (c)(8)(i) and (ii) of this section for those planned routine maintenance activities that would require the control device to not meet the applicable emission limit.

(i) A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6 months. This description must include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.

(ii) A description of the planned routine maintenance that was performed for the control device during the previous 6 months. This description must include the type of maintenance performed and the total number of hours during those 6 months that the control device did not meet the applicable emission limit due to planned routine maintenance.

(9) A listing of all transport vehicles into which organic liquids were loaded at transfer racks that are subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10,

during the previous 6 months for which vapor tightness documentation as required in §63.2390(c) was not on file at the facility.

(10)(i) A listing of all transfer racks (except those racks at which only unloading of organic liquids occurs) and of tanks greater than or equal to 18.9 cubic meters (5,000 gallons) that are part of the affected source but are not subject to any of the emission limitations, operating limits, or work practice standards of this subpart.

(ii) If the information specified in paragraph (c)(10)(i) of this section has already been submitted with the Notification of Compliance Status, the information specified in paragraphs (d)(3) and (4) of this section, as applicable, shall be submitted instead.

(d) *Subsequent Compliance reports* . Subsequent Compliance reports must contain the information in paragraphs (c)(1) through (9) of this section and, where applicable, the information in paragraphs (d)(1) through (4) of this section.

(1) For each deviation from an emission limitation occurring at an affected source where you are using a CMS to comply with an emission limitation in this subpart, you must include in the Compliance report the applicable information in paragraphs (d)(1)(i) through (xii) of this section. This includes periods of SSM.

(i) The date and time that each malfunction started and stopped.

(ii) The dates and times that each CMS was inoperative, except for zero (low-level) and high-level checks.

(iii) For each CMS that was out of control, the information in §63.8(c)(8).

(iv) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of SSM, or during another period.

(v) A summary of the total duration of the deviations during the reporting period, and the total duration as a percentage of the total emission source operating time during that reporting period.

(vi) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(vii) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percentage of the total emission source operating time during that reporting period.

(viii) An identification of each organic HAP that was potentially emitted during each deviation based on the known organic HAP contained in the liquid(s).

(ix) A brief description of the emission source(s) at which the CMS deviation(s) occurred.

(x) A brief description of each CMS that was out of control during the period.

(xi) The date of the latest certification or audit for each CMS.

(xii) A brief description of any changes in CMS, processes, or controls since the last reporting period.

(2) Include in the Compliance report the information in paragraphs (d)(2)(i) through (iii) of this section, as applicable.

(i) For each storage tank and transfer rack subject to control requirements, include periods of planned routine maintenance during which the control device did not comply with the applicable emission limits in table 2 to this subpart.

(ii) For each storage tank controlled with a floating roof, include a copy of the inspection record (required in §63.1065(b)) when inspection failures occur.

(iii) If you elect to use an extension for a floating roof inspection in accordance with §63.1063(c)(2)(iv)(B) or (e)(2), include the documentation required by those paragraphs.

(3)(i) A listing of any storage tank that became subject to controls based on the criteria for control specified in table 2 to this subpart, items 1 through 6, since the filing of the last Compliance report.

(ii) A listing of any transfer rack that became subject to controls based on the criteria for control specified in table 2 to this subpart, items 7 through 10, since the filing of the last Compliance report.

(4)(i) A listing of tanks greater than or equal to 18.9 cubic meters (5,000 gallons) that became part of the affected source but are not subject to any of the emission limitations, operating limits, or work practice standards of this subpart, since the last Compliance report.

(ii) A listing of all transfer racks (except those racks at which only the unloading of organic liquids occurs) that became part of the affected source but are not subject to any of the emission limitations, operating limits, or work practice standards of this subpart, since the last Compliance report.

(e) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to table 11 to this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission limitation in this subpart, we will consider submission of the Compliance report as satisfying any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report will not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the applicable title V permitting authority.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42910, July 28, 2006]

§ 63.2390 What records must I keep?

(a) For each emission source identified in §63.2338 that does not require control under this subpart, you must keep all records identified in §63.2343.

(b) For each emission source identified in §63.2338 that does require control under this subpart:

(1) You must keep all records identified in subpart SS of this part and in table 12 to this subpart that are applicable, including records related to notifications and reports, SSM, performance tests, CMS, and performance evaluation plans; and

(2) You must keep the records required to show continuous compliance, as required in subpart SS of this part and in tables 8 through 10 to this subpart, with each emission limitation, operating limit, and work practice standard that applies to you.

(c) For each transport vehicle into which organic liquids are loaded at a transfer rack that is subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10, you must keep the applicable records in paragraphs (c)(1) and (2) of this section or alternatively the verification records in paragraph (c)(3) of this section.

(1) For transport vehicles equipped with vapor collection equipment, the documentation described in 40 CFR 60.505(b), except that the test title is: Transport Vehicle Pressure Test-EPA Reference Method 27.

(2) For transport vehicles without vapor collection equipment, current certification in accordance with the U.S. DOT pressure test requirements in 49 CFR part 180 for cargo tanks or 49 CFR 173.31 for tank cars.

(3) In lieu of keeping the records specified in paragraph (c)(1) or (2) of this section, as applicable, the owner or operator shall record that the verification of U.S. DOT tank certification or Method 27 of appendix A to 40 CFR part 60 testing, required in table 5 to this subpart, item 2, has been performed. Various methods for the record of verification can be used, such as: A check-off on a log sheet, a list of U.S. DOT serial numbers or Method 27 data, or a position description for gate security showing that the security guard will not allow any trucks on site that do not have the appropriate documentation.

(d) You must keep records of the total actual annual facility-level organic liquid loading volume as defined in §63.2406 through transfer racks to document the applicability, or lack thereof, of the emission limitations in table 2 to this subpart, items 7 through 10.

(e) An owner or operator who elects to comply with §63.2346(a)(4) shall keep the records specified in paragraphs (e)(1) through (3) of this section.

(1) A record of the U.S. DOT certification required by §63.2346(a)(4)(ii).

(2) A record of the pressure relief vent setting specified in §63.2346(a)(4)(v).

(3) If complying with §63.2346(a)(4)(vi)(B), keep the records specified in paragraphs (e)(3)(i) and (ii) of this section.

(i) A record of the equipment to be used and the procedures to be followed when reloading the cargo tank or tank car and displacing vapors to the storage tank from which the liquid originates.

(ii) A record of each time the vapor balancing system is used to comply with §63.2346(a)(4)(vi)(B).

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42910, July 28, 2006; 73 FR 40982, July 17, 2008]

§ 63.2394 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious inspection and review according to §63.10(b)(1), including records stored in electronic form at a separate location.

(b) As specified in §63.10(b)(1), you must keep your files of all information (including all reports and notifications) for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You may keep the records off site for the remaining 3 years.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42911, July 28, 2006]

Other Requirements and Information

§ 63.2396 What compliance options do I have if part of my plant is subject to both this subpart and another subpart?

(a) *Compliance with other regulations for storage tanks* . (1) After the compliance dates specified in §63.2342, you are in compliance with the provisions of this subpart for any storage tank that is assigned to the OLD affected source and that is both controlled with a floating roof and is in compliance with the provisions of either 40 CFR part 60, subpart Kb, or 40 CFR part 61, subpart Y, except that records shall be kept for 5 years rather than 2 years for storage tanks that are assigned to the OLD affected source.

(2) After the compliance dates specified in §63.2342, you are in compliance with the provisions of this subpart for any storage tank with a fixed roof that is assigned to the OLD affected source and that is both controlled with a closed vent system and control device and is in compliance with either 40 CFR part 60, subpart Kb, or 40 CFR part 61, subpart Y, except that you must comply with the monitoring, recordkeeping, and reporting requirements in this subpart.

(3) As an alternative to paragraphs (a)(1) and (2) of this section, if a storage tank assigned to the OLD affected source is subject to control under 40 CFR part 60, subpart Kb, or 40 CFR part 61, subpart Y, you may elect to comply only with the requirements of this subpart for storage tanks meeting the applicability criteria for control in table 2 to this subpart.

(b) *Compliance with other regulations for transfer racks* . After the compliance dates specified in §63.2342, if you have a transfer rack that is subject to 40 CFR part 61, subpart BB, and that transfer rack is in OLD operation, you must meet all of the requirements of this subpart for that transfer rack when the transfer rack is in OLD operation during the loading of organic liquids.

(c) *Compliance with other regulations for equipment leak components.* (1) After the compliance dates specified in §63.2342, if you have pumps, valves, or sampling connections that are subject to a 40 CFR part 60 subpart, and those pumps, valves, and sampling connections are in OLD operation and in organic liquids service, as defined in this subpart, you must comply with the provisions of each subpart for those equipment leak components.

(2) After the compliance dates specified in §63.2342, if you have pumps, valves, or sampling connections subject to 40 CFR part 63, subpart GGG, and those pumps, valves, and sampling connections are in OLD operation and in organic liquids service, as defined in this subpart, you may elect to comply with the provisions of this subpart for all such equipment leak components. You must identify in the Notification of Compliance Status required by §63.2382(b) the provisions with which you will comply.

(d) [Reserved]

(e) *Overlap with other regulations for monitoring, recordkeeping, and reporting* —(1) *Control devices* . After the compliance dates specified in §63.2342, if any control device subject to this

subpart is also subject to monitoring, recordkeeping, and reporting requirements of another 40 CFR part 63 subpart, the owner or operator must be in compliance with the monitoring, recordkeeping, and reporting requirements of this subpart EEEE. If complying with the monitoring, recordkeeping, and reporting requirements of the other subpart satisfies the monitoring, recordkeeping, and reporting requirements of this subpart, the owner or operator may elect to continue to comply with the monitoring, recordkeeping, and reporting requirements of the other subpart. In such instances, the owner or operator will be deemed to be in compliance with the monitoring, recordkeeping, and reporting requirements of this subpart. The owner or operator must identify the other subpart being complied with in the Notification of Compliance Status required by §63.2382(b).

(2) *Equipment leak components* . After the compliance dates specified in §63.2342, if you are applying the applicable recordkeeping and reporting requirements of another 40 CFR part 63 subpart to the valves, pumps, and sampling connection systems associated with a transfer rack subject to this subpart that only unloads organic liquids directly to or via pipeline to a non-tank process unit component or to a storage tank subject to the other 40 CFR part 63 subpart, the owner or operator must be in compliance with the recordkeeping and reporting requirements of this subpart EEEE. If complying with the recordkeeping and reporting requirements of the other subpart satisfies the recordkeeping and reporting requirements of this subpart, the owner or operator may elect to continue to comply with the recordkeeping and reporting requirements of the other subpart. In such instances, the owner or operator will be deemed to be in compliance with the recordkeeping and reporting requirements of this subpart. The owner or operator must identify the other subpart being complied with in the Notification of Compliance Status required by §63.2382(b).

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42911, July 28, 2006]

§ 63.2398 What parts of the General Provisions apply to me?

Table 12 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

§ 63.2402 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (U.S. EPA) or a delegated authority such as your State, local, or eligible tribal agency. If the EPA Administrator has delegated authority to your State, local, or eligible tribal agency, then that agency, as well as the EPA, has the authority to implement and enforce this subpart. You should contact your EPA Regional Office (see list in §63.13) to find out if this subpart is delegated to your State, local, or eligible tribal agency.

(b) In delegating implementation and enforcement authority for this subpart to a State, local, or eligible tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraphs (b)(1) through (4) of this section are retained by the EPA Administrator and are not delegated to the State, local, or eligible tribal agency.

(1) Approval of alternatives to the nonopacity emission limitations, operating limits, and work practice standards in §63.2346(a) through (c) under §63.6(g).

(2) Approval of major changes to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major changes to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major changes to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42911, July 28, 2006]

§ 63.2406 What definitions apply to this subpart?

Terms used in this subpart are defined in the CAA, in §63.2, 40 CFR part 63, subparts H, PP, SS, TT, UU, and WW, and in this section. If the same term is defined in another subpart and in this section, it will have the meaning given in this section for purposes of this subpart. Notwithstanding the introductory language in §63.921, the terms “container” and “safety device” shall have the meaning found in this subpart and not in §63.921.

Actual annual average temperature, for organic liquids, means the temperature determined using the following methods:

(1) For heated or cooled storage tanks, use the calculated annual average temperature of the stored organic liquid as determined from a design analysis of the storage tank.

(2) For ambient temperature storage tanks:

(i) Use the annual average of the local (nearest) normal daily mean temperatures reported by the National Climatic Data Center; or

(ii) Use any other method that the EPA approves.

Annual average true vapor pressure means the equilibrium partial pressure exerted by the total table 1 organic HAP in the stored or transferred organic liquid. For the purpose of determining if a liquid meets the definition of an organic liquid, the vapor pressure is determined using standard conditions of 77 degrees F and 29.92 inches of mercury. For the purpose of determining whether an organic liquid meets the applicability criteria in table 2, items 1 through 6, to this subpart, use the actual annual average temperature as defined in this subpart. The vapor pressure value in either of these cases is determined:

(1) In accordance with methods described in American Petroleum Institute Publication 2517, Evaporative Loss from External Floating-Roof Tanks (incorporated by reference, see §63.14);

(2) Using standard reference texts;

(3) By the American Society for Testing and Materials Method D2879–83, 96 (incorporated by reference, see §63.14); or

(4) Using any other method that the EPA approves.

Bottoms receiver means a tank that collects distillation bottoms before the stream is sent for storage or for further processing downstream.

Cargo tank means a liquid-carrying tank permanently attached and forming an integral part of a motor vehicle or truck trailer. This term also refers to the entire cargo tank motor vehicle or trailer. For the purpose of this subpart, vacuum trucks used exclusively for maintenance or spill response are not considered cargo tanks.

Closed vent system means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow-inducing devices that transport gas or

vapors from an emission point to a control device. This system does not include the vapor collection system that is part of some transport vehicles or the loading arm or hose that is used for vapor return. For transfer racks, the closed vent system begins at, and includes, the first block valve on the downstream side of the loading arm or hose used to convey displaced vapors.

Combustion device means an individual unit of equipment, such as a flare, oxidizer, catalytic oxidizer, process heater, or boiler, used for the combustion of organic emissions.

Container means a portable unit in which a material can be stored, transported, treated, disposed of, or otherwise handled. Examples of containers include, but are not limited to, drums and portable cargo containers known as “portable tanks” or “totes.”

Control device means any combustion device, recovery device, recapture device, or any combination of these devices used to comply with this subpart. Such equipment or devices include, but are not limited to, absorbers, adsorbers, condensers, and combustion devices. Primary condensers, steam strippers, and fuel gas systems are not considered control devices.

Crude oil means any of the naturally occurring liquids commonly referred to as crude oil, regardless of specific physical properties. Only those crude oils downstream of the first point of custody transfer after the production field are considered crude oils in this subpart.

Custody transfer means the transfer of hydrocarbon liquids after processing and/or treatment in the producing operations, or from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.

Design evaluation means a procedure for evaluating control devices that complies with the requirements in §63.985(b)(1)(i).

Deviation means any instance in which an affected source subject to this subpart, or portion thereof, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limitation (including any operating limit) or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart, and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation (including any operating limit) or work practice standard in this subpart during SSM.

Emission limitation means an emission limit, opacity limit, operating limit, or visible emission limit.

Equipment leak component means each pump, valve, and sampling connection system used in organic liquids service at an OLD operation. Valve types include control, globe, gate, plug, and ball. Relief and check valves are excluded.

Gasoline means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals (4.0 pounds per square inch absolute (psia)) or greater which is used as a fuel for internal combustion engines. Aviation gasoline is included in this definition.

High throughput transfer rack means those transfer racks that transfer into transport vehicles (for existing affected sources) or into transport vehicles and containers (for new affected sources) a total of 11.8 million liters per year or greater of organic liquids.

In organic liquids service means that an equipment leak component contains or contacts organic liquids having 5 percent by weight or greater of the organic HAP listed in Table 1 to this subpart.

Low throughput transfer rack means those transfer racks that transfer into transport vehicles (for existing affected sources) or into transport vehicles and containers (for new affected sources) less than 11.8 million liters per year of organic liquids.

On-site or *on site* means, with respect to records required to be maintained by this subpart or required by another subpart referenced by this subpart, that records are stored at a location within a major source which encompasses the affected source. On-site includes, but is not limited to, storage at the affected source to which the records pertain, storage in central files elsewhere at the major source, or electronically available at the site.

Organic liquid means:

(1) Any non-crude oil liquid or liquid mixture that contains 5 percent by weight or greater of the organic HAP listed in Table 1 to this subpart, as determined using the procedures specified in §63.2354(c).

(2) Any crude oils downstream of the first point of custody transfer.

(3) Organic liquids for purposes of this subpart do not include the following liquids:

(i) Gasoline (including aviation gasoline), kerosene (No. 1 distillate oil), diesel (No. 2 distillate oil), asphalt, and heavier distillate oils and fuel oils;

(ii) Any fuel consumed or dispensed on the plant site directly to users (such as fuels for fleet refueling or for refueling marine vessels that support the operation of the plant);

(iii) Hazardous waste;

(iv) Wastewater;

(v) Ballast water: or

(vi) Any non-crude oil liquid with an annual average true vapor pressure less than 0.7 kilopascals (0.1 psia).

Organic liquids distribution (OLD) operation means the combination of activities and equipment used to store or transfer organic liquids into, out of, or within a plant site regardless of the specific activity being performed. Activities include, but are not limited to, storage, transfer, blending, compounding, and packaging.

Permitting authority means one of the following:

(1) The State Air Pollution Control Agency, local agency, or other agency authorized by the EPA Administrator to carry out a permit program under 40 CFR part 70; or

(2) The EPA Administrator, in the case of EPA-implemented permit programs under title V of the CAA (42 U.S.C. 7661) and 40 CFR part 71.

Plant site means all contiguous or adjoining surface property that is under common control, including surface properties that are separated only by a road or other public right-of-way.

Common control includes surface properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, or any combination.

Research and development facility means laboratory and pilot plant operations whose primary purpose is to conduct research and development into new processes and products, where the operations are under the close supervision of technically trained personnel, and which are not engaged in the manufacture of products for commercial sale, except in a *de minimis* manner.

Responsible official means responsible official as defined in 40 CFR 70.2 and 40 CFR 71.2, as applicable.

Safety device means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device that functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event.

Shutdown means the cessation of operation of an OLD affected source, or portion thereof (other than as part of normal operation of a batch-type operation), including equipment required or used to comply with this subpart, or the emptying and degassing of a storage tank. Shutdown as defined here includes, but is not limited to, events that result from periodic maintenance, replacement of equipment, or repair.

Startup means the setting in operation of an OLD affected source, or portion thereof (other than as part of normal operation of a batch-type operation), for any purpose. Startup also includes the placing in operation of any individual piece of equipment required or used to comply with this subpart including, but not limited to, control devices and monitors.

Storage tank means a stationary unit that is constructed primarily of nonearthen materials (such as wood, concrete, steel, or reinforced plastic) that provide structural support and is designed to hold a bulk quantity of liquid. Storage tanks do not include:

(1) Units permanently attached to conveyances such as trucks, trailers, rail cars, barges, or ships;

(2) Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere;

(3) Bottoms receivers;

(4) Surge control vessels;

(5) Vessels storing wastewater; or

(6) Reactor vessels associated with a manufacturing process unit.

Surge control vessel means feed drums, recycle drums, and intermediate vessels. Surge control vessels are used within chemical manufacturing processes when in-process storage, mixing, or management of flow rates or volumes is needed to assist in production of a product.

Tank car means a car designed to carry liquid freight by rail, and including a permanently attached tank.

Total actual annual facility-level organic liquid loading volume means the total facility-level actual volume of organic liquid loaded for transport within or out of the facility through transfer racks that

are part of the affected source into transport vehicles (for existing affected sources) or into transport vehicles and containers (for new affected sources) based on a 3-year rolling average, calculated annually.

(1) For existing affected sources, each 3-year rolling average is based on actual facility-level loading volume during each calendar year (January 1 through December 31) in the 3-year period. For calendar year 2004 only (the first year of the initial 3-year rolling average), if an owner or operator of an affected source does not have actual loading volume data for the time period from January 1, 2004, through February 2, 2004 (the time period prior to the effective date of the OLD NESHAP), the owner or operator shall compute a facility-level loading volume for this time period as follows: At the end of the 2004 calendar year, the owner or operator shall calculate a daily average facility-level loading volume (based on the actual loading volume for February 3, 2004, through December 31, 2004) and use that daily average to estimate the facility-level loading volume for the period of time from January 1, 2004, through February 2, 2004. The owner or operator shall then sum the estimated facility-level loading volume from January 1, 2004, through February 2, 2004, and the actual facility-level loading volume from February 3, 2004, through December 31, 2004, to calculate the annual facility-level loading volume for calendar year 2004.

(2)(i) For new affected sources, the 3-year rolling average is calculated as an average of three 12-month periods. An owner or operator must select as the beginning calculation date with which to start the calculations as either the initial startup date of the new affected source or the first day of the calendar month following the month in which startup occurs. Once selected, the date with which the calculations begin cannot be changed.

(ii) The initial 3-year rolling average is based on the projected maximum facility-level annual loading volume for each of the 3 years following the selected beginning calculation date. The second 3-year rolling average is based on actual facility-level loading volume for the first year of operation plus a new projected maximum facility-level annual loading volume for second and third years following the selected beginning calculation date. The third 3-year rolling average is based on actual facility-level loading volume for the first 2 years of operation plus a new projected maximum annual facility-level loading volume for the third year following the beginning calculation date. Subsequent 3-year rolling averages are based on actual facility-level loading volume for each year in the 3-year rolling average.

Transfer rack means a single system used to load organic liquids into, or unload organic liquids out of, transport vehicles or containers. It includes all loading and unloading arms, pumps, meters, shutoff valves, relief valves, and other piping and equipment necessary for the transfer operation. Transfer equipment and operations that are physically separate (i.e., do not share common piping, valves, and other equipment) are considered to be separate transfer racks.

Transport vehicle means a cargo tank or tank car.

Vapor balancing system means:

(1) A piping system that collects organic HAP vapors displaced from transport vehicles or containers during loading and routes the collected vapors to the storage tank from which the liquid being loaded originated or to another storage tank connected to a common header. For containers, the piping system must route the displaced vapors directly to the appropriate storage tank or to another storage tank connected to a common header in order to qualify as a vapor balancing system; or

(2) A piping system that collects organic HAP vapors displaced from the loading of a storage tank and routes the collected vapors to the transport vehicle from which the storage tank is filled.

Vapor collection system means any equipment located at the source (i.e., at the OLD operation) that is not open to the atmosphere; that is composed of piping, connections, and, if necessary, flow-inducing devices; and that is used for:

(1) Containing and conveying vapors displaced during the loading of transport vehicles to a control device;

(2) Containing and directly conveying vapors displaced during the loading of containers; or

(3) Vapor balancing. This does not include any of the vapor collection equipment that is installed on the transport vehicle.

Vapor-tight transport vehicle means a transport vehicle that has been demonstrated to be vapor-tight. To be considered vapor-tight, a transport vehicle equipped with vapor collection equipment must undergo a pressure change of no more than 250 pascals (1 inch of water) within 5 minutes after it is pressurized to 4,500 pascals (18 inches of water). This capability must be demonstrated annually using the procedures specified in EPA Method 27 of 40 CFR part 60, appendix A. For all other transport vehicles, vapor tightness is demonstrated by performing the U.S. DOT pressure test procedures for tank cars and cargo tanks.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the CAA.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42911, July 28, 2006]

Table 1 to Subpart EEEE of Part 63—Organic Hazardous Air Pollutants

You must use the organic HAP information listed in the following table to determine which of the liquids handled at your facility meet the HAP content criteria in the definition of Organic Liquid in §63.2406.

Compound name	CAS No.[1]
2,4-D salts and esters	94–75–7
Acetaldehyde	75–07–0
Acetonitrile	75–05–8
Acetophenone	98–86–2
Acrolein	107–02–8
Acrylamide	79–06–1
Acrylic acid	79–10–7
Acrylonitrile	107–13–1
Allyl chloride	107–05–1
Aniline	62–53–3
Benzene	71–43–2
Biphenyl	92–52–4
Butadiene (1,3-)	106–99–0
Carbon tetrachloride	56–23–5

Compound name	CAS No.[1]
Chloroacetic acid	79–11–8
Chlorobenzene	108–90–7
2-Chloro-1,3-butadiene (Chloroprene)	126–99–8
Chloroform	67–66–3
m-Cresol	108–39–4
o-Cresol	95–48–7
p-Cresol	106–44–5
Cresols/cresylic acid	1319–77–3
Cumene	98–82–8
Dibenzofurans	132–64–9
Dibutylphthalate	84–74–2
Dichloroethane (1,2-) (Ethylene dichloride) (EDC)	107–06–2
Dichloropropene (1,3-)	542–75–6
Diethanolamine	111–42–2
Diethyl aniline (N,N-)	121–69–7
Diethylene glycol monobutyl ether	112–34–5
Diethylene glycol monomethyl ether	111–77–3
Diethyl sulfate	64–67–5
Dimethyl formamide	68–12–2
Dimethylhydrazine (1,1-)	57–14–7
Dioxane (1,4-) (1,4-Diethyleneoxide)	123–91–1
Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106–89–8
Epoxybutane (1,2-)	106–88–7
Ethyl acrylate	140–88–5
Ethylbenzene	100–41–4
Ethyl chloride (Chloroethane)	75–00–3
Ethylene dibromide (Dibromomethane)	106–93–4
Ethylene glycol	107–21–1
Ethylene glycol dimethyl ether	110–71–4
Ethylene glycol monomethyl ether	109–86–4
Ethylene glycol monomethyl ether acetate	110–49–6
Ethylene glycol monophenyl ether	122–99–6
Ethylene oxide	75–21–8

Compound name	CAS No.[1]
Ethylidene dichloride (1,1-Dichloroethane)	75–34–3
Formaldehyde	50–00–0
Hexachloroethane	67–72–1
Hexane	110–54–3
Hydroquinone	123–31–9
Isophorone	78–59–1
Maleic anhydride	108–31–6
Methanol	67–56–1
Methyl chloride (Chloromethane)	74–87–3
Methylene chloride (Dichloromethane)	75–09–2
Methylenedianiline (4,4′-)	101–77–9
Methylene diphenyl diisocyanate	101–68–8
Methyl hydrazine	60–34–4
Methyl isobutyl ketone (Hexone) (MIBK)	108–10–1
Methyl methacrylate	80–62–6
Methyl tert-butyl ether (MTBE)	1634–04–4
Naphthalene	91–20–3
Nitrobenzene	98–95–3
Phenol	108–9–52
Phthalic anhydride	85–44–9
Polycyclic organic matter	50–32–8
Propionaldehyde	123–38–6
Propylene dichloride (1,2-Dichloropropane)	78–87–5
Propylene oxide	75–56–9
Quinoline	91–22–5
Styrene	100–42–5
Styrene oxide	96–09–3
Tetrachloroethane (1,1,2,2-)	79–34–5
Tetrachloroethylene (Perchloroethylene)	127–18–4
Toluene	108–88–3
Toluene diisocyanate (2,4-)	584–84–9
o-Toluidine	95–53–4
Trichlorobenzene (1,2,4-)	120–82–1

Compound name	CAS No.[1]
Trichloroethane (1,1,1-) (Methyl chloroform)	71–55–6
Trichloroethane (1,1,2-) (Vinyl trichloride)	79–00–5
Trichloroethylene	79–01–6
Triethylamine	121–44–8
Trimethylpentane (2,2,4-)	540–84–1
Vinyl acetate	108–05–4
Vinyl chloride (Chloroethylene)	75–01–4
Vinylidene chloride (1,1-Dichloroethylene)	75–35–4
Xylene (m-)	108–38–3
Xylene (o-)	95–47–6
Xylene (p-)	106–42–3
Xylenes (isomers and mixtures)	1330–20–7

[1]CAS numbers refer to the Chemical Abstracts Services registry number assigned to specific compounds, isomers, or mixtures of compounds.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42913, July 28, 2006]

Table 2 to Subpart EEEE of Part 63—Emission Limits

As stated in §63.2346, you must comply with the emission limits for the organic liquids distribution emission sources as follows:

If you own or operate . . .	And if . . .	Then you must . . .
1. A storage tank at an existing affected source with a capacity ≥18.9 cubic meters (5,000 gallons) and <189.3 cubic meters (50,000 gallons).	a. The stored organic liquid is not crude oil and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is ≥27.6 kilopascals (4.0 psia) and <76.6 kilopascals (11.1 psia).	i. Reduce emissions of total organic HAP (or, upon approval, TOC) by at least 95 weight-percent or, as an option, to an exhaust concentration less than or equal to 20 ppmv, on a dry basis corrected to 3 percent oxygen for combustion devices using supplemental combustion air, by venting emissions through a closed vent system to any combination of control devices meeting the applicable requirements of 40 CFR part 63, subpart SS; OR
		ii. Comply with the work practice standards specified in table 4 to this subpart, items 1.a, 1.b, or 1.c for tanks storing liquids described in that table.
	b. The stored organic liquid is crude oil.	i. See the requirement in item 1.a.i or 1.a.ii of this table.

If you own or operate . . .	And if . . .	Then you must . . .
2. A storage tank at an existing affected source with a capacity ≥189.3 cubic meters (50,000 gallons).	a. The stored organic liquid is not crude oil and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is <76.6 kilopascals (11.1 psia).	i. See the requirement in item 1.a.i or 1.a.ii of this table.
	b. The stored organic liquid is crude oil.	i. See the requirement in item 1.a.i or 1.a.ii of this table.
3. A storage tank at a reconstructed or new affected source with a capacity ≥18.9 cubic meters (5,000 gallons) and <37.9 cubic meters (10,000 gallons).	a. The stored organic liquid is not crude oil and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is ≥27.6 kilopascals (4.0 psia) and <76.6 kilopascals (11.1 psia).	i. See the requirement in item 1.a.i or 1.a.ii of this table.
	b. The stored organic liquid is crude oil.	i. See the requirement in item 1.a.i or 1.a.ii of this table.
4. A storage tank at a reconstructed or new affected source with a capacity ≥37.9 cubic meters (10,000 gallons) and <189.3 cubic meters (50,000 gallons).	a. The stored organic liquid is not crude oil and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is ≥0.7 kilopascals (0.1 psia) and <76.6 kilopascals (11.1 psia).	i. See the requirement in item 1.a.i or 1.a.ii of this table.
	b. The stored organic liquid is crude oil.	i. See the requirement in item 1.a.i or 1.a.ii of this table.
5. A storage tank at a reconstructed or new affected source with a capacity ≥189.3 cubic meters (50,000 gallons).	a. The stored organic liquid is not crude oil and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is <76.6 kilopascals (11.1 psia).	i. See the requirement in item 1.a.i or 1.a.ii of this table.
	b. The stored organic liquid is crude oil.	i. See the requirement in item 1.a.i or 1.a.ii of this table.

If you own or operate . . .	And if . . .	Then you must . . .
6. A storage tank at an existing, reconstructed, or new affected source meeting the capacity criteria specified in table 2 of this subpart, items 1 through 5.	a. The stored organic liquid is not crude oil and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is ≥76.6 kilopascals (11.1 psia).	i. Reduce emissions of total organic HAP (or, upon approval, TOC) by at least 95 weight-percent or, as an option, to an exhaust concentration less than or equal to 20 ppmv, on a dry basis corrected to 3 percent oxygen for combustion devices using supplemental combustion air, by venting emissions through a closed vent system to any combination of control devices meeting the applicable requirements of 40 CFR part 63, subpart SS; OR
		ii. Comply with the work practice standards specified in table 4 to this subpart, item 2.a, for tanks storing the liquids described in that table.
7. A transfer rack at an existing facility where the total actual annual facility-level organic liquid loading volume through transfer racks is equal to or greater than 800,000 gallons and less than 10 million gallons.	a. The total table 1 organic HAP content of the organic liquid being loaded through one or more of the transfer rack's arms is at least 98 percent by weight and is being loaded into a transport vehicle.	i. For all such loading arms at the rack, reduce emissions of total organic HAP (or, upon approval, TOC) from the loading of organic liquids either by venting the emissions that occur during loading through a closed vent system to any combination of control devices meeting the applicable requirements of 40 CFR part 63, subpart SS, achieving at least 98 weight-percent HAP reduction, OR, as an option, to an exhaust concentration less than or equal to 20 ppmv, on a dry basis corrected to 3 percent oxygen for combustion devices using supplemental combustion air; OR
		ii. During the loading of organic liquids, comply with the work practice standards specified in item 3 of table 4 to this subpart.
8. A transfer rack at an existing facility where the total actual annual facility-level organic liquid loading volume through transfer racks is ≥10 million gallons.	a. One or more of the transfer rack's arms is loading an organic liquid into a transport vehicle.	i. See the requirements in items 7.a.i and 7.a.ii of this table.
9. A transfer rack at a new facility where the total actual annual facility-level organic liquid loading volume through transfer racks is less than 800,000 gallons	a. The total Table 1 organic HAP content of the organic liquid being loaded through one or more of the transfer rack's arms is at least 25 percent by weight and is being loaded into a transport vehicle	i. See the requirements in items 7.a.i and 7.a.ii of this table.

If you own or operate . . .	And if . . .	Then you must . . .
	b. One or more of the transfer rack's arms is filling a container with a capacity equal to or greater than 55 gallons	i. For all such loading arms at the rack during the loading of organic liquids, comply with the provisions of §§63.924 through 63.927 of 40 CFR part 63, Subpart PP—National Emission Standards for Containers, Container Level 3 controls; OR ii. During the loading of organic liquids, comply with the work practice standards specified in item 3.a of Table 4 to this subpart.
10. A transfer rack at a new facility where the total actual annual facility-level organic liquid loading volume through transfer racks is equal to or greater than 800,000 gallons.	a. One or more of the transfer rack's arms is loading an organic liquid into a transport vehicle.	i. See the requirements in items 7.a.i and 7.a.ii of this table.
	b. One or more of the transfer rack's arms is filling a container with a capacity equal to or greater than 55 gallons.	i. For all such loading arms at the rack during the loading of organic liquids, comply with the provisions of §§63.924 through 63.927 of 40 CFR part 63, Subpart PP—National Emission Standards for Containers, Container Level 3 controls; OR
		ii. During the loading of organic liquids, comply with the work practice standards specified in item 3.a of table 4 to this subpart.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42913, July 28, 2006; 73 FR 21830, Apr. 23, 2008]

Table 3 to Subpart EEEE of Part 63—Operating Limits—High Throughput Transfer Racks

As stated in §63.2346(e), you must comply with the operating limits for existing, reconstructed, or new affected sources as follows:

For each existing, each reconstructed, and each new affected source using . . .	You must . . .
1. A thermal oxidizer to comply with an emission limit in table 2 to this subpart	Maintain the daily average fire box or combustion zone temperature greater than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit.
2. A catalytic oxidizer to comply with an emission limit in table 2 to this subpart	a. Replace the existing catalyst bed before the age of the bed exceeds the maximum allowable age established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND
	b. Maintain the daily average temperature at the inlet of the catalyst bed greater than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND
	c. Maintain the daily average temperature difference across the catalyst bed greater than or equal to the minimum temperature difference established during the design evaluation or performance test that demonstrated compliance with the emission limit.
3. An absorber to comply with an emission limit in table 2 to this subpart	a. Maintain the daily average concentration level of organic compounds in the absorber exhaust less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR
	b. Maintain the daily average scrubbing liquid temperature less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND
	Maintain the difference between the specific gravities of the saturated and fresh scrubbing fluids greater than or equal to the difference established during the design evaluation or performance test that demonstrated compliance with the emission limit.
4. A condenser to comply with an emission limit in table 2 to this subpart	a. Maintain the daily average concentration level of organic compounds at the condenser exit less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR
	b. Maintain the daily average condenser exit temperature less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit.

For each existing, each reconstructed, and each new affected source using . . .	You must . . .
5. An adsorption system with adsorbent regeneration to comply with an emission limit in table 2 to this subpart	a. Maintain the daily average concentration level of organic compounds in the adsorber exhaust less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR
	b. Maintain the total regeneration stream mass flow during the adsorption bed regeneration cycle greater than or equal to the reference stream mass flow established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND
	Before the adsorption cycle commences, achieve and maintain the temperature of the adsorption bed after regeneration less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND
	Achieve a pressure reduction during each adsorption bed regeneration cycle greater than or equal to the pressure reduction established during the design evaluation or performance test that demonstrated compliance with the emission limit.
6. An adsorption system without adsorbent regeneration to comply with an emission limit in table 2 to this subpart	a. Maintain the daily average concentration level of organic compounds in the adsorber exhaust less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR
	b. Replace the existing adsorbent in each segment of the bed with an adsorbent that meets the replacement specifications established during the design evaluation or performance test before the age of the adsorbent exceeds the maximum allowable age established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND
	Maintain the temperature of the adsorption bed less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit.
7. A flare to comply with an emission limit in table 2 to this subpart	a. Comply with the equipment and operating requirements in §63.987(a); AND b. Conduct an initial flare compliance assessment in accordance with §63.987(b); AND
	c. Install and operate monitoring equipment as specified in §63.987(c).
8. Another type of control device to comply with an emission limit in table 2 to this subpart	Submit a monitoring plan as specified in §§63.995(c) and 63.2366(b), and monitor the control device in accordance with that plan.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42914, July 28, 2006]

Table 4 to Subpart EEEE of Part 63—Work Practice Standards

As stated in §63.2346, you may elect to comply with one of the work practice standards for existing, reconstructed, or new affected sources in the following table. If you elect to do so, . . .

For each . . .	You must . . .
1. Storage tank at an existing, reconstructed, or new affected source meeting any set of tank capacity and organic HAP vapor pressure criteria specified in table 2 to this subpart, items 1 through 5	a. Comply with the requirements of 40 CFR part 63, subpart WW (control level 2), if you elect to meet 40 CFR part 63, subpart WW (control level 2) requirements as an alternative to the emission limit in table 2 to this subpart, items 1 through 5; OR
	b. Comply with the requirements of §63.984 for routing emissions to a fuel gas system or back to a process; OR
	c. Comply with the requirements of §63.2346(a)(4) for vapor balancing emissions to the transport vehicle from which the storage tank is filled.
2. Storage tank at an existing, reconstructed, or new affected source meeting any set of tank capacity and organic HAP vapor pressure criteria specified in table 2 to this subpart, item 6	a. Comply with the requirements of §63.984 for routing emissions to a fuel gas system or back to a process; OR b. Comply with the requirements of §63.2346(a)(4) for vapor balancing emissions to the transport vehicle from which the storage tank is filled.
3. Transfer rack subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10, at an existing, reconstructed, or new affected source	a. If the option of a vapor balancing system is selected, install and, during the loading of organic liquids, operate a system that meets the requirements in table 7 to this subpart, item 3.b.i and item 3.b.ii, as applicable; OR
	b. Comply with the requirements of §63.984 during the loading of organic liquids, for routing emissions to a fuel gas system or back to a process.
4. Pump, valve, and sampling connection that operates in organic liquids service at least 300 hours per year at an existing, reconstructed, or new affected source	Comply with the requirements for pumps, valves, and sampling connections in 40 CFR part 63, subpart TT (control level 1), subpart UU (control level 2), or subpart H.
5. Transport vehicles equipped with vapor collection equipment that are loaded at transfer racks that are subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10	Follow the steps in 40 CFR 60.502(e) to ensure that organic liquids are loaded only into vapor-tight transport vehicles, and comply with the provisions in 40 CFR 60.502(f), (g), (h), and (i), except substitute the term transport vehicle at each occurrence of tank truck or gasoline tank truck in those paragraphs.
6. Transport vehicles equipped without vapor collection equipment that are loaded at transfer racks that are subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10	Ensure that organic liquids are loaded only into transport vehicles that have a current certification in accordance with the U.S. DOT pressure test requirements in 49 CFR 180 (cargo tanks) or 49 CFR 173.31 (tank cars).

[71 FR 42915, July 28, 2006]

Table 5 to Subpart EEEE of Part 63—Requirements for Performance Tests and Design Evaluations

As stated in §§63.2354(a) and 63.2362, you must comply with the requirements for performance tests and design evaluations for existing, reconstructed, or new affected sources as follows:

For . . .	You must conduct . . .	According to . . .	Using . . .	To determine . . .	According to the following requirements . . .
1. Each existing, each reconstructed, and each new affected source using a nonflare control device to comply with an emission limit in Table 2 to this subpart, items 1 through 10	a. A performance test to determine the organic HAP (or, upon approval, TOC) control efficiency of each nonflare control device, OR the exhaust concentration of each combustion device; OR	i. §63.985(b)(1)(ii), §63.988(b), §63.990(b), or §63.995(b)	(1) EPA Method 1 or 1A in appendix A–1 of 40 CFR part 60, as appropriate	(A) Sampling port locations and the required number of traverse points	(i) Sampling sites must be located at the inlet and outlet of each control device if complying with the control efficiency requirement or at the outlet of the control device if complying with the exhaust concentration requirement; AND (ii) the outlet sampling site must be located at each control device prior to any releases to the atmosphere.
			(2) EPA Method 2, 2A, 2C, 2D, or 2F in appendix A–1 of 40 CFR part 60, or EPA Method 2G in appendix A–2 of 40 CFR part 60, as appropriate	(A) Stack gas velocity and volumetric flow rate	See the requirements in items 1.a.i.(1)(A)(i) and (ii) of this table.

For . . .	You must conduct . . .	According to . . .	Using . . .	To determine . . .	According to the following requirements . . .
			(3) EPA Method 3 or 3B in appendix A–2 of 40 CFR part 60, as appropriate	(A) Concentration of CO2 and O2 and dry molecular weight of the stack gas	See the requirements in items 1.a.i.(1)(A)(i) and (ii) of this table.
			(4) EPA Method 4 in appendix A–3 of 40 CFR part 60	(A) Moisture content of the stack gas	See the requirements in items 1.a.i.(1)(A)(i) and (ii) of this table.
			(5) EPA Method 18 in appendix A–6 of 40 CFR part 60, or EPA Method 25 or 25A in appendix A–7 of 40 CFR part 60, as appropriate, or EPA Method 316 in appendix A of 40 CFR part 63 for measuring form-aldehyde	(A) Total organic HAP (or, upon approval, TOC), or formaldehyde emissions	(i) The organic HAP used for the calibration gas for EPA Method 25A in appendix A–7 of 40 CFR part 60 must be the single organic HAP representing the largest percent by volume of emissions; AND (ii) During the performance test, you must establish the operating parameter limits within which total organic HAP (or, upon approval, TOC) emissions are reduced by the required weight-percent or, as an option for nonflare combustion devices, to 20 ppmv exhaust concentration.

For . . .	You must conduct . . .	According to . . .	Using . . .	To determine . . .	According to the following requirements . . .
	b. A design evaluation (for nonflare control devices) to determine the organic HAP (or, upon approval, TOC) control efficiency of each nonflare control device, or the exhaust concentration of each combustion control device	§63.985(b)(1)(i)			During a design evaluation, you must establish the operating parameter limits within which total organic HAP, (or, upon approval, TOC) emissions are reduced by at least 95 weight-percent for storage tanks or 98 weight-percent for transfer racks, or, as an option for nonflare combustion devices, to 20 ppmv exhaust concentration
2. Each transport vehicle that you own that is equipped with vapor collection equipment and is loaded with organic liquids at a transfer rack that is subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10, at an existing, reconstructed, or new affected source	A performance test to determine the vapor tightness of the tank and then repair as needed until it passes the test.		EPA Method 27 in appendix A of 40 CFR part 60	Vapor tightness	The pressure change in the tank must be no more than 250 pascals (1 inch of water) in 5 minutes after it is pressurized to 4,500 pascals (18 inches of water).

[71 FR 42916, July 28, 2006, as amended at 73 FR 21831, Apr. 23, 2008]

Table 6 to Subpart EEEE of Part 63—Initial Compliance With Emission Limits

As stated in §§63.2370(a) and 63.2382(b), you must show initial compliance with the emission limits for existing, reconstructed, or new affected sources as follows:

For each . . .	For the following emission limit . . .	You have demonstrated initial compliance if . . .
1. Storage tank at an existing, reconstructed, or new affected source meeting any set of tank capacity and liquid organic HAP vapor pressure criteria specified in Table 2 to this subpart, items 1 through 6	Reduce total organic HAP (or, upon approval, TOC) emissions by at least 95 weight-percent, or as an option for nonflare combustion devices to an exhaust concentration of ≤20 ppmv	Total organic HAP (or, upon approval, TOC) emissions, based on the results of the performance testing or design evaluation specified in Table 5 to this subpart, item 1.a or 1.b, respectively, are reduced by at least 95 weight-percent or as an option for nonflare combustion devices to an exhaust concentration ≤20 ppmv.
2. Transfer rack that is subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10, at an existing, reconstructed, or new affected source	Reduce total organic HAP (or, upon approval, TOC) emissions from the loading of organic liquids by at least 98 weight-percent, or as an option for nonflare combustion devices to an exhaust concentration of ≤20 ppmv	Total organic HAP (or, upon approval, TOC) emissions from the loading of organic liquids, based on the results of the performance testing or design evaluation specified in table 5 to this subpart, item 1.a or 1.b, respectively, are reduced by at least 98 weight-percent or as an option for nonflare combustion devices to an exhaust concentration of ≤20 ppmv.

[71 FR 42918, July 28, 2006, as amended at 73 FR 21832, Apr. 23, 2008]

Table 7 to Subpart EEEE of Part 63—Initial Compliance With Work Practice Standards

For each . . .	If you . . .	You have demonstrated initial compliance if . . .
1. Storage tank at an existing affected source meeting either set of tank capacity and liquid organic HAP vapor pressure criteria specified in Table 2 to this subpart, items 1 or 2	a. Install a floating roof or equivalent control that meets the requirements in Table 4 to this subpart, item 1.a	i. After emptying and degassing, you visually inspect each internal floating roof before the refilling of the storage tank and perform seal gap inspections of the primary and secondary rim seals of each external floating roof within 90 days after the refilling of the storage tank.
	b. Route emissions to a fuel gas system or back to a process	i. You meet the requirements in §63.984(b) and submit the statement of connection required by §63.984(c).
	c. Install and, during the filling of the storage tank with organic liquids, operate a vapor balancing system	i. You meet the requirements in §63.2346(a)(4).

For each . . .	If you . . .	You have demonstrated initial compliance if . . .
2. Storage tank at a reconstructed or new affected source meeting any set of tank capacity and liquid organic HAP vapor pressure criteria specified in Table 2 to this subpart, items 3 through 5	a. Install a floating roof or equivalent control that meets the requirements in Table 4 to this subpart, item 1.a	i. You visually inspect each internal floating roof before the initial filling of the storage tank, and perform seal gap inspections of the primary and secondary rim seals of each external floating roof within 90 days after the initial filling of the storage tank.
	b. Route emissions to a fuel gas system or back to a process	i. See item 1.b.i of this table.
	c. Install and, during the filling of the storage tank with organic liquids, operate a vapor balancing system	i. See item 1.c.i of this table.
3. Transfer rack that is subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10, at an existing, reconstructed, or new affected source	a. Load organic liquids only into transport vehicles having current vapor tightness certification as described in table 4 to this subpart, item 5 and item 6	i. You comply with the provisions specified in table 4 to this subpart, item 5 or item 6, as applicable.
	b. Install and, during the loading of organic liquids, operate a vapor balancing system	i. You design and operate the vapor balancing system to route organic HAP vapors displaced from loading of organic liquids into transport vehicles to the storage tank from which the liquid being loaded originated or to another storage tank connected to a common header. ii. You design and operate the vapor balancing system to route organic HAP vapors displaced from loading of organic liquids into containers directly (e.g., no intervening tank or containment area such as a room) to the storage tank from which the liquid being loaded originated or to another storage tank connected to a common header.
	c. Route emissions to a fuel gas system or back to a process	i. See item 1.b.i of this table.

For each . . .	If you . . .	You have demonstrated initial compliance if . . .
4. Equipment leak component, as defined in §63.2406, that operates in organic liquids service ≥300 hours per year at an existing, reconstructed, or new affected source	a. Carry out a leak detection and repair program or equivalent control according to one of the subparts listed in table 4 to this subpart, item 4.a	i. You specify which one of the control programs listed in table 4 to this subpart you have selected, OR ii. Provide written specifications for your equivalent control approach.

[71 FR 42918, July 28, 2006, as amended at 73 FR 21833, Apr. 23, 2008]

Table 8 to Subpart EEEE of Part 63—Continuous Compliance With Emission Limits

As stated in §§63.2378(a) and (b) and 63.2390(b), you must show continuous compliance with the emission limits for existing, reconstructed, or new affected sources according to the following table:

For each . . .	For the following emission limit . . .	You must demonstrate continuous compliance by . . .
1. Storage tank at an existing, reconstructed, or new affected source meeting any set of tank capacity and liquid organic HAP vapor pressure criteria specified in table 2 to this subpart, items 1 through 6	a. Reduce total organic HAP (or, upon approval, TOC) emissions from the closed vent system and control device by 95 weight-percent or greater, or as an option to 20 ppmv or less of total organic HAP (or, upon approval, TOC) in the exhaust of combustion devices	i. Performing CMS monitoring and collecting data according to §§63.2366, 63.2374, and 63.2378; AND ii. Maintaining the operating limits established during the design evaluation or performance test that demonstrated compliance with the emission limit.
2. Transfer rack that is subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10, at an existing, reconstructed, or new affected source	a. Reduce total organic HAP (or, upon approval, TOC) emissions during the loading of organic liquids from the closed vent system and control device by 98 weight-percent or greater, or as an option to 20 ppmv or less of total organic HAP (or, upon approval, TOC) in the exhaust of combustion devices	i. Performing CMS monitoring and collecting data according to §§63.2366, 63.2374, and 63.2378 during the loading of organic liquids; AND ii. Maintaining the operating limits established during the design evaluation or performance test that demonstrated compliance with the emission limit during the loading of organic liquids.

[71 FR 42919, July 28, 2006]

Table 9 to Subpart EEEE of Part 63—Continuous Compliance With Operating Limits—High Throughput Transfer Racks

As stated in §§63.2378(a) and (b) and 63.2390(b), you must show continuous compliance with the operating limits for existing, reconstructed, or new affected sources according to the following table:

For each existing, reconstructed, and each new affected source using . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
1. A thermal oxidizer to comply with an emission limit in table 2 to this subpart.	a. Maintain the daily average fire box or combustion zone, as applicable, temperature greater than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit.	i. Continuously monitoring and recording fire box or combustion zone, as applicable, temperature every 15 minutes and maintaining the daily average fire box temperature greater than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in §63.998.
2. A catalytic oxidizer to comply with an emission limit in table 2 to this subpart.	a. Replace the existing catalyst bed before the age of the bed exceeds the maximum allowable age established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND	i. Replacing the existing catalyst bed before the age of the bed exceeds the maximum allowable age established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in §63.998.
	b. Maintain the daily average temperature at the inlet of the catalyst bed greater than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND	i. Continuously monitoring and recording the temperature at the inlet of the catalyst bed at least every 15 minutes and maintaining the daily average temperature at the inlet of the catalyst bed greater than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in §63.998.

For each existing, reconstructed, and each new affected source using . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
	c. Maintain the daily average temperature difference across the catalyst bed greater than or equal to the minimum temperature difference established during the design evaluation or performance test that demonstrated compliance with the emission limit.	i. Continuously monitoring and recording the temperature at the outlet of the catalyst bed every 15 minutes and maintaining the daily average temperature difference across the catalyst bed greater than or equal to the minimum temperature difference established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in §63.998.
3. An absorber to comply with an emission limit in table 2 to this subpart.	a. Maintain the daily average concentration level of organic compounds in the absorber exhaust less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR	i. Continuously monitoring the organic concentration in the absorber exhaust and maintaining the daily average concentration less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in §63.998.
	b. Maintain the daily average scrubbing liquid temperature less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND Maintain the difference between the specific gravities of the saturated and fresh scrubbing fluids greater than or equal to the difference established during the design evaluation or performance test that demonstrated compliance with the emission limit.	i. Continuously monitoring the scrubbing liquid temperature and maintaining the daily average temperature less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Maintaining the difference between the specific gravities greater than or equal to the difference established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND iii. Keeping the applicable records required in §63.998.

For each existing, reconstructed, and each new affected source using . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
4. A condenser to comply with an emission limit in table 2 to this subpart.	a. Maintain the daily average concentration level of organic compounds at the exit of the condenser less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR	i. Continuously monitoring the organic concentration at the condenser exit and maintaining the daily average concentration less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in §63.998.
	b. Maintain the daily average condenser exit temperature less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit.	i. Continuously monitoring and recording the temperature at the exit of the condenser at least every 15 minutes and maintaining the daily average temperature less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in §63.998.
5. An adsorption system with adsorbent regeneration to comply with an emission limit in table 2 to this subpart.	a. Maintain the daily average concentration level of organic compounds in the adsorber exhaust less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR	i. Continuously monitoring the daily average organic concentration in the adsorber exhaust and maintaining the concentration less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in §63.998.

For each existing, reconstructed, and each new affected source using . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
	b. Maintain the total regeneration stream mass flow during the adsorption bed regeneration cycle greater than or equal to the reference stream mass flow established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND Before the adsorption cycle commences, achieve and maintain the temperature of the adsorption bed after regeneration less than or equal to the reference temperature established during the design evaluation or performance test; AND Achieve greater than or equal to the pressure reduction during the adsorption bed regeneration cycle established during the design evaluation or performance test that demonstrated compliance with the emission limit.	i. Maintaining the total regeneration stream mass flow during the adsorption bed regeneration cycle greater than or equal to the reference stream mass flow established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Maintaining the temperature of the adsorption bed after regeneration less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND iii. Achieving greater than or equal to the pressure reduction during the regeneration cycle established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND iv. Keeping the applicable records required in §63.998.
6. An adsorption system without adsorbent regeneration to comply with an emission limit in table 2 to this subpart.	a. Maintain the daily average concentration level of organic compounds in the adsorber exhaust less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR	i. Continuously monitoring the organic concentration in the adsorber exhaust and maintaining the concentration less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in §63.998.

For each existing, reconstructed, and each new affected source using . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
	b. Replace the existing adsorbent in each segment of the bed before the age of the adsorbent exceeds the maximum allowable age established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND Maintain the temperature of the adsorption bed less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit.	i. Replacing the existing adsorbent in each segment of the bed with an adsorbent that meets the replacement specifications established during the design evaluation or performance test before the age of the adsorbent exceeds the maximum allowable age established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Maintaining the temperature of the adsorption bed less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND iii. Keeping the applicable records required in §63.998.
7. A flare to comply with an emission limit in table 2 to this subpart.	a. Maintain a pilot flame in the flare at all times that vapors may be vented to the flare (§63.11(b)(5)); AND	i. Continuously operating a device that detects the presence of the pilot flame; AND ii. Keeping the applicable records required in §63.998.
	b. Maintain a flare flame at all times that vapors are being vented to the flare (§63.11(b)(5)); AND	i. Maintaining a flare flame at all times that vapors are being vented to the flare; AND ii. Keeping the applicable records required in §63.998.
	c. Operate the flare with no visible emissions, except for up to 5 minutes in any 2 consecutive hours (§63.11(b)(4)); AND EITHER	i. Operating the flare with no visible emissions exceeding the amount allowed; AND ii. Keeping the applicable records required in §63.998.
	d.1. Operate the flare with an exit velocity that is within the applicable limits in §63.11(b)(7) and (8) and with a net heating value of the gas being combusted greater than the applicable minimum value in §63.11(b)(6)(ii); OR	i. Operating the flare within the applicable exit velocity limits; AND ii. Operating the flare with the gas heating value greater than the applicable minimum value; AND iii. Keeping the applicable records required in §63.998.
	d.2. Adhere to the requirements in §63.11(b)(6)(i).	i. Operating the flare within the applicable limits in 63.11(b)(6)(i); AND ii. Keeping the applicable records required in §63.998.

For each existing, reconstructed, and each new affected source using . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
8. Another type of control device to comply with an emission limit in table 2 to this subpart.	Submit a monitoring plan as specified in §§63.995(c) and 63.2366(c), and monitor the control device in accordance with that plan.	Submitting a monitoring plan and monitoring the control device according to that plan.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42919, July 28, 2006]

Table 10 to Subpart EEEE of Part 63—Continuous Compliance With Work Practice Standards

As stated in §§63.2378(a) and (b) and 63.2386(c)(6), you must show continuous compliance with the work practice standards for existing, reconstructed, or new affected sources according to the following table:

For each . . .	For the following standard . . .	You must demonstrate continuous compliance by . . .
1. Internal floating roof (IFR) storage tank at an existing, reconstructed, or new affected source meeting any set of tank capacity, and vapor pressure criteria specified in table 2 to this subpart, items 1 through 5.	a. Install a floating roof designed and operated according to the applicable specifications in §63.1063(a) and (b).	i. Visually inspecting the floating roof deck, deck fittings, and rim seals of each IFR once per year (§63.1063(d)(2)); AND ii. Visually inspecting the floating roof deck, deck fittings, and rim seals of each IFR either each time the storage tank is completely emptied and degassed or every 10 years, whichever occurs first (§63.1063(c)(1), (d)(1), and (e)); AND iii. Keeping the tank records required in §63.1065.
2. External floating roof (EFR) storage tank at an existing, reconstructed, or new affected source meeting any set of tank capacity and vapor pressure criteria specified in table 2 to this subpart, items 1 through 5.	a. Install a floating roof designed and operated according to the applicable specifications in §63.1063(a) and (b).	i. Visually inspecting the floating roof deck, deck fittings, and rim seals of each EFR either each time the storage tank is completely emptied and degassed or every 10 years, whichever occurs first (§63.1063(c)(2), (d), and (e)); AND ii. Performing seal gap measurements on the secondary seal of each EFR at least once every year, and on the primary seal of each EFR at least every 5 years (§63.1063(c)(2), (d), and (e)); AND iii. Keeping the tank records required in §63.1065.
3. IFR or EFR tank at an existing, reconstructed, or new affected source meeting any set of tank capacity and vapor pressure criteria specified in table 2 to this subpart, items 1 through 5.	a. Repair the conditions causing storage tank inspection failures (§63.1063(e)).	i. Repairing conditions causing inspection failures: before refilling the storage tank with organic liquid, or within 45 days (or up to 105 days with extensions) for a tank containing organic liquid; AND ii. Keeping the tank records required in §63.1065(b).

For each . . .	For the following standard . . .	You must demonstrate continuous compliance by . . .
4. Transfer rack that is subject to control based on the criteria specified in table 2 to this subpart, items 7 through 10, at an existing, reconstructed, or new affected source.	a. Ensure that organic liquids are loaded into transport vehicles in accordance with the requirements in table 4 to this subpart, items 5 or 6, as applicable.	i. Ensuring that organic liquids are loaded into transport vehicles in accordance with the requirements in table 4 to this subpart, items 5 or 6, as applicable.
	b. Install and, during the loading of organic liquids, operate a vapor balancing system.	i. Monitoring each potential source of vapor leakage in the system quarterly during the loading of a transport vehicle or the filling of a container using the methods and procedures described in the rule requirements selected for the work practice standard for equipment leak components as specified in table 4 to this subpart, item 4. An instrument reading of 500 ppmv defines a leak. Repair of leaks is performed according to the repair requirements specified in your selected equipment leak standards.
	c. Route emissions to a fuel gas system or back to a process.	i. Continuing to meet the requirements specified in §63.984(b).
5. Equipment leak component, as defined in §63.2406, that operates in organic liquids service at least 300 hours per year.	a. Comply with the requirements of 40 CFR part 63, subpart TT, UU, or H.	i. Carrying out a leak detection and repair program in accordance with the subpart selected from the list in item 5.a of this table.
6. Storage tank at an existing, reconstructed, or new affected source meeting any of the tank capacity and vapor pressure criteria specified in table 2 to this subpart, items 1 through 6.	a. Route emissions to a fuel gas system or back to the process.	i. Continuing to meet the requirements specified in §63.984(b).
	b. Install and, during the filling of the storage tank with organic liquids, operate a vapor balancing system.	i. Monitoring each potential source of vapor leakage in the system quarterly during the loading of a transport vehicle or the filling of a container using the methods and procedures described in the rule requirements selected for the work practice standard for equipment leak components as specified in table 4 to this subpart, item 4. An instrument reading of 500 ppmv defines a leak. Repair of leaks is performed according to the repair requirements specified in your selected equipment leak standards.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 42922, July 28, 2006]

Table 11 to Subpart EEEE of Part 63—Requirements for Reports

As stated in §63.2386(a), (b), and (f), you must submit compliance reports and startup, shutdown, and malfunction reports according to the following table:

You must submit a(n) . . .	The report must contain . . .	You must submit the report . . .
1. Compliance report or Periodic Report	a. The information specified in §63.2386(c), (d), (e). If you had a SSM during the reporting period and you took actions consistent with your SSM plan, the report must also include the information in §63.10(d)(5)(i); AND	Semiannually, and it must be postmarked by January 31 or July 31, in accordance with §63.2386(b).
	b. The information required by 40 CFR part 63, subpart TT, UU, or H, as applicable, for pumps, valves, and sampling connections; AND	See the submission requirement in item 1.a of this table.
	c. The information required by §63.999(c); AND	See the submission requirement in item 1.a of this table.
	d. The information specified in §63.1066(b) including: Notification of inspection, inspection results, requests for alternate devices, and requests for extensions, as applicable.	See the submission requirement in item 1.a. of this table.
2. Immediate SSM report if you had a SSM that resulted in an applicable emission standard in the relevant standard being exceeded, and you took an action that was not consistent with your SSM plan	a. The information required in §63.10(d)(5)(ii)	i. By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority (§63.10(d)(5)(ii)).

[71 FR 42923, July 28, 2006]

Table 12 to Subpart EEEE of Part 63—Applicability of General Provisions to Subpart EEEE

As stated in §§63.2382 and 63.2398, you must comply with the applicable General Provisions requirements as follows:

Citation	Subject	Brief description	Applies to subpart EEEE
§63.1	Applicability	Initial applicability determination; Applicability after standard established; Permit requirements; Extensions, Notifications	Yes.
§63.2	Definitions	Definitions for part 63 standards	Yes.
§63.3	Units and Abbreviations	Units and abbreviations for part 63 standards	Yes.
§63.4	Prohibited Activities and Circumvention	Prohibited activities; Circumvention, Severability	Yes.
§63.5	Construction/Reconstruction	Applicability; Applications; Approvals	Yes.
§63.6(a)	Compliance with Standards/O&M Applicability	GP apply unless compliance extension; GP apply to area sources that become major	Yes.
§63.6(b)(1)–(4)	Compliance Dates for New and Reconstructed Sources	Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for section 112(f)	Yes.
§63.6(b)(5)	Notification	Must notify if commenced construction or reconstruction after proposal	Yes.
§63.6(b)(6)	[Reserved].		
§63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source	Yes.

Citation	Subject	Brief description	Applies to subpart EEEE
§63.6(c)(1)–(2)	Compliance Dates for Existing Sources	Comply according to date in this subpart, which must be no later than 3 years after effective date; for section 112(f) standards, comply within 90 days of effective date unless compliance extension	Yes.
§63.6(c)(3)–(4)	[Reserved].		
§63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Area sources that become major must comply with major source standards by date indicated in this subpart or by equivalent time period (*e.g* ., 3 years)	Yes.
§63.6(d)	[Reserved].		
§63.6(e)(1)	Operation & Maintenance	Operate to minimize emissions at all times; correct malfunctions as soon as practicable; and operation and maintenance requirements independently enforceable; information Administrator will use to determine if operation and maintenance requirements were met	Yes.
§63.6(e)(2)	[Reserved].		
§63.6(e)(3)	SSM Plan	Requirement for SSM plan; content of SSM plan; actions during SSM	Yes; however, (1) the 2-day reporting requirement in paragraph §63.6(e)(3)(iv) does not apply and (2) §63.6(e)(3) does not apply to emissions sources not requiring control.
§63.6(f)(1)	Compliance Except During SSM	You must comply with emission standards at all times except during SSM	Yes.
§63.6(f)(2)–(3)	Methods for Determining Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.
§63.6(g)(1)–(3)	Alternative Standard	Procedures for getting an alternative standard	Yes.

Citation	Subject	Brief description	Applies to subpart EEEE
§63.6(h)	Opacity/Visible Emission Standards	Requirements for compliance with opacity and visible emission standards	No; except as it applies to flares for which Method 22 observations are required as part of a flare compliance assessment.
§63.6(i)(1)–(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.
§63.6(j)	Presidential Compliance Exemption	President may exempt any source from requirement to comply with this subpart	Yes.
§63.7(a)(2)	Performance Test Dates	Dates for conducting initial performance testing; must conduct 180 days after compliance date	Yes.
§63.7(a)(3)	Section 114 Authority	Adminsitrator may require a performance test under CAA section 114 at any time	Yes.
§63.7(b)(1)	Notification of Performance Test	Must notify Administrator 60 days before the test	Yes.
§63.7(b)(2)	Notification of Rescheduling	If you have to reschedule performance test, must notify Administrator of rescheduled date as soon as practicable and without delay	Yes.
§63.7(c)	Quality Assurance (QA)/Test Plan	Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing	Yes.
§63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.
§63.7(e)(1)	Conditions for Conducting Performance Tests	Performance tests must be conducted under representative conditions; cannot conduct performance tests during SSM	Yes.

Citation	Subject	Brief description	Applies to subpart EEEE
§63.7(e)(2)	Conditions for Conducting Performance Tests	Must conduct according to this subpart and EPA test methods unless Administrator approves alternative	Yes.
§63.7(e)(3)	Test Run Duration	Must have three test runs of at least 1 hour each; compliance is based on arithmetic mean of three runs; conditions when data from an additional test run can be used	Yes; however, for transfer racks per §§63.987(b)(3)(i)(A)–(B) and 63.997(e)(1)(v)(A)–(B) provide exceptions to the requirement for test runs to be at least 1 hour each.
§63.7(f)	Alternative Test Method	Procedures by which Administrator can grant approval to use an intermediate or major change, or alternative to a test method	Yes.
§63.7(g)	Performance Test Data Analysis	Must include raw data in performance test report; must submit performance test data 60 days after end of test with the Notification of Compliance Status; keep data for 5 years	Yes; however, performance test data is to be submitted with the Notification of Compliance Status according to the schedule specified in §63.9(h)(1)–(6) below.
§63.7(h)	Waiver of Tests	Procedures for Administrator to waive performance test	Yes.
§63.8(a)(1)	Applicability of Monitoring Requirements	Subject to all monitoring requirements in standard	Yes.
§63.8(a)(2)	Performance Specifications	Performance Specifications in appendix B of 40 CFR part 60 apply	Yes.
§63.8(a)(3)	[Reserved].		
§63.8(a)(4)	Monitoring of Flares	Monitoring requirements for flares in §63.11	Yes; however, monitoring requirements in §63.987(c) also apply.

Citation	Subject	Brief description	Applies to subpart EEEE
§63.8(b)(1)	Monitoring	Must conduct monitoring according to standard unless Administrator approves alternative	Yes.
§63.8(b)(2)–(3)	Multiple Effluents and Multiple Monitoring Systems	Specific requirements for installing monitoring systems; must install on each affected source or after combined with another affected source before it is released to the atmosphere provided the monitoring is sufficient to demonstrate compliance with the standard; if more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup	Yes.
§63.8(c)(1)	Monitoring System Operation and Maintenance	Maintain monitoring system in a manner consistent with good air pollution control practices	Yes.
§63.8(c)(1)(i)—(iii)	Routine and Predictable SSM	Keep parts for routine repairs readily available; reporting requirements for SSM when action is described in SSM plan.	Yes.
§63.8(c)(2)–(3)	Monitoring System Installation	Must install to get representative emission or parameter measurements; must verify operational status before or at performance test	Yes.

Citation	Subject	Brief description	Applies to subpart EEEE
§63.8(c)(4)	CMS Requirements	CMS must be operating except during breakdown, out-of control, repair, maintenance, and high-level calibration drifts; COMS must have a minimum of one cycle of sampling and analysis for each successive 10-second period and one cycle of data recording for each successive 6-minute period; CEMS must have a minimum of one cycle of operation for each successive 15-minute period	Yes; however, COMS are not applicable.
§63.8(c)(5)	COMS Minimum Procedures	COMS minimum procedures	No.
§63.8(c)(6)–(8)	CMS Requirements	Zero and high level calibration check requirements. Out-of-control periods	Yes, but only applies for CEMS. 40 CFR part 63, subpart SS provides requirements for CPMS.
§63.8(d)	CMS Quality Control	Requirements for CMS quality control, including calibration, etc.; must keep quality control plan on record for 5 years; keep old versions for 5 years after revisions	Yes, but only applies for CEMS. 40 CFR part 63, subpart SS provides requirements for CPMS.
§63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	Yes, but only applies for CEMS.
§63.8(f)(1)–(5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	Yes, but 40 CFR part 63, subpart SS also provides procedures for approval of CPMS.
§63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for CEMS	Yes.

Citation	Subject	Brief description	Applies to subpart EEEE
§63.8(g)	Data Reduction	COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least 4 equally spaced data points; data that cannot be used in average	Yes; however, COMS are not applicable.
§63.9(a)	Notification Requirements	Applicability and State delegation	Yes.
§63.9(b)(1)–(2), (4)–(5)	Initial Notifications	Submit notification within 120 days after effective date; notification of intent to construct/reconstruct, notification of commencement of construction/reconstruction, notification of startup; contents of each	Yes.
§63.9(c)	Request for Compliance Extension	Can request if cannot comply by date or if installed best available control technology or lowest achievable emission rate (BACT/LAER)	Yes.
§63.9(d)	Notification of Special Compliance Requirements for New Sources	For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date	Yes.
§63.9(e)	Notification of Performance Test	Notify Administrator 60 days prior	Yes.
§63.9(f)	Notification of VE/Opacity Test	Notify Administrator 30 days prior	No.
§63.9(g)	Additional Notifications When Using CMS	Notification of performance evaluation; notification about use of COMS data; notification that exceeded criterion for relative accuracy alternative	Yes; however, there are no opacity standards.

Citation	Subject	Brief description	Applies to subpart EEEE
§63.9(h)(1)–(6)	Notification of Compliance Status	Contents due 60 days after end of performance test or other compliance demonstration, except for opacity/visible emissions, which are due 30 days after; when to submit to Federal vs. State authority	Yes; however, (1) there are no opacity standards and (2) all initial Notification of Compliance Status, including all performance test data, are to be submitted at the same time, either within 240 days after the compliance date or within 60 days after the last performance test demonstrating compliance has been completed, whichever occurs first.
§63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change in when notifications must be submitted	Yes.
§63.9(j)	Change in Previous Information	Must submit within 15 days after the change	No. These changes will be reported in the first and subsequent compliance reports.
§63.10(a)	Recordkeeping/Reporting	Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source	Yes.
§63.10(b)(1)	Recordkeeping/Reporting	General requirements; keep all records readily available; keep for 5 years	Yes.
§63.10(b)(2)(i)–(iv)	Records Related to Startup, Shutdown, and Malfunction	Occurrence of each for operations (process equipment); occurrence of each malfunction of air pollution control equipment; maintenance on air pollution control equipment; actions during SSM	Yes.
§63.10(b)(2)(vi)–(xi)	CMS Records	Malfunctions, inoperative, out-of-control periods	Yes.

Citation	Subject	Brief description	Applies to subpart EEEE
§63.10(b)(2)(xii)	Records	Records when under waiver	Yes.
§63.10(b)(2)(xiii)	Records	Records when using alternative to relative accuracy test	Yes.
§63.10(b)(2)(xiv)	Records	All documentation supporting initial notification and notification of compliance status	Yes.
§63.10(b)(3)	Records	Applicability determinations	Yes.
§63.10(c)	Records	Additional records for CMS	Yes.
§63.10(d)(1)	General Reporting Requirements	Requirement to report	Yes.
§63.10(d)(2)	Report of Performance Test Results	When to submit to Federal or State authority	Yes.
§63.10(d)(3)	Reporting Opacity or VE Observations	What to report and when	Yes.
§63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance extension	Yes.
§63.10(d)(5)	SSM Reports	Contents and submission	Yes.
§63.10(e)(1)–(2)	Additional CMS Reports	Must report results for each CEMS on a unit; written copy of CMS performance evaluation; 2–3 copies of COMS performance evaluation	Yes; however, COMS are not applicable.
§63.10(e)(3)(i)–(iii)	Reports	Schedule for reporting excess emissions and parameter monitor exceedance (now defined as deviations)	Yes; however, note that the title of the report is the compliance report; deviations include excess emissions and parameter exceedances.

Citation	Subject	Brief description	Applies to subpart EEEE
§63.10(e)(3)(iv)–(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions or parameter monitoring exceedance (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§63.8(c)(7)–(8) and 63.10(c)(5)–(13)	Yes.
§63.10(e)(3)(vi)–(viii)	Excess Emissions Report and Summary Report	Requirements for reporting excess emissions for CMS (now called deviations); requires all of the information in §§63.10(c)(5)–(13) and 63.8(c)(7)–(8)	Yes.
§63.10(e)(4)	Reporting COMS Data	Must submit COMS data with performance test data	No.
§63.10(f)	Waiver for Recordkeeping/Reporting	Procedures for Administrator to waive	Yes.
§63.11(b)	Flares	Requirements for flares	Yes; §63.987 requirements apply, and the section references §63.11(b).
§63.12	Delegation	State authority to enforce standards	Yes.
§63.13	Addresses	Addresses where reports, notifications, and requests are sent	Yes.
§63.14	Incorporation by Reference	Test methods incorporated by reference	Yes.
§63.15	Availability of Information	Public and confidential information	Yes.

[69 FR 5063, Feb. 3, 2004, as amended at 71 FR 20463, Apr. 20, 2006; 71 FR 42924, July 28, 2006]

Indiana Department of Environmental Management
Office of Air Quality

Attachment I

Title 40: Protection of Environment
Subpart FFFF—National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing

Source: 68 FR 63888, Nov. 10, 2003, unless otherwise noted.

What This Subpart Covers

§ 63.2430 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for miscellaneous organic chemical manufacturing. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limits, operating limits, and work practice standards.

§ 63.2435 Am I subject to the requirements in this subpart?

(a) You are subject to the requirements in this subpart if you own or operate miscellaneous organic chemical manufacturing process units (MCPU) that are located at, or are part of, a major source of hazardous air pollutants (HAP) emissions as defined in section 112(a) of the Clean Air Act (CAA).

(b) An MCPU includes equipment necessary to operate a miscellaneous organic chemical manufacturing process, as defined in §63.2550, that satisfies all of the conditions specified in paragraphs (b)(1) through (3) of this section. An MCPU also includes any assigned storage tanks and transfer racks; equipment in open systems that is used to convey or store water having the same concentration and flow characteristics as wastewater; and components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems that are used to manufacture any material or family of materials described in paragraphs (b)(1)(i) through (v) of this section.

(1) The MCPU produces material or family of materials that is described in paragraph (b)(1)(i), (ii), (iii), (iv), or (v) of this section.

(i) An organic chemical(s) classified using the 1987 version of SIC code 282, 283, 284, 285, 286, 287, 289, or 386, except as provided in paragraph (c)(5) of this section.

(ii) An organic chemical(s) classified using the 1997 version of NAICS code 325, except as provided in paragraph (c)(5) of this section.

(iii) Quaternary ammonium compounds and ammonium sulfate produced with caprolactam.

(iv) Hydrazine.

(v) Organic solvents classified in any of the SIC or NAICS codes listed in paragraph (b)(1)(i) or (ii) of this section that are recovered using nondedicated solvent recovery operations.

(2) The MCPU processes, uses, or generates any of the organic HAP listed in section 112(b) of the CAA or hydrogen halide and halogen HAP, as defined in §63.2550.

(3) The MCPU is not an affected source or part of an affected source under another subpart of this part 63, except for process vents from batch operations within a chemical manufacturing process unit (CMPU), as identified in §63.100(j)(4). For this situation, the MCPU is the same as the CMPU as defined in §63.100, and you are subject only to the requirements for batch process vents in this subpart.

(c) The requirements in this subpart do not apply to the operations specified in paragraphs (c)(1) through (7) of this section.

(1) Research and development facilities, as defined in section 112(c)(7) of the CAA.

(2) The manufacture of ammonium sulfate as a by-product, if the slurry entering the by-product manufacturing process contains 50 parts per million by weight (ppmw) HAP or less or 10 ppmw benzene or less. You must retain information, data, and analysis to document the HAP concentration in the entering slurry in order to claim this exemption.

(3) The affiliated operations located at an affected source under subparts GG (National Emission Standards for Aerospace Manufacturing and Rework Facilities), KK (National Emission Standards for the Printing and Publishing Industry), JJJJ (NESHAP: Paper and Other Web Coating), future MMMM (NESHAP: Surface Coating of Miscellaneous Metal Parts and Products), and SSSS (NESHAP: Surface Coating of Metal Coil) of this part 63. Affiliated operations include, but are not limited to, mixing or dissolving of coating ingredients; coating mixing for viscosity adjustment, color tint or additive blending, or pH adjustment; cleaning of coating lines and coating line parts; handling and storage of coatings and solvent; and conveyance and treatment of wastewater.

(4) Fabricating operations (such as spinning or compressing a solid polymer into its end use); compounding operations (in which blending, melting, and resolidification of a solid polymer product occur for the purpose of incorporating additives, colorants, or stabilizers); and extrusion and drawing operations (converting an already produced solid polymer into a different shape by melting or mixing the polymer and then forcing it or pulling it through an orifice to create an extruded product). An operation is not exempt if it involves processing with HAP solvent or if an intended purpose of the operation is to remove residual HAP monomer.

(5) Production activities described using the 1997 version of NAICS codes 325131, 325181, 325188 (except the requirements do apply to hydrazine), 325314, 325991 (except the requirements do apply to reformulating plastics resins from recycled plastics products), and 325992 (except the requirements do apply to photographic chemicals).

(6) Tall oil recovery systems.

(7) Carbon monoxide production.

(d) If the predominant use of a transfer rack loading arm or storage tank (including storage tanks in series) is associated with a miscellaneous organic chemical manufacturing process, and the loading arm or storage tank is not part of an affected source under a subpart of this part 63, then you must assign the loading arm or storage tank to the MCPU for that miscellaneous organic chemical manufacturing process. If the predominant use cannot be determined, then you may assign the loading arm or storage tank to any MCPU that shares it and is subject to this subpart. If the use varies from year to year, then you must base the determination on the utilization that occurred during the year preceding November 10, 2003 or, if the loading arm or storage tank was not in operation during that year, you must base the use on the expected use for the first 5-year period after startup. You must include the determination in the notification of compliance status

report specified in §63.2520(d). You must redetermine the primary use at least once every 5 years, or any time you implement emissions averaging or pollution prevention after the compliance date.

(e) For nondedicated equipment used to create at least one MCPU, you may elect to develop process unit groups (PUG), determine the primary product of each PUG, and comply with the requirements of the subpart in 40 CFR part 63 that applies to that primary product as specified in §63.2535(l).

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40331, July 14, 2006]

§ 63.2440 What parts of my plant does this subpart cover?

(a) This subpart applies to each miscellaneous organic chemical manufacturing affected source.

(b) The miscellaneous organic chemical manufacturing affected source is the facilitywide collection of MCPU and heat exchange systems, wastewater, and waste management units that are associated with manufacturing materials described in §63.2435(b)(1).

(c) A new affected source is described by either paragraph (c)(1) or (2) of this section.

(1) Each affected source defined in paragraph (b) of this section for which you commenced construction or reconstruction after April 4, 2002, and you meet the applicability criteria at the time you commenced construction or reconstruction.

(2) Each dedicated MCPU that has the potential to emit 10 tons per year (tpy) of any one HAP or 25 tpy of combined HAP, and you commenced construction or reconstruction of the MCPU after April 4, 2002. For the purposes of this paragraph, an MCPU is an affected source in the definition of the term “reconstruction” in §63.2.

(d) An MCPU that is also a CMPU under §63.100 is reconstructed for the purposes of this subpart if, and only if, the CMPU meets the requirements for reconstruction in §63.100(l)(2).

Compliance Dates

§ 63.2445 When do I have to comply with this subpart?

(a) If you have a new affected source, you must comply with this subpart according to the requirements in paragraphs (a)(1) and (2) of this section.

(1) If you startup your new affected source before November 10, 2003, then you must comply with the requirements for new sources in this subpart no later than November 10, 2003.

(2) If you startup your new affected source after November 10, 2003, then you must comply with the requirements for new sources in this subpart upon startup of your affected source.

(b) If you have an existing source on November 10, 2003, you must comply with the requirements for existing sources in this subpart no later than May 10, 2008.

(c) You must meet the notification requirements in §63.2515 according to the dates specified in that section and in subpart A of this part 63. Some of the notifications must be submitted before you are required to comply with the emission limits, operating limits, and work practice standards in this subpart.

(d) If you have a Group 2 emission point that becomes a Group 1 emission point after the compliance date for your affected source, you must comply with the Group 1 requirements beginning on the date the switch occurs. An initial compliance demonstration as specified in this subpart must be conducted within 150 days after the switch occurs.

(e) If, after the compliance date for your affected source, hydrogen halide and halogen HAP emissions from process vents in a process increase to more than 1,000 lb/yr, or HAP metals emissions from a process at a new affected source increase to more than 150 lb/yr, you must comply with the applicable emission limits specified in Table 3 to this subpart and the associated compliance requirements beginning on the date the emissions exceed the applicable threshold. An initial compliance demonstration as specified in this subpart must be conducted within 150 days after the switch occurs.

(f) If you have a small control device for process vent or transfer rack emissions that becomes a large control device, as defined in §63.2550(i), you must comply with monitoring and associated recordkeeping and reporting requirements for large control devices beginning on the date the switch occurs. An initial compliance demonstration as specified in this subpart must be conducted within 150 days after the switch occurs.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 10442, Mar. 1, 2006; 71 FR 40332, July 14, 2006]

Emission Limits, Work Practice Standards, and Compliance Requirements

§ 63.2450 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limits and work practice standards in tables 1 through 7 to this subpart at all times, except during periods of startup, shutdown, and malfunction (SSM), and you must meet the requirements specified in §§63.2455 through 63.2490 (or the alternative means of compliance in §63.2495, §63.2500, or §63.2505), except as specified in paragraphs (b) through (s) of this section. You must meet the notification, reporting, and recordkeeping requirements specified in §§63.2515, 63.2520, and 63.2525.

(b) *Determine halogenated vent streams.* You must determine if an emission stream is a halogenated vent stream, as defined in §63.2550, by calculating the mass emission rate of halogen atoms in accordance with §63.115(d)(2)(v). Alternatively, you may elect to designate the emission stream as halogenated.

(c) *Requirements for combined emission streams.* When organic HAP emissions from different emission types (*e.g.,* continuous process vents, batch process vents, storage tanks, transfer operations, and waste management units) are combined, you must comply with the requirements of either paragraph (c)(1) or (2) of this section.

(1) Comply with the applicable requirements of this subpart for each kind of organic HAP emissions in the stream (*e.g.,* the requirements of table 1 to this subpart for continuous process vents and the requirements of table 4 to this subpart for emissions from storage tanks).

(2) Determine the applicable requirements based on the hierarchy presented in paragraphs (c)(2)(i) through (vi) of this section. For a combined stream, the applicable requirements are specified in the highest-listed paragraph in the hierarchy that applies to any of the individual streams that make up the combined stream. For example, if a combined stream consists of emissions from Group 1 batch process vents and any other type of emission stream, then you must comply with the requirements in paragraph (c)(2)(i) of this section for the combined stream; compliance with the requirements in paragraph (c)(2)(i) of this section constitutes compliance for the other emission streams in the combined stream. Two exceptions are that you must comply

with the requirements in table 3 to this subpart and §63.2465 for all process vents with hydrogen halide and halogen HAP emissions, and recordkeeping requirements for Group 2 applicability or compliance are still required (*e.g.,* the requirement in §63.2525(f) to track the number of batches produced and calculate rolling annual emissions for processes with Group 2 batch process vents).

(i) The requirements of table 2 to this subpart and §63.2460 for Group 1 batch process vents, including applicable monitoring, recordkeeping, and reporting.

(ii) The requirements of table 1 to this subpart and §63.2455 for continuous process vents that are routed to a control device, as defined in §63.981, including applicable monitoring, recordkeeping, and reporting.

(iii) The requirements of table 5 to this subpart and §63.2475 for transfer operations, including applicable monitoring, recordkeeping, and reporting.

(iv) The requirements of table 7 to this subpart and §63.2485 for emissions from waste management units that are used to manage and treat Group 1 wastewater streams and residuals from Group 1 wastewater streams, including applicable monitoring, recordkeeping, and reporting.

(v) The requirements of table 4 to this subpart and §63.2470 for control of emissions from storage tanks, including applicable monitoring, recordkeeping, and reporting.

(vi) The requirements of table 1 to this subpart and §63.2455 for continuous process vents after a recovery device including applicable monitoring, recordkeeping, and reporting.

(d) [Reserved]

(e) *Requirements for control devices.* (1) Except when complying with §63.2485, if you reduce organic HAP emissions by venting emissions through a closed-vent system to any combination of control devices (except a flare) or recovery devices, you must meet the requirements of §63.982(c) and the requirements referenced therein.

(2) Except when complying with §63.2485, if you reduce organic HAP emissions by venting emissions through a closed-vent system to a flare, you must meet the requirements of §63.982(b) and the requirements referenced therein.

(3) If you use a halogen reduction device to reduce hydrogen halide and halogen HAP emissions from halogenated vent streams, you must meet the requirements of §63.994 and the requirements referenced therein. If you use a halogen reduction device before a combustion device, you must determine the halogen atom emission rate prior to the combustion device according to the procedures in §63.115(d)(2)(v).

(f) *Requirements for flare compliance assessments.* (1) As part of a flare compliance assessment required in §63.987(b), you have the option of demonstrating compliance with the requirements of §63.11(b) by complying with the requirements in either §63.11(b)(6)(i) or §63.987(b)(3)(ii).

(2) If you elect to meet the requirements in §63.11(b)(6)(i), you must keep flare compliance assessment records as specified in paragraphs (f)(2)(i) and (ii) of this section.

(i) Keep records as specified in §63.998(a)(1)(i), except that a record of the heat content determination is not required.

(ii) Keep records of the flare diameter, hydrogen content, exit velocity, and maximum permitted velocity. Include these records in the flare compliance report required in §63.999(a)(2).

(g) *Requirements for performance tests.* The requirements specified in paragraphs (g)(1) through (5) of this section apply instead of or in addition to the requirements specified in subpart SS of this part 63.

(1) Conduct gas molecular weight analysis using Method 3, 3A, or 3B in appendix A to part 60 of this chapter.

(2) Measure moisture content of the stack gas using Method 4 in appendix A to part 60 of this chapter.

(3) If the uncontrolled or inlet gas stream to the control device contains carbon disulfide, you must conduct emissions testing according to paragraph (g)(3)(i) or (ii) of this section.

(i) If you elect to comply with the percent reduction emission limits in tables 1 through 7 to this subpart, and carbon disulfide is the principal organic HAP component (*i.e.,* greater than 50 percent of the HAP in the stream by volume), then you must use Method 18, or Method 15 (40 CFR part 60, appendix A) to measure carbon disulfide at the inlet and outlet of the control device. Use the percent reduction in carbon disulfide as a surrogate for the percent reduction in total organic HAP emissions.

(ii) If you elect to comply with the outlet total organic compound (TOC) concentration emission limits in tables 1 through 7 to this subpart, and the uncontrolled or inlet gas stream to the control device contains greater than 10 percent (volume concentration) carbon disulfide, you must use Method 18 or Method 15 to separately determine the carbon disulfide concentration. Calculate the total HAP or TOC emissions by totaling the carbon disulfide emissions measured using Method 18 or 15 and the other HAP emissions measured using Method 18 or 25A.

(4) As an alternative to using Method 18, Method 25/25A, or Method 26/26A of 40 CFR part 60, appendix A, to comply with any of the emission limits specified in tables 1 through 7 to this subpart, you may use Method 320 of 40 CFR part 60, appendix A. When using Method 320, you must follow the analyte spiking procedures of section 13 of Method 320, unless you demonstrate that the complete spiking procedure has been conducted at a similar source.

(5) Section 63.997(c)(1) does not apply. For the purposes of this subpart, results of all initial compliance demonstrations must be included in the notification of compliance status report, which is due 150 days after the compliance date, as specified in §63.2520(d)(1).

(h) *Design evaluation.* To determine the percent reduction of a small control device that is used to comply with an emission limit specified in table 1, 2, 3, or 5 to this subpart, you may elect to conduct a design evaluation as specified in §63.1257(a)(1) instead of a performance test as specified in subpart SS of this part 63. You must establish the value(s) and basis for the operating limits as part of the design evaluation. For continuous process vents, the design evaluation must be conducted at maximum representative operating conditions for the process, unless the Administrator specifies or approves alternate operating conditions. For transfer racks, the design evaluation must demonstrate that the control device achieves the required control efficiency during the reasonably expected maximum transfer loading rate.

(i) *Outlet concentration correction for combustion devices.* When §63.997(e)(2)(iii)(C) requires you to correct the measured concentration at the outlet of a combustion device to 3 percent oxygen if you add supplemental combustion air, the requirements in either paragraph (i)(1) or (2) of this section apply for the purposes of this subpart.

(1) You must correct the concentration in the gas stream at the outlet of the combustion device to 3 percent oxygen if you add supplemental gases, as defined in §63.2550, to the vent stream, or;

(2) You must correct the measured concentration for supplemental gases using Equation 1 of §63.2460; you may use process knowledge and representative operating data to determine the fraction of the total flow due to supplemental gas.

(j) *Continuous emissions monitoring systems.* Each continuous emissions monitoring system (CEMS) must be installed, operated, and maintained according to the requirements in §63.8 and paragraphs (j)(1) through (5) of this section.

(1) Each CEMS must be installed, operated, and maintained according to the applicable Performance Specification of 40 CFR part 60, appendix B, and according to paragraph (j)(2) of this section, except as specified in paragraph (j)(1)(i) of this section. For any CEMS meeting Performance Specification 8, you must also comply with appendix F, procedure 1 of 40 CFR part 60.

(i) If you wish to use a CEMS other than an Fourier Transform Infrared Spectroscopy (FTIR) meeting the requirements of Performance Specification 15 to measure hydrogen halide and halogen HAP before we promulgate a Performance Specification for such CEMS, you must prepare a monitoring plan and submit it for approval in accordance with the procedures specified in §63.8.

(ii) [Reserved]

(2) You must determine the calibration gases and reporting units for TOC CEMS in accordance with paragraph (j)(2)(i), (ii), or (iii) of this section.

(i) For CEMS meeting Performance Specification 9 or 15 requirements, determine the target analyte(s) for calibration using either process knowledge of the control device inlet stream or the screening procedures of Method 18 on the control device inlet stream.

(ii) For CEMS meeting Performance Specification 8 used to monitor performance of a combustion device, calibrate the instrument on the predominant organic HAP and report the results as carbon (C1), and use Method 25A or any approved alternative as the reference method for the relative accuracy tests.

(iii) For CEMS meeting Performance Specification 8 used to monitor performance of a noncombustion device, determine the predominant organic HAP using either process knowledge or the screening procedures of Method 18 on the control device inlet stream, calibrate the monitor on the predominant organic HAP, and report the results as C_1. Use Method 18, ASTM D6420–99, or any approved alternative as the reference method for the relative accuracy tests, and report the results as C_1.

(3) You must conduct a performance evaluation of each CEMS according to the requirements in 40 CFR 63.8 and according to the applicable Performance Specification of 40 CFR part 60, appendix B, except that the schedule in §63.8(e)(4) does not apply, and the results of the performance evaluation must be included in the notification of compliance status report.

(4) The CEMS data must be reduced to operating day or operating block averages computed using valid data consistent with the data availability requirements specified in §63.999(c)(6)(i)(B) through (D), except monitoring data also are sufficient to constitute a valid hour of data if measured values are available for at least two of the 15-minute periods during an hour when calibration, quality assurance, or maintenance activities are being performed. An operating block

is a period of time from the beginning to end of batch operations within a process. Operating block averages may be used only for batch process vent data.

(5) If you add supplemental gases, you must correct the measured concentrations in accordance with paragraph (i) of this section and §63.2460(c)(6).

(k) *Continuous parameter monitoring.* The provisions in paragraphs (k)(1) through (6) of this section apply in addition to the requirements for continuous parameter monitoring system (CPMS) in subpart SS of this part 63.

(1) You must record the results of each calibration check and all maintenance performed on the CPMS as specified in §63.998(c)(1)(ii)(A).

(2) When subpart SS of this part 63 uses the term “a range” or “operating range” of a monitored parameter, it means an “operating limit” for a monitored parameter for the purposes of this subpart.

(3) As an alternative to continuously measuring and recording pH as specified in §§63.994(c)(1)(i) and 63.998(a)(2)(ii)(D), you may elect to continuously monitor and record the caustic strength of the effluent. For halogen scrubbers used to control only batch process vents you may elect to monitor and record either the pH or the caustic strength of the scrubber effluent at least once per day.

(4) As an alternative to the inlet and outlet temperature monitoring requirements for catalytic incinerators as specified in §63.988(c)(2) and the related recordkeeping requirements specified in §63.998(a)(2)(ii)(B)(*2*) and (c)(2)(ii), you may elect to comply with the requirements specified in paragraphs (k)(4)(i) through (iv) of this section.

(i) Monitor and record the inlet temperature as specified in subpart SS of this part 63.

(ii) Check the activity level of the catalyst at least every 12 months and take any necessary corrective action, such as replacing the catalyst to ensure that the catalyst is performing as designed.

(iii) Maintain records of the annual checks of catalyst activity levels and the subsequent corrective actions.

(iv) Recording the downstream temperature and temperature difference across the catalyst bed as specified in §63.998(a)(2)(ii)(B)(*2*) and (b)(2)(ii) is not required.

(5) For absorbers that control organic compounds and use water as the scrubbing fluid, you must conduct monitoring and recordkeeping as specified in paragraphs (k)(5)(i) through (iii) of this section instead of the monitoring and recordkeeping requirements specified in §§63.990(c)(1), 63.993(c)(1), and 63.998(a)(2)(ii)(C).

(i) You must use a flow meter capable of providing a continuous record of the absorber influent liquid flow.

(ii) You must determine gas stream flow using one of the procedures specified in §63.994(c)(1)(ii)(A) through (D).

(iii) You must record the absorber liquid-to-gas ratio averaged over the time period of any performance test.

(6) For a control device with total inlet HAP emissions less than 1 tpy, you must establish an operating limit(s) for a parameter(s) that you will measure and record at least once per averaging period (i.e., daily or block) to verify that the control device is operating properly. You may elect to measure the same parameter(s) that is required for control devices that control inlet HAP emissions equal to or greater than 1 tpy. If the parameter will not be measured continuously, you must request approval of your proposed procedure in the precompliance report. You must identify the operating limit(s) and the measurement frequency, and you must provide rationale to support how these measurements demonstrate the control device is operating properly.

(l) *Startup, shutdown, and malfunction.* Sections 63.152(f)(7)(ii) through (iv) and 63.998(b)(2)(iii) and (b)(6)(i)(A), which apply to the exclusion of monitoring data collected during periods of SSM from daily averages, do not apply for the purposes of this subpart.

(m) *Reporting.* (1) When §§63.2455 through 63.2490 reference other subparts in this part 63 that use the term “periodic report,” it means “compliance report” for the purposes of this subpart. The compliance report must include the information specified in §63.2520(e), as well as the information specified in referenced subparts.

(2) When there are conflicts between this subpart and referenced subparts for the due dates of reports required by this subpart, reports must be submitted according to the due dates presented in this subpart.

(3) Excused excursions, as defined in subparts G and SS of this part 63, are not allowed.

(n) [Reserved]

(o) You may not use a flare to control halogenated vent streams or hydrogen halide and halogen HAP emissions.

(p) Opening a safety device, as defined in §63.2550, is allowed at any time conditions require it to avoid unsafe conditions.

(q) If an emission stream contains energetics or organic peroxides that, for safety reasons, cannot meet an applicable emission limit specified in Tables 1 through 7 to this subpart, then you must submit documentation in your precompliance report explaining why an undue safety hazard would be created if the air emission controls were installed, and you must describe the procedures that you will implement to minimize HAP emissions from these vent streams.

(r) *Surge control vessels and bottoms receivers.* For each surge control vessel or bottoms receiver that meets the capacity and vapor pressure thresholds for a Group 1 storage tank, you must meet emission limits and work practice standards specified in Table 4 to this subpart.

(s) For the purposes of determining Group status for continuous process vents, batch process vents, and storage tanks in §§63.2455, 63.2460, and 63.2470, hydrazine is to be considered an organic HAP.

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38559, July 1, 2005; 71 FR 40332, July 14, 2006]

§ 63.2455 What requirements must I meet for continuous process vents?

(a) You must meet each emission limit in Table 1 to this subpart that applies to your continuous process vents, and you must meet each applicable requirement specified in paragraphs (b) through (c) of this section.

(b) For each continuous process vent, you must either designate the vent as a Group 1 continuous process vent or determine the total resource effectiveness (TRE) index value as specified in §63.115(d), except as specified in paragraphs (b)(1) through (3) of this section.

(1) You are not required to determine the Group status or the TRE index value for any continuous process vent that is combined with Group 1 batch process vents before a control device or recovery device because the requirements of §63.2450(c)(2)(i) apply to the combined stream.

(2) When a TRE index value of 4.0 is referred to in §63.115(d), TRE index values of 5.0 for existing affected sources and 8.0 for new and reconstructed affected sources apply for the purposes of this subpart.

(3) When §63.115(d) refers to “emission reductions specified in §63.113(a),” the reductions specified in Table 1 to this subpart apply for the purposes of this subpart.

(c) If you use a recovery device to maintain the TRE above a specified threshold, you must meet the requirements of §63.982(e) and the requirements referenced therein, except as specified in §63.2450 and paragraph (c)(1) of this section.

(1) When §63.993 uses the phrase “the TRE index value is between the level specified in a referencing subpart and 4.0,” the phrase “the TRE index value is >1.9 but ≤5.0” applies for an existing affected source, and the phrase “the TRE index value is >5.0 but ≤8.0” applies for a new and reconstructed affected source, for the purposes of this subpart.

(2) [Reserved]

§ 63.2460 What requirements must I meet for batch process vents?

(a) You must meet each emission limit in Table 2 to this subpart that applies to you, and you must meet each applicable requirement specified in paragraphs (b) and (c) of this section.

(b) *Group status.* If a process has batch process vents, as defined in §63.2550, you must determine the group status of the batch process vents by determining and summing the uncontrolled organic HAP emissions from each of the batch process vents within the process using the procedures specified in §63.1257(d)(2)(i) and (ii), except as specified in paragraphs (b)(1) through (7) of this section.

(1) To calculate emissions caused by the heating of a vessel without a process condenser to a temperature lower than the boiling point, you must use the procedures in §63.1257(d)(2)(i)(C)(*3*).

(2) To calculate emissions from depressurization of a vessel without a process condenser, you must use the procedures in §63.1257(d)(2)(i)(D)(*10*).

(3) To calculate emissions from vacuum systems for the purposes of this subpart, the receiving vessel is part of the vacuum system, and terms used in Equation 33 to 40 CFR part 63, subpart GGG, are defined as follows:

P_{system} = absolute pressure of the receiving vessel;

P_i = partial pressure of the HAP determined at the exit temperature and exit pressure conditions of the condenser or at the conditions of the dedicated receiver;

P_j= partial pressure of condensables (including HAP) determined at the exit temperature and exit pressure conditions of the condenser or at the conditions of the dedicated receiver;

MW_{HAP}= molecular weight of the HAP determined at the exit temperature and exit pressure conditions of the condenser or at the conditions of the dedicated receiver.

(4) To calculate uncontrolled emissions when a vessel is equipped with a process condenser, you must use the procedures in §63.1257(d)(3)(i)(B), except as specified in paragraphs (b)(4)(i) through (vii) of this section.

(i) You must determine the flowrate of gas (or volume of gas), partial pressures of condensables, temperature (T), and HAP molecular weight (MW_{HAP}) at the exit temperature and exit pressure conditions of the condenser or at the conditions of the dedicated receiver.

(ii) You must assume that all of the components contained in the condenser exit vent stream are in equilibrium with the same components in the exit condensate stream (except for noncondensables).

(iii) You must perform a material balance for each component.

(iv) For the emissions from gas evolution, the term for time, t, must be used in Equation 12 to 40 CFR part 63, subpart GGG.

(v) Emissions from empty vessel purging shall be calculated using Equation 36 to 40 CFR part 63, subpart GGG and the exit temperature and exit pressure conditions of the condenser or the conditions of the dedicated receiver.

(vi) You must conduct an engineering assessment as specified in §63.1257(d)(2)(ii) for each emission episode that is not due to vapor displacement, purging, heating, depressurization, vacuum operations, gas evolution, air drying, or empty vessel purging. The requirements of paragraphs (b)(3) through (4) of this section shall apply.

(vii) You may elect to conduct an engineering assessment if you can demonstrate to the Administrator that the methods in §63.1257(d)(3)(i)(B) are not appropriate.

(5) You may elect to designate the batch process vents within a process as Group 1 and not calculate uncontrolled emissions under either of the situations in paragraph (b)(5)(i), (ii), or (iii) of this section.

(i) If you comply with the alternative standard specified in §63.2505.

(ii) If all Group 1 batch process vents within a process are controlled; you conduct the performance test under hypothetical worst case conditions, as defined in §63.1257(b)(8)(i)(B); and the emission profile is based on capture and control system limitations as specified in §63.1257(b)(8)(ii)(C).

(iii) If you comply with an emission limit using a flare that meets the requirements specified in §63.987.

(6) You may change from Group 2 to Group 1 in accordance with either paragraph (b)(6)(i) or (ii) of this section. You must comply with the requirements of this section and submit the test report in the next Compliance report.

(i) You may switch at any time after operating as Group 2 for at least 1 year so that you can show compliance with the 10,000 pounds per year (lb/yr) threshold for Group 2 batch process vents for at least 365 days before the switch. You may elect to start keeping records of emissions from Group 2 batch process vents before the compliance date. Report a switch based on this provision in your next compliance report in accordance with §63.2520(e)(10)(i).

(ii) If the conditions in paragraph (b)(6)(i) of this section are not applicable, you must provide a 60-day advance notice in accordance with §63.2520(e)(10)(ii) before switching.

(7) As an alternative to determining the uncontrolled organic HAP emissions as specified in §63.1257(d)(2)(i) and (ii), you may elect to demonstrate that non-reactive organic HAP are the only HAP used in the process and non-reactive HAP usage in the process is less than 10,000 lb/yr. You must provide data and supporting rationale in your notification of compliance status report explaining why the non-reactive organic HAP usage will be less than 10,000 lb/yr. You must keep records of the non-reactive organic HAP usage as specified in §63.2525(e)(2) and include information in compliance reports as specified in §63.2520(e)(5)(iv).

(c) Exceptions to the requirements in subparts SS and WW of this part 63 are specified in paragraphs (c)(1) through (9) of this section.

(1) *Process condensers.* Process condensers, as defined in §63.2550(i), are not considered to be control devices for batch process vents. You must determine whether a condenser is a control device for a batch process vent or a process condenser from which the uncontrolled HAP emissions are evaluated as part of the initial compliance demonstration for each MCPU and report the results with supporting rationale in your notification of compliance status report.

(2) *Initial compliance.* (i) To demonstrate initial compliance with a percent reduction emission limit in Table 2 to this subpart FFFF, you must compare the sums of the controlled and uncontrolled emissions for the applicable Group 1 batch process vents within the process, and show that the specified reduction is met. This requirement does not apply if you comply with the emission limits of Table 2 to this subpart FFFF by using a flare that meets the requirements of §63.987.

(ii) When you conduct a performance test or design evaluation for a non-flare control device used to control emissions from batch process vents, you must establish emission profiles and conduct the test under worst-case conditions according to §63.1257(b)(8) instead of under normal operating conditions as specified in §63.7(e)(1). The requirements in §63.997(e)(1)(i) and (iii) also do not apply for performance tests conducted to determine compliance with the emission limits for batch process vents. For purposes of this subpart FFFF, references in §63.997(b)(1) to “methods specified in §63.997(e)” include the methods specified in §63.1257(b)(8).

(iii) As an alternative to conducting a performance test or design evaluation to demonstrate initial compliance with a percent reduction requirement for a condenser, you may determine controlled emissions using the procedures specified in §63.1257(d)(3)(i)(B) and paragraphs (b)(3) through (4) of this section.

(iv) When §63.1257(d)(3)(i)(B)(*7*) specifies that condenser-controlled emissions from an air dryer must be calculated using Equation 11 of 40 CFR part 63, subpart GGG, with “V equal to the air flow rate,” it means “V equal to the dryer outlet gas flow rate,” for the purposes of this subpart. Alternatively, you may use Equation 12 of 40 CFR part 63, subpart GGG, with V equal to the dryer inlet air flow rate. Account for time as appropriate in either equation.

(v) If a process condenser is used for any boiling operations, you must demonstrate that it is properly operated according to the procedures specified in §63.1257(d)(2)(i)(C)(*4*)(*ii*) and (d)(3)(iii)(B), and the demonstration must occur only during the boiling operation. The reference in §63.1257(d)(3)(iii)(B) to the alternative standard in §63.1254(c) means §63.2505 for the purposes

of this subpart. As an alternative to measuring the exhaust gas temperature, as required by §63.1257(d)(3)(iii)(B), you may elect to measure the liquid temperature in the receiver.

(vi) You must conduct a subsequent performance test or compliance demonstration equivalent to an initial compliance demonstration within 180 days of a change in the worst-case conditions.

(3) *Establishing operating limits.* You must establish operating limits under the conditions required for your initial compliance demonstration, except you may elect to establish operating limit(s) for conditions other than those under which a performance test was conducted as specified in paragraph (c)(3)(i) of this section and, if applicable, paragraph (c)(3)(ii) of this section.

(i) The operating limits may be based on the results of the performance test and supplementary information such as engineering assessments and manufacturer's recommendations. These limits may be established for conditions as unique as individual emission episodes for a batch process. You must provide rationale in the precompliance report for the specific level for each operating limit, including any data and calculations used to develop the limit and a description of why the limit indicates proper operation of the control device. The procedures provided in this paragraph (c)(3)(i) have not been approved by the Administrator and determination of the operating limit using these procedures is subject to review and approval by the Administrator.

(ii) If you elect to establish separate monitoring levels for different emission episodes within a batch process, you must maintain records in your daily schedule or log of processes indicating each point at which you change from one operating limit to another, even if the duration of the monitoring for an operating limit is less than 15 minutes. You must maintain a daily schedule or log of processes according to §63.2525(c).

(4) *Averaging periods.* As an alternative to the requirement for daily averages in §63.998(b)(3), you may determine averages for operating blocks. An operating block is a period of time that is equal to the time from the beginning to end of batch process operations within a process.

(5) [Reserved]

(6) *Outlet concentration correction for supplemental gases.* If you use a control device other than a combustion device to comply with a TOC, organic HAP, or hydrogen halide and halogen HAP outlet concentration emission limit for batch process vents, you must correct the actual concentration for supplemental gases using Equation 1 of this section; you may use process knowledge and representative operating data to determine the fraction of the total flow due to supplemental gas.

$$C_a = C_m \left(\frac{Q_s + Q_a}{Q_a} \right) \qquad (Eq.\ 1)$$

Where:

C_a= corrected outlet TOC, organic HAP, or hydrogen halide and halogen HAP concentration, dry basis, ppmv;

C_m= actual TOC, organic HAP, or hydrogen halide and halogen HAP concentration measured at control device outlet, dry basis, ppmv;

Q_a= total volumetric flowrate of all gas streams vented to the control device, except supplemental gases;

Q_s= total volumetric flowrate of supplemental gases.

(7) If flow to a control device could be intermittent, you must install, calibrate, and operate a flow indicator at the inlet or outlet of the control device to identify periods of no flow. Periods of no flow may not be used in daily or block averages, and it may not be used in fulfilling a minimum data availability requirement.

(8) *Terminology.* When the term “storage vessel” is used in subpart WW of this part 63, the term “process tank,” as defined in §63.2550(i), applies for the purposes of this section.

(9) *Requirements for a biofilter.* If you use a biofilter to meet either the 95 percent reduction requirement or outlet concentration requirement specified in Table 2 to this subpart, you must meet the requirements specified in paragraphs (c)(9)(i) through (iv) of this section.

(i) *Operational requirements.* The biofilter must be operated at all times when emissions are vented to it.

(ii) *Performance tests.* To demonstrate initial compliance, you must conduct a performance test according to the procedures in §63.997 and paragraphs (c)(9)(ii)(A) through (D) of this section. The design evaluation option for small control devices is not applicable if you use a biofilter.

(A) Keep up-to-date, readily accessible continuous records of either the biofilter bed temperature averaged over the full period of the performance test or the outlet total organic HAP or TOC concentration averaged over the full period of the performance test. Include these data in your notification of compliance status report as required by §63.999(b)(3)(ii).

(B) Record either the percent reduction of total organic HAP achieved by the biofilter determined as specified in §63.997(e)(2)(iv) or the concentration of TOC or total organic HAP determined as specified in §63.997(e)(2)(iii) at the outlet of the biofilter, as applicable.

(C) If you monitor the biofilter bed temperature, you may elect to use multiple thermocouples in representative locations throughout the biofilter bed and calculate the average biofilter bed temperature across these thermocouples prior to reducing the temperature data to 15 minute (or shorter) averages for purposes of establishing operating limits for the biofilter. If you use multiple thermocouples, include your rationale for their site selection in your notification of compliance status report.

(D) Submit a performance test report as specified in §63.999(a)(2)(i) and (ii). Include the records from paragraph (c)(9)(ii)(B) of this section in your performance test report.

(iii) *Monitoring requirements.* Use either a biofilter bed temperature monitoring device (or multiple devices) capable of providing a continuous record or an organic monitoring device capable of providing a continuous record. Keep records of temperature or other parameter monitoring results as specified in §63.998(b) and (c), as applicable. General requirements for monitoring are contained in §63.996. If you monitor temperature, the operating temperature range must be based on only the temperatures measured during the performance test; these data may not be supplemented by engineering assessments or manufacturer's recommendations as otherwise allowed in §63.999(b)(3)(ii)(A). If you establish the operating range (minimum and maximum temperatures) using data from previous performance tests in accordance with §63.996(c)(6), replacement of the biofilter media with the same type of media is not considered a process change under §63.997(b)(1). You may expand your biofilter bed temperature operating range by conducting a repeat performance test that demonstrates compliance with the 95 percent reduction requirement or outlet concentration limit, as applicable.

(iv) *Repeat performance tests.* You must conduct a repeat performance test using the applicable methods specified in §63.997 within 2 years following the previous performance test and within 150 days after each replacement of any portion of the biofilter bed media with a different type of media or each replacement of more than 50 percent (by volume) of the biofilter bed media with the same type of media.

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38559, July 1, 2005; 71 FR 40333, July 14, 2006]

§ 63.2465 What requirements must I meet for process vents that emit hydrogen halide and halogen HAP or HAP metals?

(a) You must meet each emission limit in Table 3 to this subpart that applies to you, and you must meet each applicable requirement in paragraphs (b) through (d) of this section.

(b) If any process vents within a process emit hydrogen halide and halogen HAP, you must determine and sum the uncontrolled hydrogen halide and halogen HAP emissions from each of the process vents within the process using the procedures specified in §63.1257(d)(2)(i) and/or (ii), as appropriate. When §63.1257(d)(2)(ii)(E) requires documentation to be submitted in the precompliance report, it means the notification of compliance status report for the purposes of this paragraph.

(c) If collective uncontrolled hydrogen halide and halogen HAP emissions from the process vents within a process are greater than or equal to 1,000 pounds per year (lb/yr), you must comply with §63.994 and the requirements referenced therein, except as specified in paragraphs (c)(1) through (3) of this section.

(1) When §63.994(b)(1) requires a performance test, you may elect to conduct a design evaluation in accordance with §63.1257(a)(1).

(2) When §63.994(b)(1) refers to “a combustion device followed by a halogen scrubber or other halogen reduction device,” it means any combination of control devices used to meet the emission limits specified in Table 3 to this subpart.

(3) Section 63.994(b)(2) does not apply for the purposes of this section.

(d) To demonstrate compliance with the emission limit in Table 3 to this subpart for HAP metals at a new source, you must comply with paragraphs (d)(1) through (3) of this section.

(1) Determine the mass emission rate of HAP metals based on process knowledge, engineering assessment, or test data.

(2) Conduct an initial performance test of each control device that is used to comply with the emission limit for HAP metals specified in Table 3 to this subpart. Conduct the performance test according to the procedures in §63.997. Use Method 29 of appendix A of 40 CFR part 60 to determine the HAP metals at the inlet and outlet of each control device, or use Method 5 of appendix A of 40 CFR part 60 to determine the total particulate matter (PM) at the inlet and outlet of each control device. You have demonstrated initial compliance if the overall reduction of either HAP metals or total PM from the process is greater than or equal to 97 percent by weight.

(3) Comply with the monitoring requirements specified in §63.1366(b)(1)(xi) for each fabric filter used to control HAP metals.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40334, July 14, 2006]

§ 63.2470 What requirements must I meet for storage tanks?

(a) You must meet each emission limit in Table 4 to this subpart that applies to your storage tanks, and you must meet each applicable requirement specified in paragraphs (b) through (e) of this section.

(b) [Reserved]

(c) *Exceptions to subparts SS and WW of this part 63.* (1) If you conduct a performance test or design evaluation for a control device used to control emissions only from storage tanks, you must establish operating limits, conduct monitoring, and keep records using the same procedures as required in subpart SS of this part 63 for control devices used to reduce emissions from process vents instead of the procedures specified in §§63.985(c), 63.998(d)(2)(i), and 63.999(b)(2).

(2) When the term “storage vessel” is used in subparts SS and WW of this part 63, the term “storage tank,” as defined in §63.2550 applies for the purposes of this subpart.

(d) *Planned routine maintenance.* The emission limits in Table 4 to this subpart for control devices used to control emissions from storage tanks do not apply during periods of planned routine maintenance. Periods of planned routine maintenance of each control device, during which the control device does not meet the emission limit specified in Table 4 to this subpart, must not exceed 240 hours per year (hr/yr). You may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr. The application must explain why the extension is needed, it must indicate that no material will be added to the storage tank between the time the 240-hr limit is exceeded and the control device is again operational, and it must be submitted at least 60 days before the 240-hr limit will be exceeded.

(e) *Vapor balancing alternative.* As an alternative to the emission limits specified in Table 4 to this subpart, you may elect to implement vapor balancing in accordance with §63.1253(f), except as specified in paragraphs (e)(1) through (3) of this section.

(1) When §63.1253(f)(6)(i) refers to a 90 percent reduction, 95 percent applies for the purposes of this subpart.

(2) To comply with §63.1253(f)(6)(i), the owner or operator of an offsite cleaning or reloading facility must comply with §§63.2445 through 63.2550 instead of complying with §63.1253(f)(7)(ii), except as specified in paragraph (e)(2)(i) or (ii) of this section.

(i) The reporting requirements in §63.2520 do not apply to the owner or operator of the offsite cleaning or reloading facility.

(ii) As an alternative to complying with the monitoring, recordkeeping, and reporting provisions in §§63.2445 through 63.2550, the owner or operator of an offsite cleaning or reloading facility may comply as specified in §63.2535(a)(2) with any other subpart of this part 63 which has monitoring, recordkeeping, and reporting provisions as specified in §63.2535(a)(2).

(3) You may elect to set a pressure relief device to a value less than the 2.5 pounds per square inch gage pressure (psig) required in §63.1253(f)(5) if you provide rationale in your notification of compliance status report explaining why the alternative value is sufficient to prevent breathing losses at all times.

(4) You may comply with the vapor balancing alternative in §63.1253(f) when your storage tank is filled from a barge. All requirements for tank trucks and railcars specified in §63.1253(f) also apply to barges, except as specified in §63.2470(e)(4)(i).

(i) When §63.1253(f)(2) refers to pressure testing certifications, the requirements in 40 CFR 61.304(f) apply for barges.

(ii) [Reserved]

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38559, July 1, 2005; 71 FR 40335, July 14, 2006]

§ 63.2475 What requirements must I meet for transfer racks?

(a) You must comply with each emission limit and work practice standard in table 5 to this subpart that applies to your transfer racks, and you must meet each applicable requirement in paragraphs (b) and (c) of this section.

(b) When the term “high throughput transfer rack” is used in subpart SS of this part 63, the term “Group 1 transfer rack,” as defined in §63.2550, applies for the purposes of this subpart.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40335, July 14, 2006]

§ 63.2480 What requirements must I meet for equipment leaks?

(a) You must meet each requirement in table 6 to this subpart that applies to your equipment leaks, except as specified in paragraphs (b) through (d) of this section.

(b) If you comply with either subpart H or subpart UU of this part 63, you may elect to comply with the provisions in paragraphs (b)(1) through (5) of this section as an alternative to the referenced provisions in subpart H or subpart UU of this part.

(1) The requirements for pressure testing in §63.179(b) or §63.1036(b) may be applied to all processes, not just batch processes.

(2) For the purposes of this subpart, pressure testing for leaks in accordance with §63.179(b) or §63.1036(b) is not required after reconfiguration of an equipment train if flexible hose connections are the only disturbed equipment.

(3) For an existing source, you are not required to develop an initial list of identification numbers for connectors as would otherwise be required under §63.1022(b)(1) or §63.181(b)(1)(i).

(4) For connectors in gas/vapor and light liquid service at an existing source, you may elect to comply with the requirements in §63.169 or §63.1029 for connectors in heavy liquid service, including all associated recordkeeping and reporting requirements, rather than the requirements of §63.174 or §63.1027.

(5) For pumps in light liquid service in an MCPU that has no continuous process vents and is part of an existing source, you may elect to consider the leak definition that defines a leak to be 10,000 parts per million (ppm) or greater as an alternative to the values specified in §63.1026(b)(2)(i) through (iii) or §63.163(b)(2).

(c) If you comply with 40 CFR part 65, subpart F, you may elect to comply with the provisions in paragraphs (c)(1) through (9) of this section as an alternative to the referenced provisions in 40 CFR part 65, subpart F.

(1) The requirements for pressure testing in §65.117(b) may be applied to all processes, not just batch processes.

(2) For the purposes of this subpart, pressure testing for leaks in accordance with §65.117(b) is not required after reconfiguration of an equipment train if flexible hose connections are the only disturbed equipment.

(3) For an existing source, you are not required to develop an initial list of identification numbers for connectors as would otherwise be required under §65.103(b)(1).

(4) You may elect to comply with the monitoring and repair requirements specified in §65.108(e)(3) as an alternative to the requirements specified in §65.108(a) through (d) for any connectors at your affected source.

(5) For pumps in light liquid service in an MCPU that has no continuous process vents and is part of an existing source, you may elect to consider the leak definition that defines a leak to be 10,000 ppm or greater as an alternative to the values specified in §65.107(b)(2)(i) through (iii).

(6) When 40 CFR part 65, subpart F refers to the implementation date specified in §65.1(f), it means the compliance date specified in §63.2445.

(7) When §§65.105(f) and 65.117(d)(3) refer to §65.4, it means §63.2525.

(8) When §65.120(a) refers to §65.5(d), it means §63.2515.

(9) When §65.120(b) refers to §65.5(e), it means §63.2520.

(d) The provisions of this section do not apply to bench-scale processes, regardless of whether the processes are located at the same plant site as a process subject to the provisions of this subpart.

[71 FR 40335, July 14, 2006]

§ 63.2485 What requirements must I meet for wastewater streams and liquid streams in open systems within an MCPU?

(a) You must meet each requirement in table 7 to this subpart that applies to your wastewater streams and liquid streams in open systems within an MCPU, except as specified in paragraphs (b) through (o) of this section.

(b) *Wastewater HAP.* Where §63.105 and §§63.132 through 63.148 refer to compounds in table 9 of subpart G of this part 63, the compounds in tables 8 and 9 to this subpart apply for the purposes of this subpart.

(c) *Group 1 wastewater.* Section 63.132(c)(1) (i) and (ii) do not apply. For the purposes of this subpart, a process wastewater stream is Group 1 for compounds in tables 8 and 9 to this subpart if any of the conditions specified in paragraphs (c) (1) through (3) of this section are met.

(1) The total annual average concentration of compounds in table 8 to this subpart is greater than or equal to 10,000 ppmw at any flowrate, and the total annual load of compounds in table 8 to this subpart is greater than or equal to 200 lb/yr.

(2) The total annual average concentration of compounds in table 8 to this subpart is greater than or equal to 1,000 ppmw, and the annual average flowrate is greater than or equal to 1 l/min.

(3) The combined total annual average concentration of compounds in tables 8 and 9 to this subpart is greater than or equal to 30,000 ppmw, and the combined total annual load of compounds in tables 8 and 9 to this subpart is greater than or equal to 1 tpy.

(d) *Wastewater tank requirements.* (1) When §§63.133 and 63.147 reference floating roof requirements in §§63.119 and 63.120, the corresponding requirements in subpart WW of this part 63 may be applied for the purposes of this subpart.

(2) When §63.133(a) refers to table 10 of subpart G of this part 63, the maximum true vapor pressure in the table shall be limited to the HAP listed in tables 8 and 9 of this subpart FFFF.

(3) For the purposes of this subpart, the requirements of §63.133(a)(2) are satisfied by operating and maintaining a fixed roof if you demonstrate that the total soluble and partially soluble HAP emissions from the wastewater tank are no more than 5 percent higher than the emissions would be if the contents of the wastewater tank were not heated, treated by an exothermic reaction, or sparged.

(4) The emission limits specified in §§63.133(b)(2) and 63.139 for control devices used to control emissions from wastewater tanks do not apply during periods of planned routine maintenance of the control device(s) of no more than 240 hr/yr. You may request an extension to a total of 360 hr/yr in accordance with the procedures specified in §63.2470(d).

(e) *Individual drain systems.* The provisions of §63.136(e)(3) apply except as specified in paragraph (e)(1) of this section.

(1) A sewer line connected to drains that are in compliance with §63.136(e)(1) may be vented to the atmosphere, provided that the sewer line entrance to the first downstream junction box is water sealed and the sewer line vent pipe is designed as specified in §63.136(e)(2)(ii)(A).

(2) [Reserved]

(f) *Closed-vent system requirements.* When §63.148(k) refers to closed vent systems that are subject to the requirements of §63.172, the requirements of either §63.172 or §63.1034 apply for the purposes of this subpart.

(g) *Halogenated vent stream requirements.* For each halogenated vent stream from a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream that is vented through a closed-vent system to a combustion device to reduce organic HAP emissions, you must meet the same emission limits as specified for batch process vents in item 2 of table 2 to this subpart.

(h) *Alternative test methods.* (1) As an alternative to the test methods specified in §63.144(b)(5)(i), you may use Method 8260 or 8270 as specified in §63.1257(b)(10)(iii).

(2) As an alternative to using the methods specified in §63.144(b)(5)(i), you may conduct wastewater analyses using Method 1666 or 1671 of 40 CFR part 136 and comply with the sampling protocol requirements specified in §63.144(b)(5)(ii). The validation requirements specified in §63.144(b)(5)(iii) do not apply if you use Method 1666 or 1671 of 40 CFR part 136.

(3) As an alternative to using Method 18 of 40 CFR part 60, as specified in §§63.139(c)(1)(ii) and 63.145(i)(2), you may elect to use Method 25A of 40 CFR part 60 as specified in §63.997.

(i) *Offsite management and treatment option.* (1) If you ship wastewater to an offsite treatment facility that meets the requirements of §63.138(h), you may elect to document in your notification of compliance status report that the wastewater will be treated as hazardous waste at a facility

that meets the requirements of §63.138(h) as an alternative to having the offsite facility submit the certification specified in §63.132(g)(2).

(2) As an alternative to the management and treatment options specified in §63.132(g)(2), any affected wastewater stream (or residual removed from an affected wastewater stream) with a total annual average concentration of compounds in Table 8 to this subpart less than 50 ppmw may be transferred offsite in accordance with paragraphs (i)(2) (i) and (ii) of this section.

(i) The transferee (or you) must demonstrate that less than 5 percent of the HAP in Table 9 to this subpart is emitted from the waste management units up to the activated sludge unit.

(ii) The transferee must treat the wastewater stream or residual in a biological treatment unit in accordance with §§63.138 and 63.145 and the requirements referenced therein.

(j) You must determine the annual average concentration and annual average flowrate for wastewater streams for each MCPU. The procedures for flexible operation units specified in §63.144 (b) and (c) do not apply for the purposes of this subpart.

(k) The requirement to correct outlet concentrations from combustion devices to 3 percent oxygen in §§63.139(c)(1)(ii) and 63.146(i)(6) applies only if supplemental gases are combined with a vent stream from a Group 1 wastewater stream. If emissions are controlled with a vapor recovery system as specified in §63.139(c)(2), you must correct for supplemental gases as specified in §63.2460(c)(6).

(l) *Requirements for liquid streams in open systems.* (1) References in §63.149 to §63.100(b) mean §63.2435(b) for the purposes of this subpart.

(2) When §63.149(e) refers to 40 CFR 63.100(l) (1) or (2), §63.2445(a) applies for the purposes of this subpart.

(3) When §63.149 uses the term “chemical manufacturing process unit,” the term “MCPU” applies for the purposes of this subpart.

(4) When §63.149(e)(1) refers to characteristics of water that contain compounds in Table 9 to 40 CFR part 63, subpart G, the characteristics specified in paragraphs (c) (1) through (3) of this section apply for the purposes of this subpart.

(5) When §63.149(e)(2) refers to characteristics of water that contain compounds in Table 9 to 40 CFR part 63, subpart G, the characteristics specified in paragraph (c)(2) of this section apply for the purposes of this subpart.

(m) When §63.132(f) refers to “a concentration of greater than 10,000 ppmw of table 9 compounds,” the phrase “a concentration of greater than 30,000 ppmw of total partially soluble HAP (PSHAP) and soluble HAP (SHAP) or greater than 10,000 ppmw of PSHAP” shall apply for the purposes of this subpart.

(n) *Alternative requirements for wastewater that is Group 1 for soluble HAP only.* The option specified in this paragraph (n) applies to wastewater that is Group 1 for soluble HAP in accordance with paragraph (c)(3) of this section and is discharged to biological treatment. Except as provided in paragraph (n)(4) of this section, this option does not apply to wastewater that is Group 1 for partially soluble HAP in accordance with paragraph (c)(1), (c)(2), or (c)(4) of this section. For wastewater that is Group 1 for SHAP, you need not comply with §§63.133 through 63.137 for any equalization unit, neutralization unit, and/or clarifier prior to the activated sludge unit, and you need not comply with the venting requirements in §63.136(e)(2)(ii)(A) for lift stations with a volume larger than 10,000 gal, provided you comply with the requirements specified in

paragraphs (n)(1) through (3) of this section and all otherwise applicable requirements specified in table 7 to this subpart. For this option, the treatment requirements in §63.138 and the performance testing requirements in §63.145 do not apply to the biological treatment unit, except as specified in paragraphs (n)(2)(i) through (iv) of this section.

(1) Wastewater must be hard-piped between the equalization unit, clarifier, and activated sludge unit. This requirement does not apply to the transfer between any of these types of units that are part of the same structure and one unit overflows into the next.

(2) Calculate the destruction efficiency of the biological treatment unit using Equation 1 of this section in accordance with the procedures described in paragraphs (n)(2)(i) through (vi) of this section. You have demonstrated initial compliance if E is greater than or equal to 90 percent.

$$E = \frac{(QMW_a - QMG_e - QMG_n - QMG_c)(F_{bio})}{QMW_a} \times 100 \qquad \text{(Eq. 1)}$$

Where:

E = destruction efficiency of total PSHAP and SHAP for the biological treatment unit including the equalization unit, neutralization unit, and/or clarifier, percent;

QMW_a= mass flow rate of total PSHAP and SHAP compounds entering the equalization unit (or whichever of the three types of units is first), kilograms per hour (kg/hr);

QMG_e= mass flow rate of total PSHAP and SHAP compounds emitted from the equalization unit, kg/hr;

QMG_n= mass flow rate of total PSHAP and SHAP compounds emitted from the neutralization unit, kg/hr;

QMG_c= mass flow rate of total PSHAP and SHAP compounds emitted from the clarifier, kg/hr

F_{bio}= site-specific fraction of PSHAP and SHAP compounds biodegraded in the biological treatment unit.

(i) Include all PSHAP and SHAP compounds in both Group 1 and Group 2 wastewater streams from all MCPU, except you may exclude any compounds that meet the criteria specified in §63.145(a)(6)(ii) or (iii).

(ii) Conduct the demonstration under representative process unit and treatment unit operating conditions in accordance with §63.145(a)(3) and (4).

(iii) Determine PSHAP and SHAP concentrations and the total wastewater flow rate at the inlet to the equalization unit in accordance with §63.145(f)(1) and (2). References in §63.145(f)(1) and (2) to required mass removal and actual mass removal do not apply for the purposes of this section.

(iv) Determine $F_{bio}$for the activated sludge unit as specified in §63.145(h), except as specified in paragraph (n)(2)(iv)(A) or paragraph (n)(2)(iv)(B) of this section.

(A) If the biological treatment process meets both of the requirements specified in §63.145(h)(1)(i) and (ii), you may elect to replace the F_{bio}term in Equation 1 of this section with the numeral “1.”

(B) You may elect to assume $f_{bio}$is zero for any compounds on List 2 of table 36 in subpart G.

(v) Determine QMG_e, QMG_n, and QMG_cusing EPA's WATER9 model or the most recent update to this model, and conduct testing or use other procedures to validate the modeling results.

(vi) Submit the data and results of your demonstration, including both a description of and the results of your WATER9 modeling validation procedures, in your notification of compliance status report as specified in §63.2520(d)(2)(ii).

(3) As an alternative to the venting requirements in §63.136(e)(2)(ii)(A), a lift station with a volume larger than 10,000 gal may have openings necessary for proper venting of the lift station. The size and other design characteristics of these openings may be established based on manufacturer recommendations or engineering judgment for venting under normal operating conditions. You must describe the design of such openings and your supporting calculations and other rationale in your notification of compliance status report.

(4) For any wastewater streams that are Group 1 for both PSHAP and SHAP, you may elect to meet the requirements specified in table 7 to this subpart for the PSHAP and then comply with paragraphs (n)(1) through (3) of this section for the SHAP in the wastewater system. You may determine the SHAP mass removal rate, in kg/hr, in treatment units that are used to meet the requirements for PSHAP and add this amount to both the numerator and denominator in Equation 1 of this section.

(o) *Compliance records.* For each CPMS used to monitor a nonflare control device for wastewater emissions, you must keep records as specified in §63.998(c)(1) in addition to the records required in §63.147(d).

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38559, July 1, 2005; 71 FR 40335, July 14, 2006]

§ 63.2490 What requirements must I meet for heat exchange systems?

(a) You must comply with each requirement in Table 10 to this subpart that applies to your heat exchange systems, except as specified in paragraphs (b) and (c) of this section.

(b) The phrase “a chemical manufacturing process unit meeting the conditions of §63.100 (b)(1) through (b)(3) of this section” in §63.104(a) means “an MCPU meeting the conditions of §63.2435” for the purposes of this subpart.

(c) The reference to §63.100(c) in §63.104(a) does not apply for the purposes of this subpart.

Alternative Means of Compliance

§ 63.2495 How do I comply with the pollution prevention standard?

(a) You may elect to comply with the pollution prevention alternative requirements specified in paragraphs (a) (1) and (2) of this section in lieu of the emission limitations and work practice standards contained in Tables 1 through 7 to this subpart for any MCPU for which initial startup occurred before April 4, 2002.

(1) You must reduce the production-indexed HAP consumption factor (HAP factor) by at least 65 percent from a 3-year average baseline beginning no earlier than the 1994 through 1996 calendar years. For any reduction in the HAP factor that you achieve by reducing HAP that are also volatile organic compounds (VOC), you must demonstrate an equivalent reduction in the production-indexed VOC consumption factor (VOC factor) on a mass basis. For any reduction in the HAP factor that you achieve by reducing a HAP that is not a VOC, you may not increase the VOC factor.

(2) Any MCPU for which you seek to comply by using the pollution prevention alternative must begin with the same starting material(s) and end with the same product(s). You may not comply by eliminating any steps of a process by transferring the step offsite (to another manufacturing location). You may also not merge a solvent recovery step conducted offsite to onsite and as part of an existing process as a method of reducing consumption.

(3) You may comply with the requirements of paragraph (a)(1) of this section for a series of processes, including situations where multiple processes are merged, if you demonstrate to the satisfaction of the Administrator that the multiple processes were merged after the baseline period into an existing process or processes.

(b) *Exclusions.* (1) You must comply with the emission limitations and work practice standards contained in tables 1 through 7 of this subpart for all HAP that are generated in the MCPU and that are not included in consumption, as defined in §63.2550. If any vent stream routed to the combustion control is a halogenated vent stream, as defined in §63.2550, then hydrogen halides that are generated as a result of combustion control must be controlled according to the requirements of §63.994 and the requirements referenced therein.

(2) You may not merge nondedicated formulation or nondedicated solvent recovery processes with any other processes.

(c) *Initial compliance procedures.* To demonstrate initial compliance with paragraph (a) of this section, you must prepare a demonstration summary in accordance with paragraph (c) (1) of this section and calculate baseline and target annual HAP and VOC factors in accordance with paragraphs (c) (2) and (3) of this section.

(1) *Demonstration plan.* You must prepare a pollution prevention demonstration plan that contains, at a minimum, the information in paragraphs (c)(1) (i) through (iii) of this section for each MCPU for which you comply with paragraph (a) of this section.

(i) Descriptions of the methodologies and forms used to measure and record consumption of HAP and VOC compounds.

(ii) Descriptions of the methodologies and forms used to measure and record production of the product(s).

(iii) Supporting documentation for the descriptions provided in accordance with paragraphs (c)(1) (i) and (ii) of this section including, but not limited to, samples of operator log sheets and daily, monthly, and/or annual inventories of materials and products. You must describe how this documentation will be used to calculate the annual factors required in paragraph (d) of this section.

(2) *Baseline factors.* You must calculate baseline HAP and VOC factors by dividing the consumption of total HAP and total VOC by the production rate, per process, for the first 3-year period in which the process was operational, beginning no earlier than the period consisting of the 1994 through 1996 calendar years.

(3) *Target annual factors.* You must calculate target annual HAP and VOC factors. The target annual HAP factor must be equal to 35 percent of the baseline HAP factor. The target annual VOC factor must be lower than the baseline VOC factor by an amount equivalent to the reduction in any HAP that is also a VOC, on a mass basis. The target annual VOC factor may be the same as the baseline VOC factor if the only HAP you reduce is not a VOC.

(d) *Continuous compliance requirements.* You must calculate annual rolling average values of the HAP and VOC factors (annual factors) in accordance with the procedures specified in paragraphs

(d) (1) through (3) of this section. To show continuous compliance, the annual factors must be equal to or less than the target annual factors calculated according to paragraph (c)(3) of this section.

(1) To calculate the annual factors, you must divide the consumption of both total HAP and total VOC by the production rate, per process, for 12-month periods at the frequency specified in either paragraph (d) (2) or (3) of this section, as applicable.

(2) For continuous processes, you must calculate the annual factors every 30 days for the 12-month period preceding the 30th day (i.e., annual rolling average calculated every 30 days). A process with both batch and continuous operations is considered a continuous process for the purposes of this section.

(3) For batch processes, you must calculate the annual factors every 10 batches for the 12-month period preceding the 10th batch (*i.e.,* annual rolling average calculated every 10 batches), except as specified in paragraphs (d)(3) (i) and (ii) of this section.

(i) If you produce more than 10 batches during a month, you must calculate the annual factors at least once during that month.

(ii) If you produce less than 10 batches in a 12-month period, you must calculate the annual factors for the number of batches in the 12-month period since the previous calculations.

(e) *Records.* You must keep records of HAP and VOC consumption, production, and the rolling annual HAP and VOC factors for each MCPU for which you are complying with paragraph (a) of this section.

(f) *Reporting.* (1) You must include the pollution prevention demonstration plan in the precompliance report required by §63.2520(c).

(2) You must identify all days when the annual factors were above the target factors in the compliance reports.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40336, July 14, 2006]

§ 63.2500 How do I comply with emissions averaging?

(a) For an existing source, you may elect to comply with the percent reduction emission limitations in Tables 1, 2, 4, 5, and 7 to this subpart by complying with the emissions averaging provisions specified in §63.150, except as specified in paragraphs (b) through (f) of this section.

(b) The batch process vents in an MCPU collectively are considered one individual emission point for the purposes of emissions averaging, except that only individual batch process vents must be excluded to meet the requirements of §63.150(d)(5).

(c) References in §63.150 to §§63.112 through 63.130 mean the corresponding requirements in §§63.2450 through 63.2490, including applicable monitoring, recordkeeping, and reporting.

(d) References to “periodic reports” in §63.150 mean “compliance report” for the purposes of this subpart.

(e) For batch process vents, estimate uncontrolled emissions for a standard batch using the procedures in §63.1257(d)(2)(i) and (ii) instead of the procedures in §63.150(g)(2). Multiply the

calculated emissions per batch by the number of batches per month when calculating the monthly emissions for use in calculating debits and credits.

(f) References to “storage vessels” in §63.150 mean “storage tank” as defined in §63.2550 for the purposes of this subpart.

§ 63.2505 How do I comply with the alternative standard?

As an alternative to complying with the emission limits and work practice standards for process vents and storage tanks in Tables 1 through 4 to this subpart and the requirements in §§63.2455 through 63.2470, you may comply with the emission limits in paragraph (a) of this section and demonstrate compliance in accordance with the requirements in paragraph (b) of this section.

(a) *Emission limits and work practice standards.* (1) You must route vent streams through a closed-vent system to a control device that reduces HAP emissions as specified in either paragraph (a)(1)(i) or (ii) of this section.

(i) If you use a combustion control device, it must reduce HAP emissions as specified in paragraphs (a)(1)(i)(A), (B), and (C) of this section.

(A) To an outlet TOC concentration of 20 parts per million by volume (ppmv) or less.

(B) To an outlet concentration of hydrogen halide and halogen HAP of 20 ppmv or less.

(C) As an alternative to paragraph (a)(1)(i)(B) of this section, if you control halogenated vent streams emitted from a combustion device followed by a scrubber, reduce the hydrogen halide and halogen HAP generated in the combustion device by greater than or equal to 95 percent by weight in the scrubber.

(ii) If you use a noncombustion control device(s), it must reduce HAP emissions to an outlet total organic HAP concentration of 50 ppmv or less, and an outlet concentration of hydrogen halide and halogen HAP of 50 ppmv or less.

(2) Any Group 1 process vents within a process that are not controlled according to this alternative standard must be controlled according to the emission limits in tables 1 through 3 to this subpart.

(b) *Compliance requirements.* To demonstrate compliance with paragraph (a) of this section, you must meet the requirements of §63.1258(b)(5) beginning no later than the initial compliance date specified in §63.2445, except as specified in paragraphs (b)(1) through (9) of this section.

(1) You must comply with the requirements in §63.983 and the requirements referenced therein for closed-vent systems.

(2) When §63.1258(b)(5)(i) refers to §§63.1253(d) and 63.1254(c), the requirements in paragraph (a) of this section apply for the purposes of this subpart FFFF.

(3) When §63.1258(b)(5)(i)(B) refers to “HCl,” it means “total hydrogen halide and halogen HAP” for the purposes of this subpart FFFF.

(4) When §63.1258(b)(5)(ii) refers to §63.1257(a)(3), it means §63.2450(j)(5) for the purposes of this subpart FFFF.

(5) You must submit the results of any determination of the target analytes of predominant HAP in the notification of compliance status report.

(6) If you elect to comply with the requirement to reduce hydrogen halide and halogen HAP by greater than or equal to 95 percent by weight in paragraph (a)(1)(i)(C) of this section, you must meet the requirements in paragraphs (b)(6)(i) and (ii) of this section.

(i) Demonstrate initial compliance with the 95 percent reduction by conducting a performance test and setting a site-specific operating limit(s) for the scrubber in accordance with §63.994 and the requirements referenced therein. You must submit the results of the initial compliance demonstration in the notification of compliance status report.

(ii) Install, operate, and maintain CPMS for the scrubber as specified in §§63.994(c) and 63.2450(k), instead of as specified in §63.1258(b)(5)(i)(C).

(7) If flow to the scrubber could be intermittent, you must install, calibrate, and operate a flow indicator as specified in §63.2460(c)(7).

(8) Use the operating day as the averaging period for CEMS data and scrubber parameter monitoring data.

(9) The requirements in paragraph (a) of this section do not apply to emissions from storage tanks during periods of planned routine maintenance of the control device that do not exceed 240 hr/yr. You may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr in accordance with the procedures specified in §63.2470(d). You must comply with the recordkeeping and reporting specified in §§63.998(d)(2)(ii) and 63.999(c)(4) for periods of planned routine maintenance.

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38559, July 1, 2005]

Notification, Reports, and Records

§ 63.2515 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.

(b) *Initial notification.* As specified in §63.9(b)(2), if you startup your affected source before November 10, 2003, you must submit an initial notification not later than 120 calendar days after November 10, 2003.

(2) As specified in §63.9(b)(3), if you startup your new affected source on or after November 10, 2003, you must submit an initial notification not later than 120 calendar days after you become subject to this subpart.

(c) *Notification of performance test.* If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in §63.7(b)(1). For any performance test required as part of the initial compliance procedures for batch process vents in table 2 to this subpart, you must also submit the test plan required by §63.7(c) and the emission profile with the notification of the performance test.

§ 63.2520 What reports must I submit and when?

(a) You must submit each report in Table 11 to this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in table 11 to this subpart and according to paragraphs (b)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.2445 and ending on June 30 or December 31, whichever date is the first date following the end of the first 6 months after the compliance date that is specified for your affected source in §63.2445.

(2) The first compliance report must be postmarked or delivered no later than August 31 or February 28, whichever date is the first date following the end of the first reporting period specified in paragraph (b)(1) of this section.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or delivered no later than August 31 or February 28, whichever date is the first date following the end of the semiannual reporting period.

(5) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) *Precompliance report.* You must submit a precompliance report to request approval for any of the items in paragraphs (c)(1) through (7) of this section. We will either approve or disapprove the report within 90 days after we receive it. If we disapprove the report, you must still be in compliance with the emission limitations and work practice standards in this subpart by the compliance date. To change any of the information submitted in the report, you must notify us 60 days before the planned change is to be implemented.

(1) Requests for approval to set operating limits for parameters other than those specified in §§63.2455 through 63.2485 and referenced therein. Alternatively, you may make these requests according to §63.8(f).

(2) Descriptions of daily or per batch demonstrations to verify that control devices subject to §63.2460(c)(5) are operating as designed.

(3) A description of the test conditions, data, calculations, and other information used to establish operating limits according to §63.2460(c)(3).

(4) Data and rationale used to support an engineering assessment to calculate uncontrolled emissions in accordance with §63.1257(d)(2)(ii). This requirement does not apply to calculations of hydrogen halide and halogen HAP emissions as specified in §63.2465(b), to determinations that the total HAP concentration is less than 50 ppmv, or if you use previous test data to establish the uncontrolled emissions.

(5) The pollution prevention demonstration plan required in §63.2495(c)(1), if you are complying with the pollution prevention alternative.

(6) Documentation of the practices that you will implement to minimize HAP emissions from streams that contain energetics and organic peroxides, and rationale for why meeting the emission limit specified in tables 1 through 7 to this subpart would create an undue safety hazard.

(7) For fabric filters that are monitored with bag leak detectors, an operation and maintenance plan that describes proper operation and maintenance procedures, and a corrective action plan that describes corrective actions to be taken, and the timing of those actions, when the PM concentration exceeds the set point and activates the alarm.

(d) *Notification of compliance status report.* You must submit a notification of compliance status report according to the schedule in paragraph (d)(1) of this section, and the notification of compliance status report must contain the information specified in paragraph (d)(2) of this section.

(1) You must submit the notification of compliance status report no later than 150 days after the applicable compliance date specified in §63.2445.

(2) The notification of compliance status report must include the information in paragraphs (d)(2)(i) through (ix) of this section.

(i) The results of any applicability determinations, emission calculations, or analyses used to identify and quantify HAP usage or HAP emissions from the affected source.

(ii) The results of emissions profiles, performance tests, engineering analyses, design evaluations, flare compliance assessments, inspections and repairs, and calculations used to demonstrate initial compliance according to §§63.2455 through 63.2485. For performance tests, results must include descriptions of sampling and analysis procedures and quality assurance procedures.

(iii) Descriptions of monitoring devices, monitoring frequencies, and the operating limits established during the initial compliance demonstrations, including data and calculations to support the levels you establish.

(iv) All operating scenarios.

(v) Descriptions of worst-case operating and/or testing conditions for control devices.

(vi) Identification of parts of the affected source subject to overlapping requirements described in §63.2535 and the authority under which you will comply.

(vii) The information specified in §63.1039(a)(1) through (3) for each process subject to the work practice standards for equipment leaks in Table 6 to this subpart.

(viii) Identify storage tanks for which you are complying with the vapor balancing alternative in §63.2470(e).

(ix) Records as specified in §63.2535(l)(1) through (3) of process units used to create a PUG and calculations of the initial primary product of the PUG.

(e) *Compliance report.* The compliance report must contain the information specified in paragraphs (e)(1) through (10) of this section.

(1) Company name and address.

(2) Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) For each SSM during which excess emissions occur, the compliance report must include records that the procedures specified in your startup, shutdown, and malfunction plan (SSMP) were followed or documentation of actions taken that are not consistent with the SSMP, and include a brief description of each malfunction.

(5) The compliance report must contain the information on deviations, as defined in §63.2550, according to paragraphs (e)(5)(i), (ii), (iii), and (iv) of this section.

(i) If there are no deviations from any emission limit, operating limit or work practice standard specified in this subpart, include a statement that there were no deviations from the emission limits, operating limits, or work practice standards during the reporting period.

(ii) For each deviation from an emission limit, operating limit, and work practice standard that occurs at an affected source where you are not using a continuous monitoring system (CMS) to comply with the emission limit or work practice standard in this subpart, you must include the information in paragraphs (e)(5)(ii)(A) through (C) of this section. This includes periods of SSM.

(A) The total operating time of the affected source during the reporting period.

(B) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(C) Operating logs of processes with batch vents from batch operations for the day(s) during which the deviation occurred, except operating logs are not required for deviations of the work practice standards for equipment leaks.

(iii) For each deviation from an emission limit or operating limit occurring at an affected source where you are using a CMS to comply with an emission limit in this subpart, you must include the information in paragraphs (e)(5)(iii)(A) through (L) of this section. This includes periods of SSM.

(A) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.

(B) The date, time, and duration that each CEMS was out-of-control, including the information in §63.8(c)(8).

(C) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(D) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total operating time of the affected source during that reporting period.

(E) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(F) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the affected source during that reporting period.

(G) An identification of each HAP that is known to be in the emission stream.

(H) A brief description of the process units.

(I) A brief description of the CMS.

(J) The date of the latest CMS certification or audit.

(K) Operating logs of processes with batch vents from batch operations for each day(s) during which the deviation occurred.

(L) The operating day or operating block average values of monitored parameters for each day(s) during which the deviation occurred.

(iv) If you documented in your notification of compliance status report that an MCPU has Group 2 batch process vents because the non-reactive HAP is the only HAP and usage is less than 10,000 lb/yr, the total uncontrolled organic HAP emissions from the batch process vents in an MCPU will be less than 1,000 lb/yr for the anticipated number of standard batches, or total uncontrolled hydrogen halide and halogen HAP emissions from all batch process vents and continuous process vents in a process are less than 1,000 lb/yr, include the records associated with each calculation required by §63.2525(e) that exceeds an applicable HAP usage or emissions threshold.

(6) If you use a CEMS, and there were no periods during which it was out-of-control as specified in §63.8(c)(7), include a statement that there were no periods during which the CEMS was out-of-control during the reporting period.

(7) Include each new operating scenario which has been operated since the time period covered by the last compliance report and has not been submitted in the notification of compliance status report or a previous compliance report. For each new operating scenario, you must provide verification that the operating conditions for any associated control or treatment device have not been exceeded and that any required calculations and engineering analyses have been performed. For the purposes of this paragraph, a revised operating scenario for an existing process is considered to be a new operating scenario.

(8) Records of process units added to a PUG as specified in §63.2525(i)(4) and records of primary product redeterminations as specified in §63.2525(i)(5).

(9) Applicable records and information for periodic reports as specified in referenced subparts F, G, H, SS, UU, WW, and GGG of this part and subpart F of 40 CFR part 65.

(10) *Notification of process change.* (i) Except as specified in paragraph (e)(10)(ii) of this section, whenever you make a process change, or change any of the information submitted in the notification of compliance status report or a previous compliance report, that is not within the scope of an existing operating scenario, you must document the change in your compliance report. A process change does not include moving within a range of conditions identified in the standard batch, and a nonstandard batch does not constitute a process change. The notification must include all of the information in paragraphs (e)(10)(i)(A) through (C) of this section.

(A) A description of the process change.

(B) Revisions to any of the information reported in the original notification of compliance status report under paragraph (d) of this section.

(C) Information required by the notification of compliance status report under paragraph (d) of this section for changes involving the addition of processes or equipment at the affected source.

(ii) You must submit a report 60 days before the scheduled implementation date of any of the changes identified in paragraph (e)(10)(ii)(A), (B), or (C) of this section.

(A) Any change to the information contained in the precompliance report.

(B) A change in the status of a control device from small to large.

(C) A change from Group 2 to Group 1 for any emission point except for batch process vents that meet the conditions specified in §63.2460(b)(6)(i).

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38560, July 1, 2005; 71 FR 40336, July 14, 2006]

§ 63.2525 What records must I keep?

You must keep the records specified in paragraphs (a) through (k) of this section.

(a) Each applicable record required by subpart A of this part 63 and in referenced subparts F, G, SS, UU, WW, and GGG of this part 63 and in referenced subpart F of 40 CFR part 65.

(b) Records of each operating scenario as specified in paragraphs (b)(1) through (8) of this section.

(1) A description of the process and the type of process equipment used.

(2) An identification of related process vents, including their associated emissions episodes if not complying with the alternative standard in §63.2505; wastewater point of determination (POD); storage tanks; and transfer racks.

(3) The applicable control requirements of this subpart, including the level of required control, and for vents, the level of control for each vent.

(4) The control device or treatment process used, as applicable, including a description of operating and/or testing conditions for any associated control device.

(5) The process vents, wastewater POD, transfer racks, and storage tanks (including those from other processes) that are simultaneously routed to the control device or treatment process(s).

(6) The applicable monitoring requirements of this subpart and any parametric level that assures compliance for all emissions routed to the control device or treatment process.

(7) Calculations and engineering analyses required to demonstrate compliance.

(8) For reporting purposes, a change to any of these elements not previously reported, except for paragraph (b)(5) of this section, constitutes a new operating scenario.

(c) A schedule or log of operating scenarios for processes with batch vents from batch operations updated each time a different operating scenario is put into effect.

(d) The information specified in paragraphs (d)(1) and (2) of this section for Group 1 batch process vents in compliance with a percent reduction emission limit in Table 2 to this subpart if some of the vents are controlled to less the percent reduction requirement.

(1) Records of whether each batch operated was considered a standard batch.

(2) The estimated uncontrolled and controlled emissions for each batch that is considered to be a nonstandard batch.

(e) The information specified in paragraph (e)(2), (3), or (4) of this section, as applicable, for each process with Group 2 batch process vents or uncontrolled hydrogen halide and halogen HAP emissions from the sum of all batch and continuous process vents less than 1,000 lb/yr. No records are required for situations described in paragraph (e)(1) of this section.

(1) No records are required if you documented in your notification of compliance status report that the MCPU meets any of the situations described in paragraph (e)(1)(i), (ii), or (iii) of this section.

(i) The MCPU does not process, use, or generate HAP.

(ii) You control the Group 2 batch process vents using a flare that meets the requirements of §63.987.

(iii) You control the Group 2 batch process vents using a control device for which your determination of worst case for initial compliance includes the contribution of all Group 2 batch process vents.

(2) If you documented in your notification of compliance status report that an MCPU has Group 2 batch process vents because the non-reactive organic HAP is the only HAP and usage is less than 10,000 lb/yr, as specified in §63.2460(b)(7), you must keep records of the amount of HAP material used, and calculate the daily rolling annual sum of the amount used no less frequently than monthly. If a record indicates usage exceeds 10,000 lb/yr, you must estimate emissions for the preceding 12 months based on the number of batches operated and the estimated emissions for a standard batch, and you must begin recordkeeping as specified in paragraph (e)(4) of this section. After 1 year, you may revert to recording only usage if the usage during the year is less than 10,000 lb.

(3) If you documented in your notification of compliance status report that total uncontrolled organic HAP emissions from the batch process vents in an MCPU will be less than 1,000 lb/yr for the anticipated number of standard batches, then you must keep records of the number of batches operated and calculate a daily rolling annual sum of batches operated no less frequently than monthly. If the number of batches operated results in organic HAP emissions that exceed 1,000 lb/yr, you must estimate emissions for the preceding 12 months based on the number of batches operated and the estimated emissions for a standard batch, and you must begin recordkeeping as specified in paragraph (e)(4) of this section. After 1 year, you may revert to recording only the number of batches if the number of batches operated during the year results in less than 1,000 lb of organic HAP emissions.

(4) If you meet none of the conditions specified in paragraphs (e)(1) through (3) of this section, you must keep records of the information specified in paragraphs (e)(4)(i) through (iv) of this section.

(i) A record of the day each batch was completed and/or the operating hours per day for continuous operations with hydrogen halide and halogen emissions.

(ii) A record of whether each batch operated was considered a standard batch.

(iii) The estimated uncontrolled and controlled emissions for each batch that is considered to be a nonstandard batch.

(iv) Records of the daily 365-day rolling summations of emissions, or alternative records that correlate to the emissions (e.g., number of batches), calculated no less frequently than monthly.

(f) A record of each time a safety device is opened to avoid unsafe conditions in accordance with §63.2450(s).

(g) Records of the results of each CPMS calibration check and the maintenance performed, as specified in §63.2450(k)(1).

(h) For each CEMS, you must keep records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(i) For each PUG, you must keep records specified in paragraphs (i)(1) through (5) of this section.

(1) Descriptions of the MCPU and other process units in the initial PUG required by §63.2535(l)(1)(v).

(2) Rationale for including each MCPU and other process unit in the initial PUG (*i.e.,* identify the overlapping equipment between process units) required by §63.2535(l)(1)(v).

(3) Calculations used to determine the primary product for the initial PUG required by §63.2535(l)(2)(iv).

(4) Descriptions of process units added to the PUG after the creation date and rationale for including the additional process units in the PUG as required by §63.2535(l)(1)(v).

(5) The calculation of each primary product redetermination required by §63.2535(l)(2)(iv).

(j) In the SSMP required by §63.6(e)(3), you are not required to include Group 2 emission points, unless those emission points are used in an emissions average. For equipment leaks, the SSMP requirement is limited to control devices and is optional for other equipment.

(k) For each bag leak detector used to monitor PM HAP emissions from a fabric filter, maintain records of any bag leak detection alarm, including the date and time, with a brief explanation of the cause of the alarm and the corrective action taken.

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38560, July 1, 2005; 71 FR 40337, July 14, 2006]

Other Requirements and Information

§ 63.2535 What compliance options do I have if part of my plant is subject to both this subpart and another subpart?

For any equipment, emission stream, or wastewater stream subject to the provisions of both this subpart and another rule, you may elect to comply only with the provisions as specified in paragraphs (a) through (l) of this section. You also must identify the subject equipment, emission stream, or wastewater stream, and the provisions with which you will comply, in your notification of compliance status report required by §63.2520(d).

(a) *Compliance with other subparts of this part 63.* (1) If you have an MCPU that includes a batch process vent that also is part of a CMPU as defined in subparts F and G of this part 63, you must comply with the emission limits; operating limits; work practice standards; and the compliance, monitoring, reporting, and recordkeeping requirements for batch process vents in this subpart, and you must continue to comply with the requirements in subparts F, G, and H of this part 63 that are applicable to the CMPU and associated equipment.

(2) After the compliance dates specified in §63.2445, at an offsite reloading or cleaning facility subject to §63.1253(f), as referenced from §63.2470(e), compliance with the monitoring, recordkeeping, and reporting provisions of any other subpart of this part 63 constitutes compliance with the monitoring, recordkeeping, and reporting provisions of §63.1253(f)(7)(ii) or §63.1253(f)(7)(iii). You must identify in your notification of compliance status report required by §63.2520(d) the subpart of this part 63 with which the owner or operator of the offsite reloading or cleaning facility complies.

(b) *Compliance with 40 CFR parts 264 and 265, subparts AA, BB, and/or CC.* (1) After the compliance dates specified in §63.2445, if a control device that you use to comply with this subpart is also subject to monitoring, recordkeeping, and reporting requirements in 40 CFR part 264, subpart AA, BB, or CC; or the monitoring and recordkeeping requirements in 40 CFR part 265, subpart AA, BB, or CC; and you comply with the periodic reporting requirements under 40 CFR part 264, subpart AA, BB, or CC that would apply to the device if your facility had final-permitted status, you may elect to comply either with the monitoring, recordkeeping, and reporting requirements of this subpart; or with the monitoring and recordkeeping requirements in 40 CFR part 264 or 265 and the reporting requirements in 40 CFR part 264, as described in this paragraph (b)(1), which constitute compliance with the monitoring, recordkeeping, and reporting requirements of this subpart. If you elect to comply with the monitoring, recordkeeping, and reporting requirements in 40 CFR parts 264 and/or 265, you must report the information described in §63.2520(e).

(2) After the compliance dates specified in §63.2445, if you have an affected source with equipment that is also subject to 40 CFR part 264, subpart BB, or to 40 CFR part 265, subpart BB, then compliance with the recordkeeping and reporting requirements of 40 CFR parts 264 and/or 265 may be used to comply with the recordkeeping and reporting requirements of this subpart, to the extent that the requirements of 40 CFR parts 264 and/or 265 duplicate the requirements of this subpart.

(c) *Compliance with 40 CFR part 60, subpart Kb and 40 CFR part 61, subpart Y.* After the compliance dates specified in §63.2445, you are in compliance with the provisions of this subpart FFFF for any storage tank that is assigned to an MCPU and that is both controlled with a floating roof and in compliance with the provisions of either 40 CFR part 60, subpart Kb, or 40 CFR part 61, subpart Y. You are in compliance with this subpart FFFF if you have a storage tank with a fixed roof, closed-vent system, and control device in compliance with the provisions of either 40 CFR part 60, subpart Kb, or 40 CFR part 61, subpart Y, except that you must comply with the monitoring, recordkeeping, and reporting requirements in this subpart FFFF. Alternatively, if a storage tank assigned to an MCPU is subject to control under 40 CFR part 60, subpart Kb, or 40

CFR part 61, subpart Y, you may elect to comply only with the requirements for Group 1 storage tanks in this subpart FFFF.

(d) *Compliance with subpart I, GGG, or MMM of this part 63.* After the compliance dates specified in §63.2445, if you have an affected source with equipment subject to subpart I, GGG, or MMM of this part 63, you may elect to comply with the provisions of subpart H, GGG, or MMM of this part 63, respectively, for all such equipment.

(e) *Compliance with subpart GGG of this part 63 for wastewater.* After the compliance dates specified in §63.2445, if you have an affected source subject to this subpart and you have an affected source that generates wastewater streams that meet the applicability thresholds specified in §63.1256, you may elect to comply with the provisions of this subpart FFFF for all such wastewater streams.

(f) *Compliance with subpart MMM of this part 63 for wastewater.* After the compliance dates specified in §63.2445, if you have an affected source subject to this subpart, and you have an affected source that generates wastewater streams that meet the applicability thresholds specified in §63.1362(d), you may elect to comply with the provisions of this subpart FFFF for all such wastewater streams (except that the 99 percent reduction requirement for streams subject to §63.1362(d)(10) still applies).

(g) *Compliance with other regulations for wastewater.* After the compliance dates specified in §63.2445, if you have a Group 1 wastewater stream that is also subject to provisions in 40 CFR parts 260 through 272, you may elect to determine whether this subpart or 40 CFR parts 260 through 272 contain the more stringent control requirements (*e.g.,* design, operation, and inspection requirements for waste management units; numerical treatment standards; etc.) and the more stringent testing, monitoring, recordkeeping, and reporting requirements. Compliance with provisions of 40 CFR parts 260 through 272 that are determined to be more stringent than the requirements of this subpart constitute compliance with this subpart. For example, provisions of 40 CFR parts 260 through 272 for treatment units that meet the conditions specified in §63.138(h) constitute compliance with this subpart. You must identify in the notification of compliance status report required by §63.2520(d) the information and procedures that you used to make any stringency determinations.

(h) *Compliance with 40 CFR part 60, subpart DDD, III, NNN, or RRR.* After the compliance dates specified in §63.2445, if you have an MCPU that contains equipment subject to the provisions of this subpart that are also subject to the provisions of 40 CFR part 60, subpart DDD, III, NNN, or RRR, you may elect to apply this subpart to all such equipment in the MCPU. If an MCPU subject to the provisions of this subpart has equipment to which this subpart does not apply but which is subject to a standard in 40 CFR part 60, subpart DDD, III, NNN, or RRR, you may elect to comply with the requirements for Group 1 process vents in this subpart for such equipment. If you elect any of these methods of compliance, you must consider all total organic compounds, minus methane and ethane, in such equipment for purposes of compliance with this subpart, as if they were organic HAP. Compliance with the provisions of this subpart, in the manner described in this paragraph (h), will constitute compliance with 40 CFR part 60, subpart DDD, III, NNN, or RRR, as applicable.

(i) *Compliance with 40 CFR part 61, subpart BB.* (1) After the compliance dates specified in §63.2445, a Group 1 transfer rack, as defined in §63.2550, that is also subject to the provisions of 40 CFR part 61, subpart BB, you are required to comply only with the provisions of this subpart.

(2) After the compliance dates specified in §63.2445, a Group 2 transfer rack, as defined in §63.2550, that is also subject to the provisions of 40 CFR part 61, subpart BB, is required to comply with the provisions of either paragraph (l)(2)(i) or (ii) of this section.

(i) If the transfer rack is subject to the control requirements specified in §61.302 of 40 CFR part 61, subpart BB, then you may elect to comply with either the requirements of 40 CFR part 61, subpart BB, or the requirements for Group 1 transfer racks under this subpart FFFF.

(ii) If the transfer rack is subject only to reporting and recordkeeping requirements under 40 CFR part 61, subpart BB, then you are required to comply only with the reporting and recordkeeping requirements specified in this subpart for Group 2 transfer racks, and you are exempt from the reporting and recordkeeping requirements in 40 CFR part 61, subpart BB.

(j) *Compliance with 40 CFR part 61, subpart FF.* After the compliance date specified in §63.2445, for a Group 1 or Group 2 wastewater stream that is also subject to the provisions of 40 CFR 61.342(c) through (h), and is not exempt under 40 CFR 61.342(c)(2) or (3), you may elect to comply only with the requirements for Group 1 wastewater streams in this subpart FFFF. If a Group 2 wastewater stream is exempted from 40 CFR 61.342(c)(1) under 40 CFR 61.342(c)(2) or (3), then you are required to comply only with the reporting and recordkeeping requirements specified in this subpart for Group 2 wastewater streams, and you are exempt from the requirements in 40 CFR part 61, subpart FF.

(k) *Compliance with 40 CFR part 60, subpart VV, and 40 CFR part 61, subpart V.* After the compliance date specified in §63.2445, if you have an affected source with equipment that is also subject to the requirements of 40 CFR part 60, subpart VV, or 40 CFR part 61, subpart V, you may elect to apply this subpart to all such equipment. After the compliance date specified in §63.2445, if you have an affected source with equipment to which this subpart does not apply, but which is subject to the requirements of 40 CFR part 60, subpart VV, or 40 CFR part 61, subpart V, you may elect to apply this subpart to all such equipment. If you elect either of these methods of compliance, you must consider all total organic compounds, minus methane and ethane, in such equipment for purposes of compliance with this subpart, as if they were organic HAP. Compliance with the provisions of this subpart, in the manner described in this paragraph (k), will constitute compliance with 40 CFR part 60, subpart VV and 40 CFR part 61, subpart V, as applicable.

(l) *Applicability of process units included in a process unit group.* You may elect to develop and comply with the requirements for PUG in accordance with paragraphs (l)(1) through (3) of this section.

(1) *Procedures to create process unit groups.* Develop and document changes in a PUG in accordance with the procedures specified in paragraphs (l)(1)(i) through (v) of this section.

(i) Initially, identify an MCPU that is created from nondedicated equipment that will operate on or after November 10, 2003 and identify all processing equipment that is part of this MCPU, based on descriptions in operating scenarios.

(ii) Add to the group any other nondedicated MCPU and other nondedicated process units expected to be operated in the 5 years after the date specified in paragraph (l)(1)(i) of this section, provided they satisfy the criteria specified in paragraphs (l)(1)(ii)(A) through (C) of this section. Also identify all of the processing equipment used for each process unit based on information from operating scenarios and other applicable documentation.

(A) Each process unit that is added to a group must have some processing equipment that is also part of one or more process units in the group.

(B) No process unit may be part of more than one PUG.

(C) The processing equipment used to satisfy the requirement of paragraph (l)(1)(ii)(A) of this section may not be a storage tank or control device.

(iii) The initial PUG consists of all of the processing equipment for the process units identified in paragraphs (l)(1)(i) and (ii) of this section. As an alternative to the procedures specified in paragraphs (l)(1)(i) and (ii) of this section, you may use a PUG that was developed in accordance with §63.1360(h) as your initial PUG.

(iv) Add process units developed in the future in accordance with the conditions specified in paragraphs (l)(1)(ii)(A) and (B) of this section.

(v) Maintain records that describe the process units in the initial PUG, the procedure used to create the PUG, and subsequent changes to each PUG as specified in §63.2525(i). Submit the records in reports as specified in §63.2520(d)(2)(ix) and (e)(8).

(2) *Determine primary product.* You must determine the primary product of each PUG created in paragraph (l)(1) of this section according to the procedures specified in paragraphs (l)(2)(i) through (iv) of this section.

(i) The primary product is the type of product (*e.g.,* organic chemicals subject to §63.2435(b)(1), pharmaceutical products subject to §63.1250, or pesticide active ingredients subject to §63.1360) expected to be produced for the greatest operating time in the 5-year period specified in paragraph (l)(1)(ii) of this section.

(ii) If the PUG produces multiple types of products equally based on operating time, then the primary product is the type of product with the greatest production on a mass basis over the 5-year period specified in paragraph (l)(1)(ii) of this section.

(iii) At a minimum, you must redetermine the primary product of the PUG following the procedure specified in paragraphs (l)(2)(i) and (ii) of this section every 5 years.

(iv) You must record the calculation of the initial primary product determination as specified in §63.2525(i)(3) and report the results in the notification of compliance status report as specified in §63.2520(d)(8)(ix). You must record the calculation of each redetermination of the primary product as specified in §63.2525(i)(5) and report the calculation in a compliance report submitted no later than the report covering the period for the end of the 5th year after cessation of production of the previous primary product, as specified in §63.2520(e)(8).

(3) *Compliance requirements.* (i) If the primary product of the PUG is determined according to paragraph (l)(2) of this section to be material described in §63.2435(b)(1), then you must comply with this subpart for each MCPU in the PUG. You may also elect to comply with this subpart for all other process units in the PUG, which constitutes compliance with other part 63 rules.

(ii) If the primary product of the PUG is determined according to paragraph (l)(2) of this section to be material not described in §63.2435(b)(1), then you must comply with paragraph (l)(3)(ii)(A), (B), or (C) of this section, as applicable.

(A) If the primary product is subject to subpart GGG of this part 63, then comply with the requirements of subpart GGG for each MCPU in the PUG.

(B) If the primary product is subject to subpart MMM of this part 63, then comply with the requirements of subpart MMM for each MCPU in the PUG.

(C) If the primary product is subject to any subpart in this part 63 other than subpart GGG or subpart MMM, then comply with the requirements of this subpart for each MCPU in the PUG.

(iii) The requirements for new and reconstructed sources in the alternative subpart apply to all MCPU in the PUG if and only if the affected source under the alternative subpart meets the requirements for construction or reconstruction.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40337, July 14, 2006]

§ 63.2540 What parts of the General Provisions apply to me?

Table 12 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

§ 63.2545 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the U.S. Environmental Protection Agency (U.S. EPA), or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency also has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraphs (b)(1) through (4) of this section are retained by the Administrator of U.S. EPA and are not delegated to the State, local, or tribal agency.

(1) Approval of alternatives to the non-opacity emission limits and work practice standards in §63.2450(a) under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

§ 63.2550 What definitions apply to this subpart?

(a) For an affected source complying with the requirements in subpart SS of this part 63, the terms used in this subpart and in subpart SS of this part 63 have the meaning given them in §63.981, except as specified in §§63.2450(k)(2) and (m), 63.2470(c)(2), 63.2475(b), and paragraph (i) of this section.

(b) For an affected source complying with the requirements in 40 CFR part 65, subpart F, the terms used in this subpart and in 40 CFR part 65, subpart F have the meaning given to them in §65.2.

(c) For an affected source complying with the requirements in subpart UU of this part 63, the terms used in this subpart and in subpart UU of this part 63 have the meaning given them in §63.1020.

(d) For an affected source complying with the requirements in subpart WW of this part 63, the terms used in this subpart and subpart WW of this part 63 have the meaning given them in §63.1061, except as specified in §§63.2450(m), 63.2470(c)(2), and paragraph (i) of this section.

(e) For an affected source complying with the requirements in §§63.132 through 63.149, the terms used in this subpart and §§63.132 through 63.149 have the meaning given them in §§63.101 and 63.111, except as specified in §63.2450(m) and paragraph (i) of this section.

(f) For an affected source complying with the requirements in §§63.104 and 63.105, the terms used in this subpart and in §§63.104 and 63.105 of this subpart have the meaning given them in §63.101, except as specified in §§63.2450(m), 63.2490(b), and paragraph (i) of this section.

(g) For an affected source complying with requirements in §§63.1253, 63.1257, and 63.1258, the terms used in this subpart and in §§63.1253, 63.1257, and 63.1258 have the meaning given them in §63.1251, except as specified in §63.2450(m) and paragraph (i) of this section.

(h) For an affected source complying with the requirements in 40 CFR part 65, subpart F, the terms used in this subpart and in 40 CFR part 65, subpart F, have the meaning given them in 40 CFR 65.2.

(i) All other terms used in this subpart are defined in the Clean Air Act (CAA), in 40 CFR 63.2, and in this paragraph (i). If a term is defined in §63.2, §63.101, §63.111, §63.981, §63.1020, §63.1061, §63.1251, or §65.2 and in this paragraph (i), the definition in this paragraph (i) applies for the purposes of this subpart.

Ancillary activities means boilers and incinerators (not used to comply with the emission limits in Tables 1 through 7 to this subpart), chillers and refrigeration systems, and other equipment and activities that are not directly involved (*i.e.,* they operate within a closed system and materials are not combined with process fluids) in the processing of raw materials or the manufacturing of a product or isolated intermediate.

Batch operation means a noncontinuous operation involving intermittent or discontinuous feed into equipment, and, in general, involves the emptying of the equipment after the operation ceases and prior to beginning a new operation. Addition of raw material and withdrawal of product do not occur simultaneously in a batch operation.

Batch process vent means a vent from a unit operation or vents from multiple unit operations within a process that are manifolded together into a common header, through which a HAP-containing gas stream is, or has the potential to be, released to the atmosphere. Examples of batch process vents include, but are not limited to, vents on condensers used for product recovery, reactors, filters, centrifuges, and process tanks. The following are not batch process vents for the purposes of this subpart:

(1) Continuous process vents;

(2) Bottoms receivers;

(3) Surge control vessels;

(4) Gaseous streams routed to a fuel gas system(s);

(5) Vents on storage tanks, wastewater emission sources, or pieces of equipment subject to the emission limits and work practice standards in Tables 4, 6, and 7 to this subpart;

(6) Drums, pails, and totes;

(7) Flexible elephant trunk systems that draw ambient air (*i.e.,* the system is not ducted, piped, or otherwise connected to the unit operations) away from operators when vessels are opened; and

(8) Emission streams from emission episodes that are undiluted and uncontrolled containing less than 50 ppmv HAP are not part of any batch process vent. A vent from a unit operation, or a vent from multiple unit operations that are manifolded together, from which total uncontrolled HAP emissions are less than 200 lb/yr is not a batch process vent; emissions for all emission episodes associated with the unit operation(s) must be included in the determination of the total mass emitted. The HAP concentration or mass emission rate may be determined using any of the following: process knowledge that no HAP are present in the emission stream; an engineering assessment as discussed in §63.1257(d)(2)(ii), except that you do not need to demonstrate that the equations in §63.1257(d)(2)(i) do not apply, and the precompliance reporting requirements specified in §63.1257(d)(2)(ii)(E) do not apply for the purposes of this demonstration; equations specified in §63.1257(d)(2)(i), as applicable; test data using Method 18 of 40 CFR part 60, appendix A; or any other test method that has been validated according to the procedures in Method 301 of appendix A of this part.

Biofilter means an enclosed control system such as a tank or series of tanks with a fixed roof that contact emissions with a solid media (such as bark) and use microbiological activity to transform organic pollutants in a process vent stream to innocuous compounds such as carbon dioxide, water, and inorganic salts. Wastewater treatment processes such as aeration lagoons or activated sludge systems are not considered to be biofilters.

Bottoms receiver means a tank that collects bottoms from continuous distillation before the stream is sent for storage or for further downstream processing.

Construction means the onsite fabrication, erection, or installation of an affected source or MCPU. Addition of new equipment to an MCPU subject to existing source standards does not constitute construction, but it may constitute reconstruction of the affected source or MCPU if it satisfies the definition of reconstruction in §63.2.

Consumption means the quantity of all HAP raw materials entering a process in excess of the theoretical amount used as reactant, assuming 100 percent stoichiometric conversion. The raw materials include reactants, solvents, and any other additives. If a HAP is generated in the process as well as added as a raw material, consumption includes the quantity generated in the process.

Continuous operation means any operation that is not a batch operation.

Continuous process vent means the point of discharge to the atmosphere (or the point of entry into a control device, if any) of a gas stream if the gas stream has the characteristics specified in §63.107(b) through (h), or meets the criteria specified in §63.107(i), except:

(1) The reference in §63.107(e) to a chemical manufacturing process unit that meets the criteria of §63.100(b) means an MCPU that meets the criteria of §63.2435(b);

(2) The reference in §63.107(h)(4) to §63.113 means Table 1 to this subpart;

(3) The references in §63.107(h)(7) to §§63.119 and 63.126 mean tables 4 and 5 to this subpart; and

(4) For the purposes of §63.2455, all references to the characteristics of a process vent (*e.g.,* flowrate, total HAP concentration, or TRE index value) mean the characteristics of the gas stream.

(5) The reference to “total organic HAP” in §63.107(d) means “total HAP” for the purposes of this subpart FFFF.

(6) The references to an “air oxidation reactor, distillation unit, or reactor” in §63.107 mean any continuous operation for the purposes of this subpart.

(7) A separate determination is required for the emissions from each MCPU, even if emission streams from two or more MCPU are combined prior to discharge to the atmosphere or to a control device.

Dedicated MCPU means an MCPU that consists of equipment that is used exclusively for one process, except that storage tanks assigned to the process according to the procedures in §63.2435(d) also may be shared by other processes.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard; or

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limit, operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Emission point means each continuous process vent, batch process vent, storage tank, transfer rack, and wastewater stream.

Energetics means propellants, explosives, and pyrotechnics and include materials listed at 49 CFR 172.101 as Hazard Class I Hazardous Materials, Divisions 1.1 through 1.6.

Equipment means each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, and instrumentation system in organic HAP service; and any control devices or systems used to comply with Table 6 to this subpart.

Excess emissions means emissions greater than those allowed by the emission limit.

Family of materials means a grouping of materials with the same basic composition or the same basic end use or functionality produced using the same basic feedstocks with essentially identical HAP emission profiles (primary constituent and relative magnitude on a pound per product basis) and manufacturing equipment configuration. Examples of families of materials include multiple grades of the same product or different variations of a product (*e.g.,* blue, black, and red resins).

Group 1 batch process vent means each of the batch process vents in a process for which the collective uncontrolled organic HAP emissions from all of the batch process vents are greater than or equal to 10,000 lb/yr at an existing source or greater than or equal to 3,000 lb/yr at a new source.

Group 2 batch process vent means each batch process vent that does not meet the definition of Group 1 batch process vent.

Group 1 continuous process vent means a continuous process vent for which the flow rate is greater than or equal to 0.005 standard cubic meter per minute, and the total resource

effectiveness index value, calculated according to §63.2455(b), is less than or equal to 1.9 at an existing source and less than or equal to 5.0 at a new source.

Group 2 continuous process vent means a continuous process vent that does not meet the definition of a Group 1 continuous process vent.

Group 1 storage tank means a storage tank with a capacity greater than or equal to 10,000 gal storing material that has a maximum true vapor pressure of total HAP greater than or equal to 6.9 kilopascals at an existing source or greater than or equal to 0.69 kilopascals at a new source.

Group 2 storage tank means a storage tank that does not meet the definition of a Group 1 storage tank.

Group 1 transfer rack means a transfer rack that loads more than 0.65 million liters/year of liquids that contain organic HAP with a rack-weighted average partial pressure, as defined in §63.111, greater than or equal to 1.5 pound per square inch absolute.

Group 2 transfer rack means a transfer rack that does not meet the definition of a Group 1 transfer rack.

Group 1 wastewater stream means a wastewater stream consisting of process wastewater at an existing or new source that meets the criteria for Group 1 status in §63.2485(c) for compounds in Tables 8 and 9 to this subpart and/or a wastewater stream consisting of process wastewater at a new source that meets the criteria for Group 1 status in §63.132(d) for compounds in Table 8 to subpart G of this part 63.

Group 2 wastewater stream means any process wastewater stream that does not meet the definition of a Group 1 wastewater stream.

Halogen atoms mean chlorine and fluorine.

Halogenated vent stream means a vent stream determined to have a mass emission rate of halogen atoms contained in organic compounds of 0.45 kilograms per hour or greater determined by the procedures presented in §63.115(d)(2)(v).

HAP metals means the metal portion of antimony compounds, arsenic compounds, beryllium compounds, cadmium compounds, chromium compounds, cobalt compounds, lead compounds, manganese compounds, mercury compounds, nickel compounds, and selenium compounds.

Hydrogen halide and halogen HAP means hydrogen chloride, hydrogen fluoride, and chlorine.

In organic HAP service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP as determined according to the provisions of §63.180(d). The provisions of §63.180(d) also specify how to determine that a piece of equipment is not in organic HAP service.

Isolated intermediate means a product of a process that is stored before subsequent processing. An isolated intermediate is usually a product of a chemical synthesis, fermentation, or biological extraction process. Storage of an isolated intermediate marks the end of a process. Storage occurs at any time the intermediate is placed in equipment used solely for storage. The storage equipment is part of the MCPU that produces the isolated intermediate and is not assigned as specified in §63.2435(d).

Large control device means a control device that controls total HAP emissions of greater than or equal to 10 tpy, before control.

Maintenance wastewater means wastewater generated by the draining of process fluid from components in the MCPU into an individual drain system in preparation for or during maintenance activities. Maintenance wastewater can be generated during planned and unplanned shutdowns and during periods not associated with a shutdown. Examples of activities that can generate maintenance wastewater include descaling of heat exchanger tubing bundles, cleaning of distillation column traps, draining of pumps into an individual drain system, and draining of portions of the MCPU for repair. Wastewater from routine cleaning operations occurring as part of batch operations is not considered maintenance wastewater.

Maximum true vapor pressure has the meaning given in §63.111, except that it applies to all HAP rather than only organic HAP.

Miscellaneous organic chemical manufacturing process means all equipment which collectively function to produce a product or isolated intermediate that are materials described in §63.2435(b). For the purposes of this subpart, process includes any, all or a combination of reaction, recovery, separation, purification, or other activity, operation, manufacture, or treatment which are used to produce a product or isolated intermediate. A process is also defined by the following:

(1) Routine cleaning operations conducted as part of batch operations are considered part of the process;

(2) Each nondedicated solvent recovery operation is considered a single process;

(3) Each nondedicated formulation operation is considered a single process that is used to formulate numerous materials and/or products;

(4) Quality assurance/quality control laboratories are not considered part of any process; and

(5) Ancillary activities are not considered a process or part of any process.

(6) The end of a process that produces a solid material is either up to and including the dryer or extruder, or for a polymer production process without a dryer or extruder, it is up to and including the extruder, die plate, or solid-state reactor, except in two cases. If the dryer, extruder, die plate, or solid-state reactor is followed by an operation that is designed and operated to remove HAP solvent or residual HAP monomer from the solid, then the solvent removal operation is the last step in the process. If the dried solid is diluted or mixed with a HAP-based solvent, then the solvent removal operation is the last step in the process.

Nondedicated solvent recovery operation means a distillation unit or other purification equipment that receives used solvent from more than one MCPU.

Nonstandard batch means a batch process that is operated outside of the range of operating conditions that are documented in an existing operating scenario but is still a reasonably anticipated event. For example, a nonstandard batch occurs when additional processing or processing at different operating conditions must be conducted to produce a product that is normally produced under the conditions described by the standard batch. A nonstandard batch may be necessary as a result of a malfunction, but it is not itself a malfunction.

On-site or on site means, with respect to records required to be maintained by this subpart or required by another subpart referenced by this subpart, that records are stored at a location within a major source which encompasses the affected source. On-site includes, but is not limited

to, storage at the affected source or MCPU to which the records pertain, or storage in central files elsewhere at the major source.

Operating scenario means, for the purposes of reporting and recordkeeping, any specific operation of an MCPU as described by records specified in §63.2525(b).

Organic group means structures that contain primarily carbon, hydrogen, and oxygen atoms.

Organic peroxides means organic compounds containing the bivalent -o-o-structure which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms has been replaced by an organic radical.

Point of determination means each point where process wastewater exits the MCPU or control device.

Note to definition for point of determination: The regulation allows determination of the characteristics of a wastewater stream: At the point of determination; or downstream of the point of determination if corrections are made for changes in flow rate and annual average concentration of soluble HAP and partially soluble HAP compounds as determined according to procedures in §63.144 of subpart G in this part 63. Such changes include losses by air emissions; reduction of annual average concentration or changes in flow rate by mixing with other water or wastewater streams; and reduction in flow rate or annual average concentration by treating or otherwise handling the wastewater stream to remove or destroy HAP.

Predominant HAP means as used in calibrating an analyzer, the single organic HAP that constitutes the largest percentage of the total organic HAP in the analyzed gas stream, by volume.

Process condenser means a condenser whose primary purpose is to recover material as an integral part of an MCPU. All condensers recovering condensate from an MCPU at or above the boiling point or all condensers in line prior to a vacuum source are considered process condensers. Typically, a primary condenser or condensers in series are considered to be integral to the MCPU if they are capable of and normally used for the purpose of recovering chemicals for fuel value (i.e., net positive heating value), use, reuse or for sale for fuel value, use, or reuse. This definition does not apply to a condenser that is used to remove materials that would hinder performance of a downstream recovery device as follows:

(1) To remove water vapor that would cause icing in a downstream condenser, or

(2) To remove water vapor that would negatively affect the adsorption capacity of carbon in a downstream carbon adsorber, or

(3) To remove high molecular weight organic compounds or other organic compounds that would be difficult to remove during regeneration of a downstream carbon adsorber.

Process tank means a tank or vessel that is used within a process to collect material discharged from a feedstock storage tank or equipment within the process before the material is transferred to other equipment within the process or a product storage tank. A process tank has emissions that are related to the characteristics of the batch cycle, and it does not accumulate product over multiple batches. Surge control vessels and bottoms receivers are not process tanks.

Production-indexed HAP consumption factor (HAP factor) means the result of dividing the annual consumption of total HAP by the annual production rate, per process.

Production-indexed VOC consumption factor (VOC factor) means the result of dividing the annual consumption of total VOC by the annual production rate, per process.

Quaternary ammonium compounds means a type of organic nitrogen compound in which the molecular structure includes a central nitrogen atom joined to four organic groups as well as an acid radical of some sort.

Recovery device means an individual unit of equipment used for the purpose of recovering chemicals from process vent streams and from wastewater streams for fuel value (i.e., net positive heating value), use, reuse, or for sale for fuel value, use, or reuse. For the purposes of meeting requirements in table 2 to this subpart, the recovery device must not be a process condenser and must recover chemicals to be reused in a process on site. Examples of equipment that may be recovery devices include absorbers, carbon adsorbers, condensers, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units. To be a recovery device for a wastewater stream, a decanter and any other equipment based on the operating principle of gravity separation must receive only multi-phase liquid streams.

Responsible official means responsible official as defined in 40 CFR 70.2.

Safety device means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purposes of this subpart, a safety device is not used for routine venting of gases or vapors from the vapor headspace underneath a cover such as during filling of the unit or to adjust the pressure in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the air emission control equipment as determined by the owner or operator based on manufacturer recommendations, applicable regulations, fire protection and prevention codes and practices, or other requirements for the safe handling of flammable, combustible, explosive, reactive, or hazardous materials.

Shutdown means the cessation of operation of a continuous operation for any purpose. Shutdown also means the cessation of a batch operation, or any related individual piece of equipment required or used to comply with this subpart, if the steps taken to cease operation differ from those described in a standard batch or nonstandard batch. Shutdown also applies to emptying and degassing storage vessels. Shutdown does not apply to cessation of batch operations at the end of a campaign or between batches within a campaign when the steps taken are routine operations.

Small control device means a control device that controls total HAP emissions of less than 10 tpy, before control.

Standard batch means a batch process operated within a range of operating conditions that are documented in an operating scenario. Emissions from a standard batch are based on the operating conditions that result in highest emissions. The standard batch defines the uncontrolled and controlled emissions for each emission episode defined under the operating scenario.

Startup means the setting in operation of a continuous operation for any purpose; the first time a new or reconstructed batch operation begins production; for new equipment added, including equipment required or used to comply with this subpart, the first time the equipment is put into operation; or for the introduction of a new product/process, the first time the product or process is run in equipment. For batch operations, startup applies to the first time the equipment is put into operation at the start of a campaign to produce a product that has been produced in the past if

the steps taken to begin production differ from those specified in a standard batch or nonstandard batch. Startup does not apply when the equipment is put into operation as part of a batch within a campaign when the steps taken are routine operations.

Storage tank means a tank or other vessel that is used to store liquids that contain organic HAP and/or hydrogen halide and halogen HAP and that has been assigned to an MCPU according to the procedures in §63.2435(d). The following are not considered storage tanks for the purposes of this subpart:

(1) Vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships;

(2) Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere;

(3) Vessels storing organic liquids that contain HAP only as impurities;

(4) Wastewater storage tanks;

(5) Bottoms receivers;

(6) Surge control vessels; and

(7) Process tanks.

Supplemental gases means the air that is added to a vent stream after the vent stream leaves the unit operation. Air that is part of the vent stream as a result of the nature of the unit operation is not considered supplemental gases. Air required to operate combustion device burner(s) is not considered supplemental gases.

Surge control vessel means feed drums, recycle drums, and intermediate vessels as part of any continuous operation. Surge control vessels are used within an MCPU when in-process storage, mixing, or management of flowrates or volumes is needed to introduce material into continuous operations.

Total organic compounds or (TOC) means the total gaseous organic compounds (minus methane and ethane) in a vent stream.

Transfer rack means the collection of loading arms and loading hoses, at a single loading rack, that are assigned to an MCPU according to the procedures specified in §63.2435(d) and are used to fill tank trucks and/or rail cars with organic liquids that contain one or more of the organic HAP listed in section 112(b) of the CAA of this subpart. Transfer rack includes the associated pumps, meters, shutoff valves, relief valves, and other piping and valves.

Unit operation means those processing steps that occur within distinct equipment that are used, among other things, to prepare reactants, facilitate reactions, separate and purify products, and recycle materials. Equipment used for these purposes includes, but is not limited to, reactors, distillation columns, extraction columns, absorbers, decanters, dryers, condensers, and filtration equipment.

Waste management unit means the equipment, structure(s), and/or device(s) used to convey, store, treat, or dispose of wastewater streams or residuals. Examples of waste management units include wastewater tanks, air flotation units, surface impoundments, containers, oil-water or organic-water separators, individual drain systems, biological wastewater treatment units, waste incinerators, and organic removal devices such as steam and air stripper units, and thin film

evaporation units. If such equipment is being operated as a recovery device, then it is part of a miscellaneous organic chemical manufacturing process and is not a waste management unit.

Wastewater means water that is discarded from an MCPU or control device through a POD and that contains either: an annual average concentration of compounds in tables 8 and 9 to this subpart of at least 5 ppmw and has an annual average flowrate of 0.02 liters per minute or greater; or an annual average concentration of compounds in tables 8 and 9 to this subpart of at least 10,000 ppmw at any flowrate. Wastewater means process wastewater or maintenance wastewater. The following are not considered wastewater for the purposes of this subpart:

(1) Stormwater from segregated sewers;

(2) Water from fire-fighting and deluge systems, including testing of such systems;

(3) Spills;

(4) Water from safety showers;

(5) Samples of a size not greater than reasonably necessary for the method of analysis that is used;

(6) Equipment leaks;

(7) Wastewater drips from procedures such as disconnecting hoses after cleaning lines; and

(8) Noncontact cooling water.

Wastewater stream means a stream that contains only wastewater as defined in this paragraph (i).

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the CAA.

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38560, July 1, 2005; 71 FR 40338, July 14, 2006]

Table 1 to Subpart FFFF of Part 63—Emission Limits and Work Practice Standards for Continuous Process Vents

As required in §63.2455, you must meet each emission limit and work practice standard in the following table that applies to your continuous process vents:

For each . . .	For which . . .	Then you must . . .
1. Group 1 continuous process vent	a. Not applicable	i. Reduce emissions of total organic HAP by ≥98 percent by weight or to an outlet process concentration ≤20 ppmv as organic HAP or TOC by venting emissions through a closed-vent system to any combination of control devices (except a flare); or
		ii. Reduce emissions of total organic HAP by venting emissions through a closed vent system to a flare; or
		iii. Use a recovery device to maintain the TRE above 1.9 for an existing source or above 5.0 for a new source.
2. Halogenated Group 1 continuous process vent stream	a. You use a combustion control device to control organic HAP emissions	i. Use a halogen reduction device after the combustion device to reduce emissions of hydrogen halide and halogen HAP by ≥99 percent by weight, or to ≤0.45 kg/hr, or to ≤20 ppmv; or ii. Use a halogen reduction device before the combustion device to reduce the halogen atom mass emission rate to ≤0.45 kg/hr or to a concentration ≤20 ppmv.
3. Group 2 continuous process vent at an existing source	You use a recovery device to maintain the TRE level >1.9 but ≤5.0	Comply with the requirements in §63.993 and the requirements referenced therein.
4. Group 2 continuous process vent at a new source	You use a recovery device to maintain the TRE level >5.0 but ≤8.0	Comply with the requirements in §63.993 and the requirements referenced therein.

Table 2 to Subpart FFFF of Part 63—Emission Limits and Work Practice Standards for Batch Process Vents

As required in §63.2460, you must meet each emission limit and work practice standard in the following table that applies to your batch process vents:

For each . . .	Then you must . . .	And you must . . .
1. Process with Group 1 batch process vents	a. Reduce collective uncontrolled organic HAP emissions from the sum of all batch process vents within the process by ≥98 percent by weight by venting emissions from a sufficient number of the vents through one or more closed-vent systems to any combination of control devices (except a flare); or	Not applicable.
	b. Reduce collective uncontrolled organic HAP emissions from the sum of all batch process vents within the process by ≥95 percent by weight by venting emissions from a sufficient number of the vents through one or more closed-vent systems to any combination of recovery devices or a biofilter, except you may elect to comply with the requirements of subpart WW of this part for any process tank; or	Not applicable.
	c. Reduce uncontrolled organic HAP emissions from one or more batch process vents within the process by venting through a closed-vent system to a flare or by venting through one or more closed-vent systems to any combination of control devices (excluding a flare) that reduce organic HAP to an outlet concentration ≤20 ppmv as TOC or total organic HAP.	For all other batch process vents within the process, reduce collective organic HAP emissions as specified in item 1.a and/or item 1.b of this table.
2. Halogenated Group 1 batch process vent for which you use a combustion device to control organic HAP emissions	a. Use a halogen reduction device after the combustion control device; or	i. Reduce overall emissions of hydrogen halide and halogen HAP by ≥99 percent; or ii. Reduce overall emissions of hydrogen halide and halogen HAP to ≤0.45 kg/hr; or iii. Reduce overall emissions of hydrogen halide and halogen HAP to a concentration ≤20 ppmv.
	b. Use a halogen reduction device before the combustion control device	Reduce the halogen atom mass emission rate to ≤0.45 kg/hr or to a concentration ≤20 ppmv.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40339, July 14, 2006]

Table 3 to Subpart FFFF of Part 63—Emission Limits for Hydrogen Halide and Halogen HAP Emissions or HAP Metals Emissions From Process Vents

As required in §63.2465, you must meet each emission limit in the following table that applies to your process vents that contain hydrogen halide and halogen HAP emissions or PM HAP emissions:

For each . . .	You must . . .
1. Process with uncontrolled hydrogen halide and halogen HAP emissions from process vents ≥1,000 lb/yr	a. Reduce collective hydrogen halide and halogen HAP emissions by ≥99 percent by weight or to an outlet concentration ≤20 ppmv by venting through one or more closed-vent systems to any combination of control devices, or
	b. Reduce the halogen atom mass emission rate from the sum of all batch process vents and each individual continuous process vent to ≤0.45 kg/hr by venting through one or more closed-vent systems to a halogen reduction device.
2. Process at a new source with uncontrolled emissions from process vents ≥150 lb/yr of HAP metals	Reduce overall emissions of HAP metals by ≥97 percent by weight.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40340, July 14, 2006]

Table 4 to Subpart FFFF of Part 63—Emission Limits for Storage Tanks

As required in §63.2470, you must meet each emission limit in the following table that applies to your storage tanks:

For each . . .	For which . . .	Then you must . . .
1. Group 1 storage tank	a. The maximum true vapor pressure of total HAP at the storage temperature is ≥76.6 kilopascals	i. Reduce total HAP emissions by ≥95 percent by weight or to ≤20 ppmv of TOC or organic HAP and ≤20 ppmv of hydrogen halide and halogen HAP by venting emissions through a closed vent system to any combination of control devices (excluding a flare); or
		ii. Reduce total organic HAP emissions by venting emissions through a closed vent system to a flare; or
		iii. Reduce total HAP emissions by venting emissions to a fuel gas system or process in accordance with §63.982(d) and the requirements referenced therein.
	b. The maximum true vapor pressure of total HAP at the storage temperature is <76.6 kilopascals	i. Comply with the requirements of subpart WW of this part, except as specified in §63.2470; or
		ii. Reduce total HAP emissions by ≥95 percent by weight or to ≤20 ppmv of TOC or organic HAP and ≤20 ppmv of hydrogen halide and halogen HAP by venting emissions through a closed vent system to any combination of control devices (excluding a flare); or
		iii. Reduce total organic HAP emissions by venting emissions through a closed vent system to a flare; or
		iv. Reduce total HAP emissions by venting emissions to a fuel gas system or process in accordance with §63.982(d) and the requirements referenced therein.
2. Halogenated vent stream from a Group 1 storage tank	You use a combustion control device to control organic HAP emissions	Meet one of the emission limit options specified in Item 2.a.i or ii. in Table 1 to this subpart.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40340, July 14, 2006]

Table 5 to Subpart FFFF of Part 63—Emission Limits and Work Practice Standards for Transfer Racks

As required in §63.2475, you must meet each emission limit and work practice standard in the following table that applies to your transfer racks:

For each . . .	You must . . .
1. Group 1 transfer rack	a. Reduce emissions of total organic HAP by ≥98 percent by weight or to an outlet concentration ≤20 ppmv as organic HAP or TOC by venting emissions through a closed-vent system to any combination of control devices (except a flare); or
	b. Reduce emissions of total organic HAP by venting emissions through a closed-vent system to a flare; or
	c. Reduce emissions of total organic HAP by venting emissions to a fuel gas system or process in accordance with §63.982(d) and the requirements referenced therein; or
	d. Use a vapor balancing system designed and operated to collect organic HAP vapors displaced from tank trucks and railcars during loading and route the collected HAP vapors to the storage tank from which the liquid being loaded originated or to another storage tank connected by a common header.
2. Halogenated Group 1 transfer rack vent stream for which you use a combustion device to control organic HAP emissions	a. Use a halogen reduction device after the combustion device to reduce emissions of hydrogen halide and halogen HAP by ≥99 percent by weight, to ≤0.45 kg/hr, or to ≤20 ppmv; or b. Use a halogen reduction device before the combustion device to reduce the halogen atom mass emission rate to ≤0.45 kg/hr or to a concentration ≤20 ppmv.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40341, July 14, 2006]

Table 6 to Subpart FFFF of Part 63—Requirements for Equipment Leaks

As required in §63.2480, you must meet each requirement in the following table that applies to your equipment leaks:

For all . . .	And that is part of . . .	You must . . .
1. Equipment that is in organic HAP service	a. Comply with the requirements of subpart UU of this part 63 and the requirements referenced therein, except as specified in §63.2480(b) and (d); or	
	b. Comply with the requirements of subpart H of this part 63 and the requirements referenced therein, except as specified in §63.2480(b) and (d); or	
	c. Comply with the requirements of 40 CFR part 65, subpart F and the requirements referenced therein, except as specified in §63.2480(c) and (d).	
2. Equipment that is in organic HAP service at a new source	a. Any MCPU	i. Comply with the requirements of subpart UU of this part 63 and the requirements referenced therein; or ii. Comply with the requirements of 40 CFR part 65, subpart F.

[68 FR 63888, Nov. 10, 2003, as amended at 71 FR 40341, July 14, 2006]

Table 7 to Subpart FFFF of Part 63—Requirements for Wastewater Streams and Liquid Streams in Open Systems Within an MCPU

As required in §63.2485, you must meet each requirement in the following table that applies to your wastewater streams and liquid streams in open systems within an MCPU:

For each . . .	You must . . .
1. Process wastewater stream	Comply with the requirements in §§63.132 through 63.148 and the requirements referenced therein, except as specified in §63.2485.
2. Maintenance wastewater stream	Comply with the requirements in §63.105 and the requirements referenced therein, except as specified in §63.2485.
3. Liquid streams in an open system within an MCPU	Comply with the requirements in §63.149 and the requirements referenced therein, except as specified in §63.2485.

Table 8 to Subpart FFFF of Part 63—Partially Soluble Hazardous Air Pollutants

As specified in §63.2485, the partially soluble HAP in wastewater that are subject to management and treatment requirements in this subpart FFFF are listed in the following table:

Chemical name . . .	CAS No.
1. 1,1,1–Trichloroethane (methyl chloroform)	71556
2. 1,1,2,2–Tetrachloroethane	79345
3. 1,1,2–Trichloroethane	79005
4. 1,1–Dichloroethylene (vinylidene chloride)	75354
5. 1,2–Dibromoethane	106934
6. 1,2–Dichloroethane (ethylene dichloride)	107062
7. 1,2–Dichloropropane	78875
8. 1,3–Dichloropropene	542756
9. 2,4,5–Trichlorophenol	95954
10. 1,4–Dichlorobenzene	106467
11. 2–Nitropropane	79469
12. 4–Methyl-2-pentanone (MIBK)	108101
13. Acetaldehyde	75070
14. Acrolein	107028
15. Acrylonitrile	107131
16. Allyl chloride	107051
17. Benzene	71432
18. Benzyl chloride	100447
19. Biphenyl	92524
20. Bromoform (tribromomethane)	75252
21. Bromomethane	74839
22. Butadiene	106990
23. Carbon disulfide	75150
24. Chlorobenzene	108907
25. Chloroethane (ethyl chloride)	75003
26. Chloroform	67663
27. Chloromethane	74873
28. Chloroprene	126998

Chemical name . . .	CAS No.
29. Cumene	98828
30. Dichloroethyl ether	111444
31. Dinitrophenol	51285
32. Epichlorohydrin	106898
33. Ethyl acrylate	140885
34. Ethylbenzene	100414
35. Ethylene oxide	75218
36. Ethylidene dichloride	75343
37. Hexachlorobenzene	118741
38. Hexachlorobutadiene	87683
39. Hexachloroethane	67721
40. Methyl methacrylate	80626
41. Methyl-t-butyl ether	1634044
42. Methylene chloride	75092
43. N-hexane	110543
44. N,N-dimethylaniline	121697
45. Naphthalene	91203
46. Phosgene	75445
47. Propionaldehyde	123386
48. Propylene oxide	75569
49. Styrene	100425
50. Tetrachloroethylene (perchloroethylene)	127184
51. Tetrachloromethane (carbon tetrachloride)	56235
52. Toluene	108883
53. Trichlorobenzene (1,2,4-)	120821
54. Trichloroethylene	79016
55. Trimethylpentane	540841
56. Vinyl acetate	108054
57. Vinyl chloride	75014
58. Xylene (m)	108383
59. Xylene (o)	95476

Chemical name . . .	CAS No.
60. Xylene (p)	106423

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38560, July 1, 2005; 71 FR 40341, July 14, 2006]

Table 9 to Subpart FFFF of Part 63—Soluble Hazardous Air Pollutants

As specified in §63.2485, the soluble HAP in wastewater that are subject to management and treatment requirements of this subpart FFFF are listed in the following table:

Chemical name . . .	CAS No.
1. Acetonitrile	75058
2. Acetophenone	98862
3. Diethyl sulfate	64675
4. Dimethyl hydrazine (1,1)	57147
5. Dimethyl sulfate	77781
6. Dinitrotoluene (2,4)	121142
7. Dioxane (1,4)	123911
8. Ethylene glycol dimethyl ether	110714
9. Ethylene glycol monobutyl ether acetate	112072
10. Ethylene glycol monomethyl ether acetate	110496
11. Isophorone	78591
12. Methanol	67561
13. Nitrobenzene	98953
14. Toluidine (o-)	95534
15. Triethylamine	121448

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38561, July 1, 2005]

Table 10 to Subpart FFFF of Part 63—Work Practice Standards for Heat Exchange Systems

As required in §63.2490, you must meet each requirement in the following table that applies to your heat exchange systems:

For each . . .	You must . . .
Heat exchange system, as defined in §63.101	Comply with the requirements of §63.104 and the requirements referenced therein, except as specified in §63.2490.

Table 11 to Subpart FFFF of Part 63—Requirements for Reports

As required in §63.2520(a) and (b), you must submit each report that applies to you on the schedule shown in the following table:

You must submit a(n)	The report must contain . . .	You must submit the report . . .
1. Precompliance report	The information specified in §63.2520(c)	At least 6 months prior to the compliance date; or for new sources, with the application for approval of construction or reconstruction.
2. Notification of compliance status report	The information specified in §63.2520(d)	No later than 150 days after the compliance date specified in §63.2445.
3. Compliance report	The information specified in §63.2520(e)	Semiannually according to the requirements in §63.2520(b).

Table 12 to Subpart FFFF of Part 63—Applicability of General Provisions to Subpart FFFF

As specified in §63.2540, the parts of the General Provisions that apply to you are shown in the following table:

Citation	Subject	Explanation
§63.1	Applicability	Yes.
§63.2	Definitions	Yes.
§63.3	Units and Abbreviations	Yes.
§63.4	Prohibited Activities	Yes.
§63.5	Construction/Reconstruction	Yes.
§63.6(a)	Applicability	Yes.
§63.6(b)(1)–(4)	Compliance Dates for New and Reconstructed sources	Yes.
§63.6(b)(5)	Notification	Yes.
§63.6(b)(6)	[Reserved]	
§63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Yes.
§63.6(c)(1)–(2)	Compliance Dates for Existing Sources	Yes.
§63.6(c)(3)–(4)	[Reserved]	
§63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Yes
§63.6(d)	[Reserved]	

Citation	Subject	Explanation
§63.6(e)(1)–(2)	Operation & Maintenance	Yes.
§63.6(e)(3)(i), (ii), and (v) through (viii)	Startup, Shutdown, Malfunction Plan (SSMP)	Yes, except information regarding Group 2 emission points and equipment leaks is not required in the SSMP, as specified in §63.2525(j).
§63.6(e)(3)(iii) and (iv)	Recordkeeping and Reporting During SSM	No, §63.998(d)(3) and 63.998(c)(1)(ii)(D) through (G) specify the recordkeeping requirement for SSM events, and §63.2520(e)(4) specifies reporting requirements.
§63.6(e)(3)(ix)	SSMP incorporation into title V permit	Yes.
§63.6(f)(1)	Compliance Except During SSM	Yes.
§63.6(f)(2)–(3)	Methods for Determining Compliance	Yes.
§63.6(g)(1)–(3)	Alternative Standard	Yes.
§63.6(h)	Opacity/Visible Emission (VE) Standards	Only for flares for which Method 22 observations are required as part of a flare compliance assessment.
§63.6(i)(1)–(14)	Compliance Extension	Yes.
§63.6(j)	Presidential Compliance Exemption	Yes.
§63.7(a)(1)–(2)	Performance Test Dates	Yes, except substitute 150 days for 180 days.
§63.7(a)(3)	Section 114 Authority	Yes, and this paragraph also applies to flare compliance assessments as specified under §63.997(b)(2).
§63.7(b)(1)	Notification of Performance Test	Yes.
§63.7(b)(2)	Notification of Rescheduling	Yes.
§63.7(c)	Quality Assurance/Test Plan	Yes, except the test plan must be submitted with the notification of the performance test if the control device controls batch process vents.
§63.7(d)	Testing Facilities	Yes.
§63.7(e)(1)	Conditions for Conducting Performance Tests	Yes, except that performance tests for batch process vents must be conducted under worst-case conditions as specified in §63.2460.
§63.7(e)(2)	Conditions for Conducting Performance Tests	Yes.
§63.7(e)(3)	Test Run Duration	Yes.

Citation	Subject	Explanation
§63.7(f)	Alternative Test Method	Yes.
§63.7(g)	Performance Test Data Analysis	Yes.
§63.7(h)	Waiver of Tests	Yes.
§63.8(a)(1)	Applicability of Monitoring Requirements	Yes.
§63.8(a)(2)	Performance Specifications	Yes.
§63.8(a)(3)	[Reserved]	
§63.8(a)(4)	Monitoring with Flares	Yes.
§63.8(b)(1)	Monitoring	Yes.
§63.8(b)(2)–(3)	Multiple Effluents and Multiple Monitoring Systems	Yes.
§63.8(c)(1)	Monitoring System Operation and Maintenance	Yes.
§63.8(c)(1)(i)	Routine and Predictable SSM	Yes.
§63.8(c)(1)(ii)	SSM not in SSMP	Yes.
§63.8(c)(1)(iii)	Compliance with Operation and Maintenance Requirements	Yes.
§63.8(c)(2)–(3)	Monitoring System Installation	Yes.
§63.8(c)(4)	CMS Requirements	Only for CEMS. Requirements for CPMS are specified in referenced subparts G and SS of part 63. Requirements for COMS do not apply because subpart FFFF does not require continuous opacity monitoring systems (COMS).
§63.8(c)(4)(i)	COMS Measurement and Recording Frequency	No; subpart FFFF does not require COMS.
§63.8(c)(4)(ii)	CEMS Measurement and Recording Frequency	Yes.
§63.8(c)(5)	COMS Minimum Procedures	No. Subpart FFFF does not contain opacity or VE limits.
§63.8(c)(6)	CMS Requirements	Only for CEMS; requirements for CPMS are specified in referenced subparts G and SS of this part 63. Requirements for COMS do not apply because subpart FFFF does not require COMS.
§63.8(c)(7)–(8)	CMS Requirements	Only for CEMS. Requirements for CPMS are specified in referenced subparts G and SS of part 63. Requirements for COMS do not apply because subpart FFFF does not require COMS.

Citation	Subject	Explanation
§63.8(d)	CMS Quality Control	Only for CEMS.
§63.8(e)	CMS Performance Evaluation	Only for CEMS. Section 63.8(e)(5)(ii) does not apply because subpart FFFF does not require COMS.
§63.8(f)(1)–(5)	Alternative Monitoring Method	Yes, except you may also request approval using the precompliance report.
§63.8(f)(6)	Alternative to Relative Accuracy Test	Only applicable when using CEMS to demonstrate compliance, including the alternative standard in §63.2505.
§63.8(g)(1)–(4)	Data Reduction	Only when using CEMS, including for the alternative standard in §63.2505, except that the requirements for COMS do not apply because subpart FFFF has no opacity or VE limits, and §63.8(g)(2) does not apply because data reduction requirements for CEMS are specified in §63.2450(j).
§63.8(g)(5)	Data Reduction	No. Requirements for CEMS are specified in §63.2450(j). Requirements for CPMS are specified in referenced subparts G and SS of this part 63.
§63.9(a)	Notification Requirements	Yes.
§63.9(b)(1)–(5)	Initial Notifications	Yes.
§63.9(c)	Request for Compliance Extension	Yes.
§63.9(d)	Notification of Special Compliance Requirements for New Source	Yes.
§63.9(e)	Notification of Performance Test	Yes.
§63.9(f)	Notification of VE/Opacity Test	No. Subpart FFFF does not contain opacity or VE limits.
§63.9(g)	Additional Notifications When Using CMS	Only for CEMS. Section 63.9(g)(2) does not apply because subpart FFFF does not require COMS.
63.9(h)(1)–(6)	Notification of Compliance Status	Yes, except subpart FFFF has no opacity or VE limits, and 63.9(h)(2)(i)(A) through (G) and (ii) do not apply because 63.2520(d) specifies the required contents and due date of the notification of compliance status report.
§63.9(i)	Adjustment of Submittal Deadlines	Yes.

Citation	Subject	Explanation
§63.9(j)	Change in Previous Information	No, §63.2520(e) specifies reporting requirements for process changes.
§63.10(a)	Recordkeeping/Reporting	Yes.
§63.10(b)(1)	Recordkeeping/Reporting	Yes.
§63.10(b)(2)(i)–(ii), (iv), (v)	Records related to SSM	No, §§63.998(d)(3) and 63.998(c)(1)(ii)(D) through (G) specify recordkeeping requirements for periods of SSM.
§63.10(b)(2)(iii)	Records related to maintenance of air pollution control equipment	Yes.
§63.10(b)(2)(vi), (x), and (xi)	CMS Records	Only for CEMS; requirements for CPMS are specified in referenced subparts G and SS of this part 63.
§63.10(b)(2)(vii)–(ix)	Records	Yes.
§63.10(b)(2)(xii)	Records	Yes.
§63.10(b)(2)(xiii)	Records	Only for CEMS.
§63.10(b)(2)(xiv)	Records	Yes.
§63.10(b)(3)	Records	Yes.
§63.10(c)(1)–(6),(9)–(15)	Records	Only for CEMS. Recordkeeping requirements for CPMS are specified in referenced subparts G and SS of this part 63.
§63.10(c)(7)–(8)	Records	No. Recordkeeping requirements are specified in §63.2525.
§63.10(d)(1)	General Reporting Requirements	Yes.
§63.10(d)(2)	Report of Performance Test Results	Yes.
§63.10(d)(3)	Reporting Opacity or VE Observations	No. Subpart FFFF does not contain opacity or VE limits.
§63.10(d)(4)	Progress Reports	Yes.
§63.10(d)(5)(i)	Periodic Startup, Shutdown, and Malfunction Reports	No, §63.2520(e)(4) and (5) specify the SSM reporting requirements.
§63.10(d)(5)(ii)	Immediate SSM Reports	No.
§63.10(e)(1)	Additional CEMS Reports	Yes.
§63.10(e)(2)(i)	Additional CMS Reports	Only for CEMS.
§63.10(e)(2)(ii)	Additional COMS Reports	No. Subpart FFFF does not require COMS.

Citation	Subject	Explanation
§63.10(e)(3)	Reports	No. Reporting requirements are specified in §63.2520.
§63.10(e)(3)(i)–(iii)	Reports	No. Reporting requirements are specified in §63.2520.
§63.10(e)(3)(iv)–(v)	Excess Emissions Reports	No. Reporting requirements are specified in §63.2520.
§63.10(e)(3)(iv)–(v)	Excess Emissions Reports	No. Reporting requirements are specified in §63.2520.
§63.10(e)(3)(vi)–(viii)	Excess Emissions Report and Summary Report	No. Reporting requirements are specified in §63.2520.
§63.10(e)(4)	Reporting COMS data	No. Subpart FFFF does not contain opacity or VE limits.
§63.10(f)	Waiver for Recordkeeping/Reporting	Yes.
§63.11	Control device requirements for flares and work practice requirements for equipment leaks	Yes.
§63.12	Delegation	Yes.
§63.13	Addresses	Yes.
§63.14	Incorporation by Reference	Yes.
§63.15	Availability of Information	Yes.

[68 FR 63888, Nov. 10, 2003, as amended at 70 FR 38561, July 1, 2005; 71 FR 20463, Apr. 20, 2006; 71 FR 40341, July 14, 2006; 73 FR 72816, Dec. 22, 2008]

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Operating Permit with New Source Review

Source Background and Description

Source Name:	Wolf Lake Terminals, Inc.
Source Location:	3200 Sheffield Avenue, Hammond, Indiana 46327
County:	Lake
SIC Code:	2869 & 4226
Part 70 Operating Permit No.:	T089-28673-00230
Permit Reviewer:	John Haney

History

On November 27, 2002, Wolf Lake Terminals, Inc. submitted an application to IDEM, OAQ requesting to construct and operate a storage tank facility. On May 22, 2003, Wolf Lake Terminals, Inc. was issued Registration No. R089-16857-00230 for a storage tank facility by IDEM, OAQ.

On May 9, 2005, Wolf Lake Terminals, Inc. submitted an application to IDEM, OAQ and the Hammond Department of Environmental Management (HDEM) requesting to transition from a Registration to a Permit By Rule. Once the transition was to be completed, the source was to be modified with the addition of a batch process biodiesel production facility. On October 18, 2005, Wolf Lake Terminals, Inc. withdrew the application to transition to a Permit By Rule from IDEM, OAQ. However, on March 31, 2006, Wolf Lake Terminals, Inc. was issued HDEM Operation Permit No. 2595 by HDEM for the construction and operation of the batch process biodiesel production facility without IDEM, OAQ approval.

On September 3, 2009, Wolf Lake Terminals, Inc. submitted an application to IDEM, OAQ requesting to remove HDEM local agency conditions. During the permit review process, it was discovered that the biodiesel production facility had been permitted without IDEM, OAQ approval.

On November 13, 2009, Wolf Lake Terminals, Inc. submitted an application to IDEM, OAQ requesting to increase its annual biodiesel production from five million gallons to thirty-six million gallons. As a result, IDEM, OAQ determined that it was necessary to transition Wolf Lake Terminals, Inc. from a Registration to a Part 70 Operating Permit with New Source Review.

Permitted Emission Units

(a) One (1) Kewanee Boiler, constructed in 1994, with a maximum heat input capacity of 25.1 MMBtu/hr, burning natural gas only, and exhausting uncontrolled. Under 40 CFR 60, Subpart Dc, this is considered an affected facility. [40 CFR 60, Subpart Dc]

(b) A storage tank facility (with vertical, above ground, fixed cone roof tanks, without internal floating roofs) holding products with a vapor pressure less than 0.50 psia, consisting of the following:

(1) One (1) storage tank, constructed in 1951, identified as Tank 1, for storage of propylene glycol, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(5) One (1) storage tank, constructed in 1951, identified as Tank 8, for storage of Atosol 100, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(6) One (1) storage tank, constructed in 1951, identified as Tank 9, for storage of glycol, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(7) One (1) storage tank, constructed in 1951, identified as Tank 11, for storage of Low Sulfur Diesel Supreme, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(10) One (1) storage tank, constructed in 1951, identified as Tank 14, for storage of Atosol 150, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(14) One (1) storage tank, constructed in 1951, identified as Tank 19, for storage of glycerin/water, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(15) One (1) storage tank, constructed in 1951, identified as Tank 20, for storage of Diprop Gly/DPNB/PNB, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(38) One (1) storage tank, constructed in 1951, identified as Tank 45, for storage of triethanolamine, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(43) One (1) storage tank, constructed in 1951, identified as Tank 50, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(49) One (1) storage tank, constructed in 1951, identified as Tank 56, for storage of glycol, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(50) One (1) storage tank, constructed in 1951, identified as Tank 57, for storage of MPG-DEG, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(53) One (1) storage tank, constructed in 1951, identified as Tank 60, for storage of diesel fuel, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(54) One (1) storage tank, constructed in 1951, identified as Tank 61, for storage of glycol, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(58) One (1) storage tank, constructed in 1951, identified as Tank 65, for storage of diethanolamine, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(59) One (1) storage tank, constructed in 1951, identified as Tank 66, for storage of biodiesel, with a maximum volume of 126,000 gallons, with a maximum throughput of 5,000,000 gallons per year, and exhausting to the atmosphere;

(62) One (1) storage tank, constructed in 1951, identified as Tank 69, for storage of glycol, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(63) One (1) storage tank, constructed in 1951, identified as Tank 70, for storage of monoethanolamine, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(68) One (1) storage tank, constructed in 1951, identified as Tank 75, for storage of glycol, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(69) One (1) storage tank, constructed in 1951, identified as Tank 76, for storage of glycol, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(78) One (1) storage tank, constructed in 1994, identified as Tank 86, for storage of morpholine, with a maximum volume of 88,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(79) One (1) storage tank, constructed in 1994, identified as Tank 87, for storage of glycol, with a maximum volume of 88,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(87) One (1) storage tank, constructed in 1996, identified as Tank 100, for storage of cetane improver, with a maximum volume of 16,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(88) One (1) storage tank, constructed in 1996, identified as Tank 102, for storage of cetane improver, with a maximum volume of 16,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(89) One (1) storage tank, constructed in 1996, identified as Tank 104, for storage of Infineum F7596, with a maximum volume of 35,800 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(92) One (1) storage tank, constructed in 1999, identified as Tank 107, for storage of propylene glycol, with a maximum volume of 78,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(93) One (1) storage tank, constructed in 1999, identified as Tank 108, for storage of propylene glycol, with a maximum volume of 19,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(94) One (1) storage tank, constructed in 1999, identified as Tank 109, for storage of propylene glycol, with a maximum volume of 19,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(95) One (1) storage tank, constructed in 1999, identified as Tank 110, for storage of propylene glycol, with a maximum volume of 18,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(96) One (1) storage tank, constructed in 1999, identified as Tank 111, for storage of propylene glycol, with a maximum volume of 25,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(97) One (1) storage tank, constructed in 1999, identified as Tank 112, for storage of propylene glycol, with a maximum volume of 25,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(98) One (1) storage tank, constructed in 1999, identified as Tank 113, for storage of propylene glycol, with a maximum volume of 25,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(100) One (1) storage tank, constructed in 2000, identified as Tank 115, for storage of propylene glycol, with a maximum volume of 2,400 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(101) One (1) storage tank, constructed in 2000, identified as Tank 116, for storage of propylene glycol, with a maximum volume of 2,400 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(103) One (1) storage tank, constructed in 2001, identified as Tank 119, for storage of Sulfonic N-100, with a maximum volume of 30,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(104) One (1) storage tank, constructed in 2001, identified as Tank 120, for storage of Sulfonic N-120, with a maximum volume of 30,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere; and

(106) One (1) storage tank, constructed in 2001, identified as Tank 122, for storage of Sulfonic N-60, with a maximum volume of 30,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere.

Specifically Regulated Insignificant Activities

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) One (1) Cleaver Brooks Boiler, constructed in 1970, with a maximum heat input capacity of 9.0 MMBtu/hr, burning natural gas only, and exhausting uncontrolled. [326 IAC 6.8-1-2]

Existing Approvals

The source was issued Registration No. R089-16857-00230 on May 22, 2003. The source has since received the following approvals:

(a) Notice-Only Change (NOC) No. 089-19443, issued on September 1, 2004.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

The following terms and conditions from previous approvals have been revised in this Part 70 Operating Permit:

(a) Emission Limitations and Standards

Pursuant to Registration R089-16857-00230, particulate emissions from the combustion of natural gas for the Cleaver Brooks Boiler and the Kewanee Boiler were limited to 0.2996 pounds per hour and 0.8335 pounds per hour, respectively, as governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended). Local agencies no longer have effective authority to implement state and federal requirements for IDEM. Therefore, IDEM has removed all references to local agencies from the permit. Pursuant to 326 IAC 326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County), particulate emissions from these boilers shall not exceed 0.01 grains per dry standard cubic foot of particulate matter (PM), each.

The following terms and conditions from previous approvals have been determined no longer applicable; therefore, they were not incorporated into this Part 70 Operating Permit Renewal:

(a) All construction conditions from all previously issued permits.

Reason not incorporated: All facilities previously permitted have already been constructed; therefore, the construction conditions are no longer necessary as part of the operating permit. Any facilities that were previously permitted but have not yet been constructed would need new pre-construction approval before beginning construction.

Emission Units and Pollution Control Equipment Receiving New Source Review Approval

(b) A storage tank facility (with vertical, above ground, fixed cone roof tanks, without internal floating roofs) holding products with a vapor pressure less than 0.50 psia, consisting of the following:

(2) One (1) storage tank, constructed in 1951, identified as Tank 2, for storage of polymer polyols, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(3) One (1) storage tank, constructed in 1951, identified as Tank 6, for storage of Infineum R693, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(4) One (1) storage tank, approved in 2010 for construction, identified as Tank 7, for storage of various products, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(8) One (1) storage tank, constructed in 1951, identified as Tank 12, for storage of T11E tallow fatty acid, with a maximum volume of 126,000 gallons, with a maximum throughput of 3,000,000 gallons per year, and exhausting to the atmosphere;

(9) One (1) storage tank, constructed in 1951, identified as Tank 13, for storage of glycerin/water, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(11) One (1) storage tank, constructed in 1951, identified as Tank 16, for storage of Synacto 246, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(12) One (1) storage tank, constructed in 1951, identified as Tank 17, for storage of various products, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(13) One (1) storage tank, constructed in 1951, identified as Tank 18, for storage of various products, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(16) One (1) storage tank, constructed in 1951, identified as Tank 21, for storage of Sulfonic N-95, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(17) One (1) storage tank, constructed in 1951, identified as Tank 22, for storage of RHT 240, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(18) One (1) storage tank, constructed in 1951, identified as Tank 23, for storage of RHT 70, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(19) One (1) storage tank, constructed in 1951, identified as Tank 25, for storage of REO, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(20) One (1) storage tank, constructed in 1951, identified as Tank 26, for storage of REO, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(21) One (1) storage tank, constructed in 1951, identified as Tank 27, for storage of deodorizer distillate, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(22) One (1) storage tank, constructed in 1951, identified as Tank 28, for storage of L24-7, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(23) One (1) storage tank, constructed in 1951, identified as Tank 29, for storage of various products, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(24) One (1) storage tank, constructed in 1951, identified as Tank 30, for storage of Moly Oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(25) One (1) storage tank, constructed in 1951, identified as Tank 31, for storage of On Spec Fuel Oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(26) One (1) storage tank, constructed in 1951, identified as Tank 32, for storage of RS Used Oils, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(27) One (1) storage tank, constructed in 1951, identified as Tank 33, for storage of RHT 120L, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(28) One (1) storage tank, constructed in 1951, identified as Tank 34, for storage of RHT 240, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(29) One (1) storage tank, constructed in 1951, identified as Tank 35, for storage of Hiboiler, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(30) One (1) storage tank, constructed in 1951, identified as Tank 36, for storage of various products, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(31) One (1) storage tank, constructed in 1951, identified as Tank 37, for storage of RS Used Oils, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(32) One (1) storage tank, constructed in 1951, identified as Tank 39, for storage of soy oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(33) One (1) storage tank, constructed in 1951, identified as Tank 40, for storage of soy oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(34) One (1) storage tank, constructed in 1951, identified as Tank 41, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(35) One (1) storage tank, constructed in 1951, identified as Tank 42, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(36) One (1) storage tank, constructed in 1951, identified as Tank 43, for storage of VOD, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(37) One (1) storage tank, constructed in 1951, identified as Tank 44, for storage of T-130, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(39) One (1) storage tank, constructed in 1951, identified as Tank 46, for storage of T130 Kosher, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(40) One (1) storage tank, constructed in 1951, identified as Tank 47, for storage of vegetable oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(41) One (1) storage tank, constructed in 1951, identified as Tank 48, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(42) One (1) storage tank, constructed in 1951, identified as Tank 49, for storage of biodiesel, with a maximum volume of 420,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(44) One (1) storage tank, constructed in 1951, identified as Tank 51, for storage of NPE-9, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(45) One (1) storage tank, constructed in 1951, identified as Tank 52, for storage of 1200 Pale Oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(46) One (1) storage tank, constructed in 1951, identified as Tank 53, for storage of 6NF Mineral Oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(47) One (1) storage tank, constructed in 1951, identified as Tank 54, for storage of 16 USP Mineral Oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(48) One (1) storage tank, constructed in 1951, identified as Tank 55, for storage of 50 USP Mineral Oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(51) One (1) storage tank, constructed in 1951, identified as Tank 58, for storage of 20 USP Apex Oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(52) One (1) storage tank, constructed in 1951, identified as Tank 59, for storage of Superta, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(55) One (1) storage tank, constructed in 1951, identified as Tank 62, for storage of various products, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(56) One (1) storage tank, constructed in 1951, identified as Tank 63, for storage of 100 Pale Oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(57) One (1) storage tank, constructed in 1951, identified as Tank 64, for storage of Carnation, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(60) One (1) storage tank, constructed in 1951, identified as Tank 67, for storage of coconut oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(61) One (1) storage tank, constructed in 1951, identified as Tank 68, for storage of soy oil, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(64) One (1) storage tank, constructed in 1951, identified as Tank 71, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(65) One (1) storage tank, constructed in 1951, identified as Tank 72, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(66) One (1) storage tank, constructed in 1951, identified as Tank 73, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(67) One (1) storage tank, constructed in 1951, identified as Tank 74, for storage of #4 used oil, with a maximum volume of 420,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(70) One (1) storage tank, constructed in 1951, identified as Tank 77, for storage of mineral oil, with a maximum volume of 10,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(71) One (1) storage tank, constructed in 1951, identified as Tank 78, for storage of mineral oil, with a maximum volume of 10,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(72) One (1) storage tank, constructed in 1951, identified as Tank 79, for storage of mineral oil, with a maximum volume of 10,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(73) One (1) storage tank, constructed in 1951, identified as Tank 80, for storage of Pale Oil Blends, with a maximum volume of 10,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(74) One (1) storage tank, constructed in 1979, identified as Tank 81, for storage of mineral oil, with a maximum volume of 18,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(75) One (1) storage tank, constructed in 1980, identified as Tank 82, for storage of TPC 1285, with a maximum volume of 56,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(76) One (1) storage tank, constructed in 1980, identified as Tank 83, for storage of glycerin/water, with a maximum volume of 56,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(77) One (1) storage tank, constructed in 1980, identified as Tank 84, for storage of TPC 1160, with a maximum volume of 56,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere;

(80) One (1) storage tank, constructed in 1994, identified as Tank 89, for storage of H-1500 SPA Blending, with a maximum volume of 88,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(81) One (1) storage tank, constructed in 1994, identified as Tank 90, for storage of Riken Ser, with a maximum volume of 88,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(82) One (1) storage tank, constructed in 1994, identified as Tank 92, for storage of mineral oil, with a maximum volume of 24,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(83) One (1) storage tank, constructed in 1994, identified as Tank 93, for storage of mineral oil, with a maximum volume of 24,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(84) One (1) storage tank, constructed in 1994, identified as Tank 94, for storage of Synacto 406, with a maximum volume of 24,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(85) One (1) storage tank, constructed in 1994, identified as Tank 95, for storage of biodiesel, with a maximum volume of 20,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(86) One (1) storage tank, constructed in 1996, identified as Tank 98, for storage of Indopol L-10S, with a maximum volume of 16,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(90) One (1) storage tank, constructed in 1966, identified as Tank 105, for storage of various products, with a maximum volume of 13,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(91) One (1) storage tank, constructed in 1966, identified as Tank 106, for storage of various products, with a maximum volume of 13,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(99) One (1) storage tank, constructed in 2000, identified as Tank 114, for storage of de-ionized water, with a maximum volume of 9,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(102) One (1) storage tank, constructed in 2003, identified as Tank 117, for storage of Genapol SSM, with a maximum volume of 30,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(105) One (1) storage tank, constructed in 2001, identified as Tank 121, for storage of dipropylene glycol, with a maximum volume of 30,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(107) One (1) storage tank, constructed in 1997, identified as Tank 123, for storage of various products, with a maximum volume of 24,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(108) One (1) storage tank, constructed in 2003, identified as Tank 127, for storage of Max Flight Slurry, with a maximum volume of 7,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere;

(109) One (1) storage tank, constructed in 2003, identified as Tank 128, for storage of Max Flight Slurry, with a maximum volume of 7,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere; and

(110) One (1) storage tank, constructed in 2003, identified as Tank 129, for storage of Max Flight Slurry, with a maximum volume of 7,500 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere.

(c) A biodiesel production facility, with a maximum production rate of 800 gallons per hour, modified in 2006 for use as a single process unit, modified in 2009, approved in 2010 for modification, consisting of the following:

Under 40 CFR 60, Subpart VVa, these are considered affected facilities. Under 40 CFR 63, Subpart FFFF, these are considered affected facilities. [40 CFR 60, Subpart VVa] [40 CFR 63, Subpart FFFF]

(1) One (1) feedstock storage tank, constructed in 1951, modified in 2006, identified as T-24, for storage of soy oil, with a maximum volume of 420,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(2) One (1) feedstock storage tank, constructed in 1996, modified in 2006, identified as T-99, for storage of methanol, with a maximum volume of 16,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(3) Two (2) feedstock storage tanks, constructed in 1996, approved in 2010 for modification, identified as T-101 and T-103, for storage of methanol, each with a maximum volume of 16,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(4) One (1) feedstock storage tank, constructed in 1996, modified in 2006, identified as T-97, for storage of 30% sodium methylate catalyst, with a maximum volume of 6,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(5) One (1) feedstock storage tank, constructed in 1996, approved in 2010 for modification, identified as T-96, for storage of 30% sodium methylate catalyst, with a maximum volume of 6,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(6) One (1) reactor, constructed in 1994, modified in 2006, identified as T-88, with a maximum volume of 88,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(7) One (1) by-product storage tank, constructed in 1951, modified in 2006, approved in 2010 for modification, identified as T-3, for storage of crude glycerin, with a maximum volume of 126,000 gallons, using the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(8) One (1) by-product storage tank, constructed in 1980, approved in 2010 for modification, identified as T-85, for storage of crude glycerin, with a maximum volume of 56,000 gallons, using the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(9) One (1) process tank, constructed in 2003, approved in 2010 for modification, identified as T-118, with a maximum volume of 30,500 gallons, using reflux condenser V-5 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. This process tank will also be used for stripping methanol from glycerol brought in from outside sources;

(10) One (1) washing and drying tank, constructed in 1994, modified in 2009, identified as T-91, with a maximum volume of 88,000 gallons, using reflux condenser V-4 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(11) One (1) by-product storage tank, constructed in 1951, modified in 2006, identified as T-4, for storage of spent wash water, with a maximum volume of 126,000 gallons, using reflux condenser V-4 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(12) One (1) product storage tank, constructed in 1951, modified in 2009, approved in 2010 for modification, identified as T-5, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(13) One (1) product storage tank, constructed in 1951, modified in 2006, identified as T-10, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX; and

(14) One (1) product storage tank, constructed in 1951, modified in 2006, identified as T-15, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX.

Specifically Regulated Insignificant Activities

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(b) One (1) Johnson Boiler, approved in 2010 for construction, with a maximum heat input capacity of 3.5 MMBtu/hr, burning natural gas only, and exhausting uncontrolled. [326 IAC 6.8-1-2]

(c) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4] [326 IAC 6.8-10]

Insignificant Activities

This stationary source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.

(b) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.

Enforcement Issue

IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled "Emission Units and Pollution Control Equipment Receiving New Source Review Approval".

IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

Emission Calculations

See Appendices A and B of this document for detailed emission calculations.

County Attainment Status

The source is located in Lake County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of East Chicago bounded by Columbus Drive on the north; the Indiana Harbor Canal on the west; 148th Street, if extended, on the south; and Euclid Avenue on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of East Chicago and Lake County.
O_3	Attainment effective June 3, 2010, for the 8-hour ozone standard.[1]
PM_{10}	Attainment effective March 11, 2003, for the cities of East Chicago, Hammond, Whiting, and Gary. Unclassifiable effective November 15, 1990, for the remainder of Lake County.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.
[1]Attainment effective June 3, 2010, for the Chicago-Gary-Lake County area for the 1-hour ozone standard. Basic nonattainment designation effective federally April 5, 2005, for $PM_{2.5}$.	

(a) Ozone Standards

(1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

(2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, and St. Joseph as attainment for the 8-hour ozone standard.

(3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.

(4) On June 3, 2010, the Indiana Air Pollution Control Board will finalize a temporary emergency rule to re-designate Lake and Porter as attainment for the 8-hour ozone standard.

(5) Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated

under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone.

8-hour ozone standard

VOC and NO_x emissions are considered when evaluating the rule applicability relating to the 8-hour ozone standard. U.S. EPA, in the Federal Register Notice 75 FR 12090 dated March 12, 2010, has designated Lake County as attainment for ozone. U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for VOC and NO_x emissions, and the effective date of these rules will be June 2, 2010. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(b) $PM_{2.5}$
U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Lake County as nonattainment for $PM_{2.5}$. On March 7, 2005, the Indiana Attorney General's Office, on behalf of IDEM, filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's New Source Review Rule for $PM_{2.5}$ promulgated on May 8, 2008, and effective on July 15, 2008. Therefore, direct $PM_{2.5}$ and SO_2 emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Lake County has been classified as attainment or unclassifiable in Indiana for SO_2, CO, PM_{10}, NO_x, and lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this source is classified as a chemical process plant, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7. Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Unrestricted Potential Emissions

These tables reflect the unrestricted potential emissions of the source.

Pollutant	tons/year
PM	12.64
PM_{10}	3.65
$PM_{2.5}$	1.61
SO_2	0.10
VOC	3870.34
CO	13.83
NO_x	16.47

HAPs	tons/year
Hexane	0.30
Morpholine	0.54
Diethanolamine (DEA)	< 0.01
Methanol	3866.57
Total HAPs	3867.42

Appendices A and B of this TSD reflect the unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOC is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2002 OAQ emission data.

Pollutant	**Actual Emissions** (tons/yr)
PM	0.14
PM_{10}	0.14
$PM_{2.5}$	0.14
SO_2	0.01
VOC	5.30
CO	1.52
NO_X	1.81
Hexane	not reported
Morpholine	not reported
Diethanolamine (DEA)	not reported
Methanol	not reported
Total HAPs	not reported

Stack Summary

Stack ID	**Operation**	**Height** (ft)	**Diameter** (ft)	**Flow Rate** (acfm)	**Temperature** (^{0}F)
HX	Condenser Operation HX (with Refrigerated Coolant Condensers HX-88A and HX-88B, in series)	35	0.33	38	less than 20
Kewanee	Boiler	52	4	7000	375
Cleaver Brooks	Boiler	52	4	7000	375
Johnson	Boiler	TBD	TBD	7000	375

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a Part 70 Operating Permit application, submitted by Wolf Lake Terminals, Inc. on November 13, 2009, relating to the transition of Wolf Lake Terminals, Inc. from a Registration to a Part 70 Operating Permit. The subject equipment is listed in this Technical Support Document under the conditions entitled "Permitted Emission Units" and "Emission Units and Pollution Control Equipment Receiving New Source Review Approval". Wolf Lake Terminals, Inc. is also requesting to increase its annual biodiesel production from five million gallons to thirty-six million gallons.

"Integral Part of the Process" Determination

Pursuant to the Technical Support Document (TSD) for HDEM Air Pollution Control Division Operation Permit No. 2595, the condenser operation HX (with refrigerated coolant condensers HX-88A and HX-88B, in series) should be considered an integral part of the biodiesel production facility. Therefore, the permitting level will be determined using the potential to emit after these two vertical condensers. Operating conditions in the proposed permit will specify that these two vertical condensers shall operate at all times when the biodiesel production facility is in operation.

Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency."

Since the potential to emit of NO_x is greater than 10 tons per year, the potential to emit of VOC is greater than 10 tons per year, the potential to emit of a single HAP (methanol) is greater than one ton per year, and the potential to emit of a combination of HAPs is greater than 2.5 tons per year for the modification, this modification does not qualify as exempt under 326 IAC 2-7-10.5.

Therefore, this modification will be issued as a Part 70 Operating Permit with New Source Review.

Permit Level Determination – PSD, Emission Offset, and Nonattainment NSR

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this New Source Construction and Part 70 Operating Permit, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential to Emit (tons/yr)						
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**	**CO**	**NO_X**
Kewanee Boiler	0.21	0.84	0.84	0.07	0.60	9.23	10.99
Insignificant Boilers	0.10	0.42	0.42	0.03	0.30	4.60	5.48
Storage Tank Facility	0.00	0.00	0.00	0.00	< 99	0.00	0.00
Biodiesel Production Facility	0.00	0.00	0.00	0.00		0.00	0.00
Methanol Stripping (Outside Sources)	0.00	0.00	0.00	0.00		0.00	0.00
Paved/Unpaved Roads	5.63	1.10	0.16	0.00	0.00	0.00	0.00
Total for Source after the Modification	5.95	2.35	1.42	0.10	< 100	13.83	16.47
PSD Major Source Thresholds	250	250	---	250	250	250	250
Nonattainment NSR Major Source Thresholds	---	---	100	100	---	---	---

(a) This modification to an existing minor stationary source is not major because the emissions increase is less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

(b) This modification to an existing minor stationary source is not major because the emissions increase is less than the Emission Offset and Nonattainment NSR major levels. Therefore, pursuant to 326 IAC 2-3 and 326 IAC 2-1.1-5, the Emission Offset and Nonattainment NSR requirements do not apply.

Federal Rule Applicability

NSPS:

(a) 40 CFR 60, Subpart D
The requirements of the New Source Performance Standard for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971, 40 CFR 60.40, Subpart D, are not included in the permit for the boilers because these units each have heat input capacities of less than 250 MMBtu/hr.

(b) 40 CFR 60, Subpart Da
The requirements of the New Source Performance Standard for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978, 40 CFR 60.40Da, Subpart Da, are not included in the permit for the boilers because these units are not considered electric utility steam generating units pursuant to 40 CFR 60.41Da.

(c) 40 CFR 60, Subpart Db
The requirements of the New Source Performance Standard for Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60.40b, Subpart Db, are not included in this permit for the boilers because these units each have heat input capacities of less than or equal to 100 MMBtu/hr.

(d) 40 CFR 60, Subpart Dc
(1) The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60.40c, Subpart Dc, are not included in this permit for the Cleaver Brooks Boiler and the Johnson Boiler because each boiler has a heat input capacity less than 10 MMBtu/hr.

(2) The Kewanee Boiler is subject to the New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60.40c, Subpart Dc, which is incorporated by reference as 326 IAC 12, because it was constructed after June 9, 1989 and has a heat input capacity of greater than or equal to 10 MMBtu/hr and less than or equal to 100 MMBtu/hr. The following facility is subject to this rule:

(a) One (1) Kewanee Boiler, constructed in 1994, with a maximum heat input capacity of 25.1 MMBtu/hr, burning natural gas only, and exhausting uncontrolled. Under 40 CFR 60, Subpart Dc, this is considered an affected facility. [40 CFR 60, Subpart Dc]

The entire rule has been included as Attachment B to the permit. This unit is subject to the following portions of 40 CFR 60, Subpart Dc:

(A) 40 CFR 60.40c(a), (b), (c), (d);
(B) 40 CFR 60.41c; and
(C) 40 CFR 60.48c(a), (g), (i), (j).

(e) 40 CFR 60, Subpart K
The requirements of the New Source Performance Standard for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978, 40 CFR 60.110, Subpart K, are not included in this permit because no storage tanks were constructed after June 11, 1973, and prior to May 19, 1978.

(f) 40 CFR 60, Subpart Ka
The requirements of the New Source Performance Standard for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984, 40 CFR 60.110a, Subpart Ka, are not included for:

(1) Storage tanks 1 through 6 and 8 through 80 because all of these tanks were constructed prior to 1978;

(2) Storage tanks 83 and 85 because each tank currently does not store a petroleum liquid, as defined in 40 CFR 60.111a(b);

(3) Storage tank 81 because, pursuant to 40 CFR 60.110a(a), the tank has a volume less than 40,000 gallons;

(4) Storage tanks 82 and 84 because each tank has a capacity of less than 420,000 gallons and is used for petroleum storage prior to custody transfer, making it exempt from the requirements of this subpart, pursuant to 40 CFR 60.110a(b); and

(5) Storage tanks 7 and 86 through 127 as well as all tanks and vessels associated with the biodiesel production facility because all of these tanks were constructed or modified after 1984.

(g) 40 CFR 60, Subpart Kb
(1) The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, 40 CFR 60.110b, Subpart Kb, are not included for:

(A) Storage tanks 1 through 6 and 8 through 85 because all of these tanks were constructed prior to 1984;

(B) Storage tanks 96 through 103, 105, 106, 108 through 110, 114 through 116, and 127 through 129 as well as tanks T-99, T-101, T-103, T-97, and T-96 associated with the biodiesel production facility because each of these tanks has a volume less than 75 m^3 (19,813 gallons);

(C) Storage tanks 7, 86 through 95, 104, 107, 111 through 113, and 117 through 123 as well as tanks T-24, T-4, T-5, T-10, and T-15 associated with the biodiesel production facility because each of these tanks stores a liquid with a maximum true vapor pressure less than 3.5 kilopascals (0.51 psia) and is excluded from this subpart, pursuant to 40 CFR 60.110b(b); and

(D) Reactor T-88 and tanks T-118 and T-91 associated with the biodiesel production facility because these tanks are process tanks and do not meet the definition of a storage vessel, pursuant to 40 CFR 60.111b.

(2) Tanks T-3 and T-85 associated with the biodiesel production facility are subject to the New Source Performance Standard for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, 40 CFR 60.110b, Subpart Kb, which is incorporated by reference as 326 IAC 12, because each of these tanks has a volume greater than 75 m^3 (19,813 gallons) and stores a liquid with a maximum true vapor pressure greater than 3.5 kilopascals (0.51 psia). The following facilities are subject to this rule:

(c) A biodiesel production facility, with a maximum production rate of 800 gallons per hour, modified in 2006 for use as a single process unit, modified in 2009, approved in 2010 for modification, consisting of the following:

(7) One (1) by-product storage tank, constructed in 1951, modified in 2006, approved in 2010 for modification, identified as T-3, for storage of crude glycerin, with a maximum volume of 126,000 gallons, using the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(8) One (1) by-product storage tank, constructed in 1980, approved in 2010 for modification, identified as T-85, for storage of crude glycerin, with a maximum volume of 56,000 gallons, using the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

The entire rule has been included as Attachment C to the permit. This unit is subject to the following portions of 40 CFR 60, Subpart Kb:

(A) 40 CFR 60.110b;
(B) 40 CFR 60.111b;
(C) 40 CFR 60.112b(a)(3);
(D) 40 CFR 60.113b(c);
(E) 40 CFR 60.114b;
(F) 40 CFR 60.115b(c);

(G) 40 CFR 60.116b; and
(H) 40 CFR 60.117b.

(h) 40 CFR 60, Subpart VV
The requirements of the New Source Performance Standards for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and On or Before November 7, 2006, 40 CFR 60.480, Subpart VV, are not included in this permit because the entire biodiesel facility, as a single process unit, is being approved in 2010 for modification with the addition of a closed loop VOC abatement system as well as the addition of five storage tanks.

(i) 40 CFR 60, Subpart VVa
Wolf Lake Terminals is subject to the requirements of the New Source Performance Standard for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After November 7, 2006, 40 CFR 60.480a, Subpart VVa, which is incorporated by reference as 326 IAC 12, because the biodiesel production facility involves the usage of methanol, which is a listed chemical in 40 CFR 60.489 to which the NSPS applies, and the entire biodiesel facility, as a single process unit, is being approved for modification in 2010 with the addition of a closed loop VOC abatement system as well as the addition of five storage tanks. The affected facility is the group of all equipment within a process unit, which includes: components assembled and connected by pipes or ducts to process raw materials and to produce a listed chemical, including any feed, intermediate and final product storage vessels, product transfer racks, and connected ducts and piping. The units subject to this rule include the following:

(c) A biodiesel production facility, with a maximum production rate of 800 gallons per hour, modified in 2006 for use as a single process unit, modified in 2009, approved in 2010 for modification, consisting of the following:

Under 40 CFR 60, Subpart VVa, these are considered affected facilities. Under 40 CFR 63, Subpart FFFF, these are considered affected facilities. [40 CFR 60, Subpart VVa] [40 CFR 63, Subpart FFFF]

(1) One (1) feedstock storage tank, constructed in 1951, modified in 2006, identified as T-24, for storage of soy oil, with a maximum volume of 420,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(2) One (1) feedstock storage tank, constructed in 1996, modified in 2006, identified as T-99, for storage of methanol, with a maximum volume of 16,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(3) Two (2) feedstock storage tanks, constructed in 1996, approved in 2010 for modification, identified as T-101 and T-103, for storage of methanol, each with a maximum volume of 16,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(4) One (1) feedstock storage tank, constructed in 1996, modified in 2006, identified as T-97, for storage of 30% sodium methylate catalyst, with a maximum volume of 6,000 gallons, using reflux condenser V-3 and the

condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(5) One (1) feedstock storage tank, constructed in 1996, approved in 2010 for modification, identified as T-96, for storage of 30% sodium methylate catalyst, with a maximum volume of 6,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(6) One (1) reactor, constructed in 1994, modified in 2006, identified as T-88, with a maximum volume of 88,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(7) One (1) by-product storage tank, constructed in 1951, modified in 2006, approved in 2010 for modification, identified as T-3, for storage of crude glycerin, with a maximum volume of 126,000 gallons, using the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(8) One (1) by-product storage tank, constructed in 1980, approved in 2010 for modification, identified as T-85, for storage of crude glycerin, with a maximum volume of 56,000 gallons, using the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(9) One (1) process tank, constructed in 2003, approved in 2010 for modification, identified as T-118, with a maximum volume of 30,500 gallons, using reflux condenser V-5 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. This process tank will also be used for stripping methanol from glycerol brought in from outside sources;

(10) One (1) washing and drying tank, constructed in 1994, modified in 2009, identified as T-91, with a maximum volume of 88,000 gallons, using reflux condenser V-4 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(11) One (1) by-product storage tank, constructed in 1951, modified in 2006, identified as T-4, for storage of spent wash water, with a maximum volume of 126,000 gallons, using reflux condenser V-4 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(12) One (1) product storage tank, constructed in 1951, modified in 2009, approved in 2010 for modification, identified as T-5, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(13) One (1) product storage tank, constructed in 1951, modified in 2006, identified as T-10, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX; and

(14) One (1) product storage tank, constructed in 1951, modified in 2006, identified as T-15, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX.

The entire rule has been included as Attachment D to the permit. These units are subject to the following portions of 40 CFR 60, Subpart VVa:

(1) 40 CFR 60.480a(a), (b), (c), (e);
(2) 40 CFR 60.481a;
(3) 40 CFR 60.482-1a;
(4) 40 CFR 60.482-2a;
(5) 40 CFR 60.482-3a;
(6) 40 CFR 60.482-4a;
(7) 40 CFR 60.482-5a;
(8) 40 CFR 60.482-6a;
(9) 40 CFR 60.482-7a;
(10) 40 CFR 60.482-8a;
(11) 40 CFR 60.482-9a;
(12) 40 CFR 60.482-10a;
(13) 40 CFR 60.482-11a;
(14) 40 CFR 60.483-1a;
(15) 40 CFR 60.483-2a;
(16) 40 CFR 60.484a;
(17) 40 CFR 60.485a;
(18) 40 CFR 60.486a;
(19) 40 CFR 60.487a;
(20) 40 CFR 60.488a; and
(21) 40 CFR 60.489a.

(j) 40 CFR 60, Subpart XX
The requirements of the New Source Performance Standards for Bulk Gasoline Terminals, 40 CFR 60.500, Subpart XX, are not included in this permit because the source does not meet the definition of a bulk gasoline terminal pursuant to 40 CFR 60.501 because it does not receive gasoline by pipeline, ship, or barge.

(k) 40 CFR 60, Subpart III
The requirements of the New Source Performance Standards for Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes, 40 CFR 60.610, Subpart III, are not included in this permit because the source does not utilize air oxidation units.

(l) 40 CFR 60, Subpart NNN
The requirements of the New Source Performance Standards for Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations, 40 CFR 60.660, Subpart NNN, are not included in this permit because the biodiesel production facility operates as a batch process and therefore is exempt from Subpart NNN, pursuant to 40 CFR 60.660(c)(3).

(m) 40 CFR 60, Subpart RRR
The requirements of the New Source Performance Standards for Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes, 40 CFR 60.700, Subpart RRR, are not included in this permit because the biodiesel production facility operates as a batch process and therefore is exempt from Subpart RRR, pursuant to 40 CFR 60.700(c)(1).

NESHAP:

(n) 40 CFR 63, Subpart F
The requirements of the National Emissions Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry, 40 CFR 63.100, Subpart F, are not included in this permit because biodiesel is not one of the listed chemicals to which this subpart applies.

(o) 40 CFR 63, Subpart G
The requirements of the National Emissions Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, 40 CFR 63.110, Subpart G, are not included in this permit because Wolf Lake Terminals is not subject to 40 CFR 63, Subpart F, as described above.

(p) 40 CFR 63, Subpart H
The requirements of the National Emissions Standards for Organic Hazardous Air Pollutants for Equipment Leaks, 40 CFR 63.160, Subpart H, are not included in this permit because the source is not subject to a specific subpart in 40 CFR 63 that references Subpart H.

(q) 40 CFR 63, Subpart I
The requirements of the National Emissions Standards for Organic Hazardous Air Pollutants for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks, 40 CFR 63.190, Subpart I, are not included in this permit because this source does not operate one of the processes listed in 40 CFR 63.190(b)(1)-(6).

(r) 40 CFR 63, Subpart R
The requirements of the National Emissions Standards for Hazardous Air Pollutants for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations), 40 CFR 63.420, Subpart R, are not included in this permit because this source does not meet the definition of a bulk gasoline terminal pursuant to 40 CFR 63.421 because it does not receive gasoline by pipeline, ship, or barge.

(s) 40 CFR 63, Subpart OO
The requirements of the National Emissions Standards for Tanks - Level 1, 40 CFR 63.900, Subpart OO, are not included in this permit because there are no subparts of 40 CFR 60, 61, or 63 applicable to this source that reference Subpart OO.

(t) 40 CFR 63, Subpart SS
The requirements of the National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process, 40 CFR 63.980, Subpart SS, are referenced as a part of 40 CFR 63, Subpart FFFF. The standards in 40 CFR 63, Subpart SS are included in a separate Subpart for administrative purposes. Since this Subpart is referenced in Subpart FFFF and Subpart FFFF is applicable to this source, the entire rule is being included as Attachment E to the permit.

(u) 40 CFR 63, Subpart TT
The requirements of the National Emissions Standards for Equipment Leaks - Control Level 1, 40 CFR 63.1000, Subpart TT, are not included in this permit because there are no subparts of 40 CFR 60, 61, or 63 applicable to this source that reference Subpart TT.

(v) 40 CFR 63, Subpart UU
The requirements of the National Emissions Standards for Equipment Leaks - Control Level 2, 40 CFR 63.1019, Subpart UU, are referenced as a part of 40 CFR 63, Subpart FFFF. The standards in 40 CFR 63, Subpart UU are included in a separate Subpart for administrative purposes. Since this Subpart is referenced in Subpart FFFF and Subpart FFFF is applicable to this source, the entire rule is being included as Attachment F to the permit.

(w) 40 CFR 63, Subpart WW
The requirements of the National Emissions Standards for Storage Vessels (Tanks) - Control Level 2, 40 CFR 63.1060, Subpart WW, are referenced as a part of 40 CFR 63, Subpart FFFF. The standards in 40 CFR 63, Subpart WW are included in a separate Subpart for administrative purposes. Since this Subpart is referenced in Subpart FFFF and Subpart FFFF is applicable to this source, the entire rule is being included as Attachment G to the permit.

(x) 40 CFR 63, Subpart CCCC
The requirements of the National Emissions Standards for Hazardous Air Pollutants for the Manufacturing of Nutritional Yeast, 40 CFR 63.2130, Subpart CCCC, are not included in this permit because this source does not manufacture nutritional yeast.

(y) The requirements of National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) (40 CFR Part 63.2330, Subpart EEEE) have been included as follows:

(1) The following emission units are not subject to Subpart EEEE because, pursuant to 40 CFR 63.2338(c)(1), the emission units are part of an affected source under another NESHAP and will comply with the requirements of Subpart FFFF:

(c) A biodiesel production facility, with a maximum production rate of 800 gallons per hour, modified in 2006 for use as a single process unit, modified in 2009, approved in 2010 for modification, consisting of the following:

Under 40 CFR 60, Subpart VVa, these are considered affected facilities.
Under 40 CFR 63, Subpart FFFF, these are considered affected facilities.
[40 CFR 60, Subpart VVa] [40 CFR 63, Subpart FFFF]

(1) One (1) feedstock storage tank, constructed in 1951, modified in 2006, identified as T-24, for storage of soy oil, with a maximum volume of 420,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(2) One (1) feedstock storage tank, constructed in 1996, modified in 2006, identified as T-99, for storage of methanol, with a maximum volume of 16,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(3) Two (2) feedstock storage tanks, constructed in 1996, approved in 2010 for modification, identified as T-101 and T-103, for storage of methanol, each with a maximum volume of 16,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(4) One (1) feedstock storage tank, constructed in 1996, modified in 2006, identified as T-97, for storage of 30% sodium methylate catalyst, with a maximum volume of 6,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(5) One (1) feedstock storage tank, constructed in 1996, approved in 2010 for modification, identified as T-96, for storage of 30% sodium methylate catalyst, with a maximum volume of 6,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(6) One (1) reactor, constructed in 1994, modified in 2006, identified as T-88, with a maximum volume of 88,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(7) One (1) by-product storage tank, constructed in 1951, modified in 2006, approved in 2010 for modification, identified as T-3, for storage of crude glycerin, with a maximum volume of 126,000 gallons, using the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(8) One (1) by-product storage tank, constructed in 1980, approved in 2010 for modification, identified as T-85, for storage of crude glycerin, with a maximum volume of 56,000 gallons, using the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(9) One (1) process tank, constructed in 2003, approved in 2010 for modification, identified as T-118, with a maximum volume of 30,500 gallons, using reflux condenser V-5 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. This process tank will also be used for stripping methanol from glycerol brought in from outside sources;

(10) One (1) washing and drying tank, constructed in 1994, modified in 2009, identified as T-91, with a maximum volume of 88,000 gallons, using reflux condenser V-4 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(11) One (1) by-product storage tank, constructed in 1951, modified in 2006, identified as T-4, for storage of spent wash water, with a maximum volume of 126,000 gallons, using reflux condenser V-4 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(12) One (1) product storage tank, constructed in 1951, modified in 2009, approved in 2010 for modification, identified as T-5, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(13) One (1) product storage tank, constructed in 1951, modified in 2006, identified as T-10, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX; and

(14) One (1) product storage tank, constructed in 1951, modified in 2006, identified as T-15, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX.

(2) Storage tanks (Tanks 7, 17, 18, 29, 36, 62, 105, 106, 123) that do not store an organic liquid, as defined in 40 CFR 63.2406, are not currently subject to Subpart EEEE. Any change in the liquid stored in these tanks that would be defined as an organic liquid, under 40 CFR 63.2406, into equipment that has not been excluded from the affected source, pursuant to 40 CFR 63.2338(c), shall be subject to the requirements of this condition at such time.

(3) Facilities containing the following liquids are not subject to Subpart EEEE because, pursuant to 40 CFR 63.2406, each liquid does not meet the definition of "organic liquid" given that each liquid does not contain 5 percent by weight or greater of the organic HAP listed in Table 1 to Subpart EEEE:

- Morpholine (Tank 86);
- Deionized Water (Tank 114); and
- Max Flight Slurry (Tanks 127, 128, and 129).

(4) Facilities containing the following liquids are not subject to Subpart EEEE because, pursuant to 40 CFR 63.2406, organic liquids for purposes of Subpart EEEE do not include liquids with an annual average true vapor pressure less than 0.7 kilopascals (0.1 psia):

- Propylene Glycol (Tanks 1, 107, 108, 109, 110, 111, 112, 113, 115, and 116);
- Polymer Polyols (Tank 2);
- Infineum R693 (Tank 6);
- Glycol (Tanks 9, 56, 61, 69, 75, 76, and 87);
- Low Sulfur Diesel Supreme (Tank 11);
- T11E Tallow Fatty Acid (Tank 12);
- Synacto 246 (Tank 16);
- Diprop Gly/DPNB/PNB (Tank 20);
- Sulfonic N-95 (Tank 21);
- RHT 240 (Tank 22);
- RHT 70 (Tank 23);
- REO (Tanks 25 and 26);
- Deodorizer Distillate (Tank 27);
- L24-7 (Tank 28);

- Moly Oil (Tank 30);
- On Spec Fuel Oil (Tank 31);
- RS Used Oils (Tanks 32 and 37);
- RHT 120L (Tank 33);
- RHT 240 (Tank 34);
- Hiboiler (Tank 35);
- Soy Oil (Tanks 39, 40, and 68);
- #4 Used Oil (Tanks 41, 42, 48, 50, 71, 72, 73, and 74);
- VOD (Tank 43);
- T-130 (Tank 44);
- Triethanolamine (Tank 45);
- T130 Kosher (Tank 46);
- Vegetable Oil (Tank 47);
- Biodiesel (Tanks 49, 66, and 95);
- NPE-9 (Tank 51);
- 1200 Pale Oil (Tank 52);
- 6NF Mineral Oil (Tank 53);
- 16 USP Mineral Oil (Tank 54);
- 50 USP Mineral Oil (Tank 55);
- MPG - DEG (Tank 57);
- 20 USP Apex Oil (Tank 58);
- Superta (Tank 59);
- Diesel Fuel (Tank 60);
- 100 Pale Oil (Tank 63);
- Carnation (Tank 64);
- Diethanolamine (Tank 65);
- Coconut Oil (Tank 67);
- Monoethanolamine (Tank 70);
- Mineral Oil (Tanks 77, 78, 79, 81, 92, and 93);
- Pale Oil Blends (Tank 80);
- TPC 1285 (Tank 82);
- TPC 1160 (Tank 84);
- H-1500 SPA Blending (Tank 89);
- Riken Ser (Tank 90);
- Synacto 406 (Tank 94);
- Indopol L-10S (Tank 98);
- Cetane Improver (Tanks 100 and 102);
- Infineum F7596 (Tank 104);
- Genapol SSM (Tanks 117 and 118);
- Sulfonic N-100 (Tank 119);
- Sulfonic N-120 (Tank 120);
- Dipropylene Glycol (Tank 121); and
- Sulfonic N-60 (Tank 122).

(5) The organic liquid distribution (OLD) operations used to distribute the following liquids are subject to Subpart EEEE because, pursuant to 40 CFR 63.2406, the liquids meet the definition of "organic liquid" and the equipment have not been excluded from the affected source, pursuant to 40 CFR 63.2338(c):

- Glycerin/water (Tanks 13, 19, and 83);
- Atosol 100 (Tank 8); and
- Atosol 150 (Tank 14).

According to the source, the glycerin/water mixture is 12% methanol, and the Atosol 100 and Atosol 150 could contain up to 10% naphthalene.

Pursuant to 40 CFR 63.2338, the affected source that is subject to the requirements of 40 CFR 63, Subpart EEEE consists of the collection of activities and equipment used to distribute organic liquids into, out of, or within a facility that is a major source of HAP. The specific facilities include the following:

(b) A storage tank facility (with vertical, above ground, fixed cone roof tanks, without internal floating roofs) holding products with a vapor pressure less than 0.50 psia, consisting of the following:

(5) One (1) storage tank, constructed in 1951, identified as Tank 8, for storage of Atosol 100, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(9) One (1) storage tank, constructed in 1951, identified as Tank 13, for storage of glycerin/water, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(10) One (1) storage tank, constructed in 1951, identified as Tank 14, for storage of Atosol 150, with a maximum volume of 126,000 gallons, with a maximum throughput of 1,500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(14) One (1) storage tank, constructed in 1951, identified as Tank 19, for storage of glycerin/water, with a maximum volume of 126,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

(76) One (1) storage tank, constructed in 1980, identified as Tank 83, for storage of glycerin/water, with a maximum volume of 56,000 gallons, with a maximum throughput of 500,000 gallons per year, and exhausting to the atmosphere. Under 40 CFR 63, Subpart EEEE, this is considered an existing affected source; [40 CFR 63, Subpart EEEE]

Upon the issuance of this permit, Wolf Lake Terminals, Inc. will be a major source of HAPs, making these facilities newly-permitted existing affected sources. Pursuant to 40 CFR 63.2382(b)(2), since the affected sources have a startup date after February 3, 2004, the Initial Notification must be submitted no later than 120 calendar days after the issuance of this permit.

Pursuant to 40 CFR 63.2342(b)(1), the Permittee shall comply with the requirements of 40 CFR 63, Subpart EEEE upon the issuance of this permit.

The entire rule has been included as Attachment H to the permit. The above emission units are subject to the following portions of Subpart EEEE:

(A) 40 CFR 63.2330;
(B) 40 CFR 63.2334(a);
(C) 40 CFR 63.2338(a), (b), (c), (f);
(D) 40 CFR 63.2342(b)(1), (d);
(E) 40 CFR 63.2343(b), (c), (d);
(F) 40 CFR 63.2350;
(G) 40 CFR 63.2382(a), (b)(1);
(H) 40 CFR 63.2386(a), (b), (c)(1), (c)(2), (c)(3), (c)(4), (c)(10)(i), (d)(4);
(I) 40 CFR 63.2390(a), (d);
(J) 40 CFR 63.2394;
(K) 40 CFR 63.2398;
(L) 40 CFR 63.2402;
(M) 40 CFR 63.2406;
(N) Table 1 to Subpart EEEE of Part 63;
(O) Table 11 to Subpart EEEE of Part 63; and
(P) Table 12 to Subpart EEEE of Part 63.

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63, Subpart EEEE.

(z) This source is subject to the National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing, 40 CFR 63.2430, Subpart FFFF, which is incorporated by reference as 326 IAC 20-84, because the production of biodiesel will involve miscellaneous organic chemical manufacturing process units (MCPU). The MCPU includes equipment necessary to operate a miscellaneous organic chemical manufacturing process and any assigned storage tanks and transfer racks, equipment in open systems that is used to convey or store water having the same concentration and flow characteristics as wastewater, and components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems that are used to manufacture the ethanol. The units subject to this rule include the following:

(c) A biodiesel production facility, with a maximum production rate of 800 gallons per hour, modified in 2006 for use as a single process unit, modified in 2009, approved in 2010 for modification, consisting of the following:

Under 40 CFR 60, Subpart VVa, these are considered affected facilities. Under 40 CFR 63, Subpart FFFF, these are considered affected facilities. [40 CFR 60, Subpart VVa] [40 CFR 63, Subpart FFFF]

(1) One (1) feedstock storage tank, constructed in 1951, modified in 2006, identified as T-24, for storage of soy oil, with a maximum volume of 420,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(2) One (1) feedstock storage tank, constructed in 1996, modified in 2006, identified as T-99, for storage of methanol, with a maximum volume of 16,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(3) Two (2) feedstock storage tanks, constructed in 1996, approved in 2010 for modification, identified as T-101 and T-103, for storage of methanol, each with a maximum volume of 16,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(4) One (1) feedstock storage tank, constructed in 1996, modified in 2006, identified as T-97, for storage of 30% sodium methylate catalyst, with a maximum volume of 6,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(5) One (1) feedstock storage tank, constructed in 1996, approved in 2010 for modification, identified as T-96, for storage of 30% sodium methylate catalyst, with a maximum volume of 6,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(6) One (1) reactor, constructed in 1994, modified in 2006, identified as T-88, with a maximum volume of 88,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(7) One (1) by-product storage tank, constructed in 1951, modified in 2006, approved in 2010 for modification, identified as T-3, for storage of crude glycerin, with a maximum volume of 126,000 gallons, using the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(8) One (1) by-product storage tank, constructed in 1980, approved in 2010 for modification, identified as T-85, for storage of crude glycerin, with a maximum volume of 56,000 gallons, using the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. Under 40 CFR 60, Subpart Kb, this is considered an affected facility; [40 CFR 60, Subpart Kb]

(9) One (1) process tank, constructed in 2003, approved in 2010 for modification, identified as T-118, with a maximum volume of 30,500 gallons, using reflux condenser V-5 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX. This process tank will also be used for stripping methanol from glycerol brought in from outside sources;

(10) One (1) washing and drying tank, constructed in 1994, modified in 2009, identified as T-91, with a maximum volume of 88,000 gallons, using reflux condenser V-4 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(11) One (1) by-product storage tank, constructed in 1951, modified in 2006, identified as T-4, for storage of spent wash water, with a maximum

volume of 126,000 gallons, using reflux condenser V-4 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(12) One (1) product storage tank, constructed in 1951, modified in 2009, approved in 2010 for modification, identified as T-5, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX;

(13) One (1) product storage tank, constructed in 1951, modified in 2006, identified as T-10, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX; and

(14) One (1) product storage tank, constructed in 1951, modified in 2006, identified as T-15, for storage of biodiesel, with a maximum volume of 126,000 gallons, using reflux condenser V-3 and the condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for control, and exhausting to stack HX.

The entire rule has been included as Attachment I to the permit. These units are subject to the following portions of 40 CFR 60, Subpart FFFF:

(1) 40 CFR 63.2430;
(2) 40 CFR 63.2435(a), (b)(1)(i);
(3) 40 CFR 63.2440(a), (b), (c);
(4) 40 CFR 63.2445(a)(2), (c), (d);
(5) 40 CFR 63.2450(a), (b), (e)(1), (g), (j), (k), (l), (m), (o), (p);
(6) 40 CFR 63.2455;
(7) 40 CFR 63.2470;
(8) 40 CFR 63.2475;
(9) 40 CFR 63.2480;
(10) 40 CFR 63.2505;
(11) 40 CFR 63.2515(a), (b)(2), (c);
(12) 40 CFR 63.2520;
(13) 40 CFR 63.2525;
(14) 40 CFR 63.2535(c);
(15) 40 CFR 63.2540;
(16) 40 CFR 63.2545;
(17) 40 CFR 63.2550;
(18) 40 CFR 63, Subpart FFFF, Table 1;
(19) 40 CFR 63, Subpart FFFF, Table 3;
(20) 40 CFR 63, Subpart FFFF, Table 4;
(21) 40 CFR 63, Subpart FFFF, Table 5;
(22) 40 CFR 63, Subpart FFFF, Table 6;
(23) 40 CFR 63, Subpart FFFF, Table 11; and
(24) 40 CFR 63, Subpart FFFF, Table 12.

The provisions of 40 CFR 63, Subpart A - General Provisions, which are incorporated as 326 AIC 20-1-1, apply to the units described in this section except when otherwise specified in 40 CFR 63, Subpart FFFF.

(aa) 40 CFR 63, Subpart GGGG
The requirements of the National Emissions Standards for Hazardous Air Pollutants: Solvent Extraction for Vegetable Oil Production, 40 CFR 63.2830, Subpart GGGG, are not included in this permit because this source does not manufacture vegetable oil.

(bb) 40 CFR 63, Subpart DDDDD
The Cleaver Brooks Boiler, Kewanee Boiler, and the Johnson Boiler would have been subject to the requirements of the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63.7480, Subpart DDDDD. However, on June 8, 2007, the United States Court of Appeals for the District of Columbia Circuit (in NRDC v. EPA, no. 04-1386) vacated in its entirety the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD. Additionally, since the state rule at 326 IAC 20-95 incorporated the requirements of the NESHAP 40 CFR 63, Subpart DDDDD by reference, the requirements of 326 IAC 20-95 are no longer effective. Therefore, the requirements of 40 CFR 63, Subpart DDDDD and 326 IAC 20-95 are not included in the permit.

Section 112(j) of the Clean Air Act (CAA)
The operation of the entire source will emit greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs; therefore, Section 112(j) of the Clean Air Act (CAA) applies to the Cleaver Brooks Boiler, Kewanee Boiler, and Johnson Boiler. Section 112(j) requires application of Maximum Achievable Control Technology (MACT). An application for applying MACT to the Cleaver Brooks Boiler, Kewanee Boiler, and Johnson Boiler for 112(j) will need to be submitted to IDEM, at which time further action will be taken by IDEM regarding 112(j). EPA has not provided guidance on making 112(j) case-by-case MACT determinations for existing boilers. Therefore, IDEM is not addressing this issue until EPA either provides guidance on 112(j) determinations or a new MACT standard is promulgated.

(cc) The requirements of the following NESHAPs under 40 CFR Part 63 are not included in the permit:

- NESHAP for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities (40 CFR 63.11080, Subpart BBBBBB);
- NESHAP for Source Category: Gasoline Dispensing Facilities (40 CFR 63.11110, Subpart CCCCCC); and
- NESHAP for Chemical Manufacturing Area Sources (40 CFR 63.11494, Subpart VVVVVV).

These NESHAPs apply only to area sources of hazardous air pollutants. Since the potential to emit of any single HAP is greater than 10 tons per year and the potential to emit of all combined HAPs is greater than 25 tons per year, Wolf Lake Terminals is a major source of HAPs; therefore, Wolf Lake Terminals is not subject to these NESHAPs.

CAM:

(dd) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each emission unit and specified pollutant subject to CAM:

Emission Unit / Pollutant	Control Device Used	Emission Limitation/ Standard (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Part 70 Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Soy Oil Tank T-24 [VOC]	Condensers HX-88A, HX-88B, V-3	Y[1]	---	---	100	N	N
Methanol Tank T-99 [VOC]	Condensers HX-88A, HX-88B, V-3	Y[1]	---	---	100	N	N
Methanol Tank T-101 [VOC]	Condensers HX-88A, HX-88B, V-3	Y[1]	---	---	100	N	N
Methanol Tank T-103 [VOC]	Condensers HX-88A, HX-88B, V-3	Y[1]	---	---	100	N	N
Catalyst Tank T-97 [VOC]	Condensers HX-88A, HX-88B, V-3	Y[1]	---	---	100	N	N
Catalyst Tank T-96 [VOC]	Condensers HX-88A, HX-88B, V-3	Y[1]	---	---	100	N	N
Reactor T-88 [VOC]	Condensers HX-88A, HX-88B, V-3	Y[1]	---	---	100	N	N
Crude Glycerin Tank T-3 [VOC]	Condensers HX-88A, HX-88B	Y[1]	---	---	100	N	N
Crude Glycerin Tank T-85 [VOC]	Condensers HX-88A, HX-88B	Y[1]	---	---	100	N	N
Process Tank T-118 [VOC]	Condensers HX-88A, HX-88B, V-5	Y[1]	---	---	100	N	N
Wash/Dry Tank T-91 [VOC]	Condensers HX-88A, HX-88B, V-4	Y[1]	---	---	100	N	N
Wash Water Tank T-4 [VOC]	Condensers HX-88A, HX-88B, V-4	Y[1]	---	---	100	N	N

Emission Unit / Pollutant	Control Device Used	Emission Limitation/ Standard (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Part 70 Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Biodiesel Tank T-5 [VOC]	Condensers HX-88A, HX-88B, V-3	Y[1]	---	---	100	N	N
Biodiesel Tank T-10 [VOC]	Condensers HX-88A, HX-88B, V-3	Y[1]	---	---	100	N	N
Biodiesel Tank T-15 [VOC]	Condensers HX-88A, HX-88B, V-3	Y[1]	---	---	100	N	N

[1] These emission units are specifically regulated by NESHAP 40 CFR 63, Subpart FFFF. Therefore, pursuant to 40 CFR 64, the emission limitations/standards are exempt because they are pursuant to a post 1990 NESHAP.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the new units as part of this Part 70 Operating Permit with New Source Review.

State Rule Applicability - Entire Source

326 IAC 1-6-3 (Preventive Maintenance Plan)
The source is subject to the requirements of 326 IAC 1-6-3.

326 IAC 2-1.1-5 (Nonattainment New Source Review)
The following table is used to identify the 326 IAC 2-1.1-5 applicable pollutants, the corresponding emission increases for this modification, and the corresponding Nonattainment NSR major source threshold:

Pollutant	Emissions Increase (tons/year)	Nonattainment NSR Major Threshold (tons/year)
$PM_{2.5}$	1.42	100
SO_2	0.10	100

This is a minor modification under 326 IAC 2-1.1-5 because each of the emissions increases is less than the corresponding Nonattainment NSR major source threshold. Therefore, pursuant to 326 IAC 2-1.1-5, the Nonattainment NSR requirements do not apply.

326 IAC 2-2 (PSD)
The following table is used to identify the 326 IAC 2-2 applicable pollutants, the corresponding emission increases for this modification, and the corresponding PSD major source threshold:

Pollutant	Emissions Increase (tons/year)	PSD Major Source Threshold (tons/year)
PM	5.95	250
PM_{10}	2.35	250
SO_2	0.10	250
VOC	less than 100	250
CO	13.83	250
NO_x	16.47	250

The operation of this source has the potential to emit greater than 250 tons per year of VOC. Therefore, 326 IAC 2-2 would have applied to these facilities. The source has decided to limit their VOC emissions below the major source threshold as follows:

(a) The VOC emissions from the storage tank facility, biodiesel production, and methanol stripping processes combined shall be less than 99 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) As stated in 40 CFR 63.983(a)(2), closed vent systems used to comply with the provisions of 40 CFR 63, Subpart SS, shall be operated at all times when emissions are vented to, or collected by, them.

(c) In the event that failure of the closed vent systems has been observed, the feed to the process shall be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit.

Compliance with the above limits, combined with the potential to emit VOC from other emission units at the source, shall limit the VOC emissions from the entire source to less than 100 tons per twelve (12) consecutive month period for VOC. This shall render the requirements of 326 IAC 2-2 (PSD) not applicable.

326 IAC 2-3 (Emission Offset)
VOC and NO_x emissions are considered when evaluating the rule applicability relating to the 8-hour ozone standard. U.S. EPA, in the Federal Register Notice 75 FR 12090 dated March 12, 2010, has designated Lake County as attainment for ozone. U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for VOC and NO_x emissions, and the effective date of these rules will be June 2, 2010.

Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

326 IAC 2-6 (Emission Reporting)
This source is subject to 326 IAC 2-6 (Emission Reporting) because it is located in Lake County and its emissions of VOC are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-6-3(a)(1), annual reporting is required. An emission statement shall be submitted by July 1, 2011, and every year thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 4-1 (Open Burning)
The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2(2).

326 IAC 6-2 (Sources of Indirect Heating)
This source is not subject to the requirements of 326 IAC 6-2 because the facility is subject to the requirements of 326 IAC 6.8-1-2 (Particulate Matter Limitations For Lake County). Pursuant to the applicability requirements (326 IAC 6-2-1(e)), if any limitation established by this rule is inconsistent with applicable limitations contained in 326 IAC 6.8-1 (Particulate Matter Limitations For Lake County) or 326 IAC 12 (New Source Performance Standards), then the limitations contained in 326 IAC 6.8-1 or 326 IAC 12 prevail.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
The only particulate emissions from manufacturing processes at this source are due to the combustion for indirect heating. Pursuant to 326 IAC 6-3-1(b)(1), these processes are exempt from this rule. Therefore, this source is not subject to the requirements of 326 IAC 6-3.

326 IAC 6-4 (Fugitive Dust Emissions)
The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
This source is not located in a county listed in 326 IAC 6-5-1(a) and has not added a facility with the potential to emit fugitive particulate matter greater than 25 tons per year, which requires a permit as set forth in 326 IAC 2, after December 13, 1985. Therefore, pursuant to 326 IAC 6-5-1(b), this source is not subject to the requirements of 326 IAC 6-5.

326 IAC 6.5 PM Limitations Except Lake County
This source is not subject to 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

326 IAC 6.8-2 (Lake County: PM_{10} Emission Requirements)
Wolf Lake Terminals, Inc. is not specifically listed in 326 IAC 6.8-2. Therefore, this source is not subject to the requirements of 326 IAC 6.8-2.

326 IAC 6.8-10 (Lake County Fugitive Particulate Matter)
Pursuant to 326 IAC 6.8-10-1(a)(2)(V), this rule specifically applies to Wolf Lake Terminals, Inc..

(a) Pursuant to 326 IAC 6.8-10 (Lake County Fugitive Particulate Matter), the particulate matter emissions from source wide activities shall meet the following requirements:

(1) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).

(2) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).

(3) The opacity of fugitive particulate emissions from exposed areas shall not exceed ten percent (10%) on a six (6) minute average.

(4) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.

(5) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.

(6) There shall be a zero (0) percent frequency of visible emission observations of a material during the in plant transportation of material by truck or rail at any time.

(7) The opacity of fugitive particulate emissions from the in plant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).

(8) Material processing facilities shall include the following:

(A) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.

(B) The PM_{10} emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.

(C) The PM_{10} stack emissions from a material processing facility shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.

(D) The opacity of fugitive particulate emissions from the material processing facilities, except a crusher at which a capture system is not used, shall not exceed ten percent (10%).

(9) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).

(10) Material transfer limits shall be as follows:

(A) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).

(B) Where adequate wetting of the material for fugitive particulate emissions control is prohibitive for further processing or reuse of the material, the opacity shall not exceed ten percent (10%), three (3) minute average.

(11) Any facility or operation not specified in 326 IAC 6.8-10-3 shall meet a twenty percent (20%), three (3) minute average opacity standard.

(b) The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the Fugitive Dust Control Plan, submitted on February 19, 2010.

326 IAC 7-1.1 (Sulfur Dioxide Limitations)
This source does not have the potential to emit 25 tons per year or 10 pounds per hour of sulfur dioxide. Therefore, pursuant to 326 IAC 7-1.1-1, this source is not subject to the requirements of 326 IAC 7-1.1.

326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)
This source does not have petroleum liquid storage tanks with capacities greater than 39,000 gallons that contain volatile organic compounds whose true vapor pressure is greater than 10.5 kilopascals (1.52 psia). Therefore, pursuant to 326 IAC 8-4-3(a), this source is not subject to the requirements of 326 IAC 8-4-3.

326 IAC 8-6 (Organic Solvent Emission Limitations)
326 IAC 8-19 applies to this source. Therefore, pursuant to 326 IAC 8-6-1(1), this source is not subject to the requirements of 326 IAC 8-6.

326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties) [RACT]
Although multiple facilities at this source have been in operation since 1951, the source did not meet the definition of a Title V Source during the 326 IAC 8-7 rule applicability period of 1990 to 1995. During this time, the source had potential to emit of all criteria pollutants less than 100 tons per year, potential to emit of VOC less than 25 tons per year, potential to emit of any single HAP less than 10 tons per year, and potential to emit of any combination of HAPs less than 25 tons per year, making the source not subject to the provisions of 326 IAC 2-7. Therefore, this source is not subject to the requirements of 326 IAC 8-7.

326 IAC 9-1 (Carbon Monoxide Emission Limits)
This source is not subject to 326 IAC 9-1 because, although it is a stationary source of CO emissions commencing operation after March 21, 1972, there are no applicable CO emission limits established in 326 IAC 9-1-2 for this type of source.

State Rule Applicability – Boilers

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

(a) The Cleaver Brooks Boiler and the Kewanee Boiler were constructed prior to the effective date of this rule (July 27, 1997). Therefore, 326 IAC 2-4.1 does not apply to these facilities.

(b) The operation of the Johnson Boiler will emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs, each. Therefore, 326 IAC 2-4.1 does not apply to this facility.

326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County)

This source has unrestricted potential emissions of ten (10) tons or more of PM per year, which could cause actual emissions of ten (10) tons or more of PM per year. Therefore, pursuant to 326 IAC 6.8-1-1(a)(2), this source is subject to the requirements of 326 IAC 6.8-1-2.

Pursuant to 326 IAC 6.8-1-2(b)(3), the Kewanee Boiler, Cleaver Brooks Boiler, and Johnson Boiler shall not exceed 0.01 gr/dscf of particulate matter (PM), each. The AP-42 emission factor for natural gas combustion less than 100 MMBtu/hr is 1.9 lb/MMCF, which equals 0.0019 lb/MMBtu. Each of these boilers utilize an air flow of 7000 cfm.

(a) The maximum operating capacity of the Kewanee Boiler is 25.1 MMBtu/hr.

$$\frac{(0.0019\ \text{lb/MMBtu})(25.1\ \text{MMBtu/hr})(7000\ \text{gr/lb})}{(7000\ \text{dscf/min})(60\ \text{min/hr})} = 0.0008\ \text{gr/dscf}$$

Therefore, the Kewanee Boiler is capable of complying with this rule.

(b) The maximum operating capacity of the Cleaver Brooks Boiler is 9.0 MMBtu/hr.

$$\frac{(0.0019\ \text{lb/MMBtu})(9.0\ \text{MMBtu/hr})(7000\ \text{gr/lb})}{(7000\ \text{dscf/min})(60\ \text{min/hr})} = 0.0003\ \text{gr/dscf}$$

Therefore, the Cleaver Brooks Boiler is capable of complying with this rule.

(c) The maximum operating capacity of the Johnson Boiler is 3.5 MMBtu/hr.

$$\frac{(0.0019\ \text{lb/MMBtu})(3.5\ \text{MMBtu/hr})(7000\ \text{gr/lb})}{(7000\ \text{dscf/min})(60\ \text{min/hr})} = 0.0001\ \text{gr/dscf}$$

Therefore, the Johnson Boiler is capable of complying with this rule.

326 IAC 6.8-8 (Lake County: Continuous Compliance Plan)

Wolf Lake Terminals, Inc. is not specifically listed in 326 IAC 6.8-8. However, this source has a boiler with a greater than 25 MMBtu/hr heat capacity throughput that vents through a single stack. Since the boiler is configured to burn only natural gas, it is exempt from this rule, pursuant to 326 IAC 6.8-8-1(18)(A). Therefore, this source is not subject to the requirements of 326 IAC 6.8-8.

326 IAC 8-1-6 (Best Available Control Technology)

(a) The Cleaver Brooks Boiler was constructed prior to January 1, 1980. Therefore, it is not subject to the requirements of 326 IAC 8-1-6.

(b) The Kewanee Boiler and the Johnson Boiler each have potential VOC emissions less than 25 tons per year. Therefore, these boilers are not subject to the requirements of 326 IAC 8-1-6.

State Rule Applicability – Storage Tank Facility

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

(a) The following facilities were constructed prior to the effective date of this rule (July 27, 1997):

Storage tanks 1, 2, 6, 8, 9, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 86, 87, 89, 90, 92, 93, 94, 95, 98, 100, 102, 104, 105, and 106.

Therefore, 326 IAC 2-4.1 does not apply to these facilities.

(b) The operation of the following facilities will emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs, each:

Storage tanks 7, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 119, 120, 121, 122, 123, 127, 128, and 129.

Therefore, 326 IAC 2-4.1 does not apply to these facilities.

326 IAC 8-1-6 (Best Available Control Technology)

(a) All of the following storage tanks were constructed prior to January 1, 1980:

Tank 1, Tank 2, Tank 6, Tank 8, Tank 9, Tank 11, Tank 12, Tank 13, Tank 14, Tank 16, Tank 17, Tank 18, Tank 19, Tank 20, Tank 21, Tank 22, Tank 23, Tank 25, Tank 26, Tank 27, Tank 28, Tank 29, Tank 30, Tank 31, Tank 32, Tank 33, Tank 34, Tank 35, Tank 36, Tank 37, Tank 38, Tank 39, Tank 40, Tank 41, Tank 42, Tank 43, Tank 44, Tank 45, Tank 46, Tank 47, Tank 48, Tank 49, Tank 50, Tank 51, Tank 52, Tank 53, Tank 54, Tank 55, Tank 56, Tank 57, Tank 58, Tank 59, Tank 60, Tank 61, Tank 62, Tank 63, Tank 64, Tank 65, Tank 66, Tank 67, Tank 68, Tank 69, Tank 70, Tank 71, Tank 72, Tank 73, Tank 74, Tank 75, Tank 76, Tank 77, Tank 78, Tank 79, Tank 80, and Tank 81.

Therefore, none of these facilities are subject to the requirements of 326 IAC 8-1-6.

(b) Each of the following storage tanks has potential VOC emissions less than 25 tons per year:

Tank 7, Tank 82, Tank 83, Tank 84, Tank 86, Tank 87, Tank 89, Tank 90, Tank 92, Tank 93, Tank 94, Tank 95, Tank 98, Tank 100, Tank 102, Tank 104, Tank 105, Tank 106, Tank 107, Tank 108, Tank 109, Tank 110, Tank 111, Tank 112, Tank 113, Tank 114, Tank 115, Tank 116, Tank 117, Tank 119, Tank 120, Tank 121, Tank 122, Tank 123, Tank 127, Tank 128, and Tank 129.

Therefore, none of these facilities are subject to the requirements of 326 IAC 8-1-6.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

(a) All storage tanks that do not store a volatile organic liquid, as defined in 326 IAC 8-9-3(10), are not subject to 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels). Any change in the liquid stored in these tanks that would be defined as a VOL shall be subject to the requirements of this condition, under 326 IAC 8-9-6.

(b) Pursuant to 326 IAC 8-9-1(b), storage tanks 77 through 81, 92 through 106, and 108 through 129 are subject to the reporting and recordkeeping requirements of 326 IAC 8-9-

6(a) and (b) and are exempt from all other provisions of 326 IAC 8-9 because each of these tanks has a capacity of less than 39,000 gallons.

(c) Storage tanks 1 through 76, 82 through 90, and 107 are subject to 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels) because, pursuant to 326 IAC 8-9-1(a), these tanks are used to store VOL and are located in Lake County. The following requirements of 326 IAC 8-9 are not applicable to these tanks because:

(1) Each of the tanks store a VOL with a maximum true vapor pressure less than 0.50 psia, rendering the requirements of 326 IAC 8-9-4(a), 326 IAC 8-9-4(b), 326 IAC 8-9-5(a), 326 IAC 8-9-6(g), and 326 IAC 8-9-6(h) not applicable; and

(2) Each of the tanks has a fixed roof with no closed vent system or control device, rendering the requirements of 326 IAC 8-9-4(c) through (e), 326 IAC 8-9-5(b) through (e), and 326 IAC 8-9-6(d) through (f) not applicable.

Storage tanks 1 through 76, 82 through 90, and 107 are subject to the reporting and recordkeeping requirements of 326 IAC 8-9-6(a), (b), (i), and (j).

State Rule Applicability – Biodiesel Production Facility

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The operation of the biodiesel production facility will emit greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs; however, pursuant to 326 IAC 2-4.1-1(b)(2), because the biodiesel production facility is specifically regulated by NESHAP 40 CFR 63, Subpart FFFF, which was issued pursuant to Section 112(d) of the CAA, the biodiesel production facility is exempt from the requirements of 326 IAC 2-4.1.

326 IAC 8-1-6 (Best Available Control Technology)
(a) 326 IAC 8-19 applies to Reactor T-88 and tanks T-118 and T-91. Therefore, pursuant to 326 IAC 8-1-6(3)(A), these facilities are not subject to the requirements of 326 IAC 8-1-6.

(b) Each of the remaining tanks associated with the biodiesel production facility has potential VOC emissions less than 25 tons per year. Therefore, these tanks are not subject to the requirements of 326 IAC 8-1-6.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
(a) Reactor T-88 and tanks T-118 and T-91 are process tanks and are not used for storing liquids. Therefore, they are not subject to 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels).

(b) Pursuant to 326 IAC 8-9-1(b), tanks T-99, T-101, T-103, T-97, and T-96 are subject to the reporting and recordkeeping requirements of 326 IAC 8-9-6(a) and (b) and are exempt from all other provisions of 326 IAC 8-9 because each of these tanks has a capacity of less than 39,000 gallons.

(c) Tanks T-24, T-3, T-85, T-4, T-5, T-10, and T-15 are subject to 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels) because, pursuant to 326 IAC 8-9-1(a), these tanks are used to store VOL and are located in Lake County. The following requirements of 326 IAC 8-9 are not applicable to these tanks because:

(1) Each of the tanks store a VOL with a maximum true vapor pressure less than 0.50 psia, rendering the requirements of 326 IAC 8-9-4(a), 326 IAC 8-9-4(b), and 326 IAC 8-9-5(a) not applicable;

(2) Each of the tanks has a fixed roof, rendering the requirements of 326 IAC 8-9-4(c), 326 IAC 8-9-4(e), 326 IAC 8-9-5(b), 326 IAC 8-9-5(c), and 326 IAC 8-9-6(d) not applicable; and

(3) Pursuant to 326 IAC 8-9-6(f), the owner or operator of each vessel equipped with a closed vent system and control device meeting the standards of 326 IAC 8-9-4 is exempt from the reporting and recordkeeping requirements of 326 IAC 8-9-6(g) and (h).

Tanks T-24, T-3, T-85, T-4, T-5, T-10, and T-15 are subject to the operation standards of 326 IAC 8-9-4(d), the compliance determination requirements of 326 IAC 8-9-5(d), and the reporting and recordkeeping requirements of 326 IAC 8-9-6(a), (b), (e), (i), and (j).

326 IAC 8-18 (Synthetic Organic Chemical Manufacturing Industry Air Oxidation, Distillation, and Reactor Processes)

(a) Reactor T-88 and tanks T-91 and T-118 would have been subject to 326 IAC 8-18 because, pursuant to 326 IAC 8-18-1(a), these tanks vent from a distillation operation, are located in Lake County, and produce methanol as a product, co-product, byproduct, or intermediate. However, pursuant to 326 IAC 8-18-3(b)(1), these tanks are exempt from the provisions of 326 IAC 8-18-3 because the biodiesel production facility operates as a batch process and therefore is excluded from Subpart NNN, pursuant to 40 CFR 60.660(c)(3).

(b) Reactor T-88 would have been subject to 326 IAC 8-18 because, pursuant to 326 IAC 8-18-1(a), this tank vents from a reactor process, is located in Lake County, and produces methanol as a product, co-product, byproduct, or intermediate. However, pursuant to 326 IAC 8-18-4(b)(1), this tank is exempt from the provisions of 326 IAC 8-18-4 because the biodiesel production facility operates as a batch process and therefore is excluded from Subpart RRR, pursuant to 40 CFR 60.700(c)(1).

326 IAC 8-19 (Control of Volatile Organic Compound Emissions from Process Vents in Batch Operations)

Each of the following collections of equipment are part of a batch process train associated with SIC code 2869, are located in Lake County, and have potential emissions greater than one hundred (100) tons per year of VOC:

(1) Reactor T-88 and tank T-91; and

(2) Tank T-118.

Therefore, pursuant to 326 IAC 8-19-1(a), 326 IAC 8-19 is applicable to these facilities. However, the source has decided to limit their VOC emissions below the major source thresholds as follows:

(a) The VOC emissions from the storage tank facility, biodiesel production, and methanol stripping processes combined shall be less than 99 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) As stated in 40 CFR 63.983(a)(2), closed vent systems used to comply with the provisions of 40 CFR 63, Subpart SS, shall be operated at all times when emissions are vented to, or collected by, them.

(c) In the event that failure of the closed vent systems has been observed, the feed to the process shall be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit.

Compliance with the above limit, combined with the potential to emit VOC from other emission units at the source, shall limit the VOC emissions from the entire source to less than 100 tons per twelve (12) consecutive month period for VOC. Pursuant to 326 IAC 8-19-1(b), this shall render the requirements of 326 IAC 8-19-3 (Control Requirements for VOC Emissions from Process Vents) not applicable.

326 IAC 8-20 (Industrial Wastewater)
Although this source has industrial wastewater operations associated with SIC code 2869 that are located in Lake County, these operations do not have the potential to emit 100 tons per year of VOC. Therefore, pursuant to 326 IAC 8-20-1(a)(2), this source is not subject to the requirements of 326 IAC 8-20.

State Rule Applicability – Methanol Stripping from Outside Sources

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The operation of the biodiesel production facility will emit greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs; however, pursuant to 326 IAC 2-4.1-1(b)(2), because the biodiesel production facility is specifically regulated by NESHAP 40 CFR 63, Subpart FFFF, which was issued pursuant to Section 112(d) of the CAA, the biodiesel production facility is exempt from the requirements of 326 IAC 2-4.1.

326 IAC 8-1-6 (Best Available Control Technology)
326 IAC 8-19 applies to Reactor T-88 and tanks T-118 and T-91. Therefore, pursuant to 326 IAC 8-1-6(3)(A), these facilities are not subject to the requirements of 326 IAC 8-1-6.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
Reactor T-88 and tanks T-118 and T-91 are process tanks and are not used for storing liquids. Therefore, they are not subject to 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels).

326 IAC 8-18 (Synthetic Organic Chemical Manufacturing Industry Air Oxidation, Distillation, and Reactor Processes)

(a) Reactor T-88 and tanks T-91 and T-118 would have been subject to 326 IAC 8-18 because, pursuant to 326 IAC 8-18-1(a), these tanks vent from a distillation operation, are located in Lake County, and produce methanol as a product, co-product, byproduct, or intermediate. However, pursuant to 326 IAC 8-18-3(b)(1), these tanks are exempt from the provisions of 326 IAC 8-18-3 because the biodiesel production facility operates as a batch process and therefore is excluded from Subpart NNN, pursuant to 40 CFR 60.660(c)(3).

(b) Reactor T-88 would have been subject to 326 IAC 8-18 because, pursuant to 326 IAC 8-18-1(a), this tank vents from a reactor process, is located in Lake County, and produces methanol as a product, co-product, byproduct, or intermediate. However, pursuant to 326 IAC 8-18-4(b)(1), this tank is exempt from the provisions of 326 IAC 8-18-4 because the biodiesel production facility operates as a batch process and therefore is excluded from Subpart RRR, pursuant to 40 CFR 60.700(c)(1).

326 IAC 8-19 (Control of Volatile Organic Compound Emissions from Process Vents in Batch Operations)
Each of the following collections of equipment are part of a batch process train associated with SIC code 2869, are located in Lake County, and have potential emissions greater than one hundred (100) tons per year of VOC:

(1) Reactor T-88 and tank T-91; and

(2) Tank T-118.

Therefore, pursuant to 326 IAC 8-19-1(a), 326 IAC 8-19 is applicable to these facilities. However, the source has decided to limit their VOC emissions below the major source thresholds as follows:

(a) The VOC emissions from the storage tank facility, biodiesel production, and methanol stripping processes combined shall be less than 99 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) As stated in 40 CFR 63.983(a)(2), closed vent systems used to comply with the provisions of 40 CFR 63, Subpart SS, shall be operated at all times when emissions are vented to, or collected by, them.

(c) In the event that failure of the closed vent systems has been observed, the feed to the process shall be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit.

Compliance with the above limit, combined with the potential to emit VOC from other emission units at the source, shall limit the VOC emissions from the entire source to less than 100 tons per twelve (12) consecutive month period for VOC. Pursuant to 326 IAC 8-19-1(b), this shall render the requirements of 326 IAC 8-19-3 (Control Requirements for VOC Emissions from Process Vents) not applicable.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance determination requirements applicable to this source are as follows:

(a) Testing Requirements

Emission Unit	Control Device	Timeframe for Testing	Pollutant	Frequency of Testing	Limit or Requirement
Reactor T-88 and Tanks T-24, T-99, T-101, T-103, T-97, T-96, T-3, T-85, T-118, T-91, T-4, T-5, T-10, and T-15	Condenser Operation HX (with Condensers HX-88A and HX-88B, in series)	Not later than 180 days after initial startup of the condenser operation HX	VOC	Once every 5 years	13.38 lb/hr VOC, and minimum overall control efficiency of 95%

Each test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

(b) Emission Controls Operation

(1) Condenser operation HX (identified as refrigerated coolant condensers HX-88A and HX-88B, in series) for VOC control shall be in operation at all times when reactor T-88 and tanks T-24, T-99, T-101, T-103, T-97, T-96, T-3, T-85, T-118, T-91, T-4, T-5, T-10, and T-15 are in operation.

(2) Condenser V-3 for VOC control shall be in operation at all times when reactor T-88 and tanks T-24, T-99, T-101, T-103, T-97, T-96, T-5, T-10, and T-15 are in operation.

(3) Condenser V-4 for VOC control shall be in operation at all times when tanks T-4 and T-91 are in operation.

(4) Condenser V-5 for VOC control shall be in operation at all times when tank T-118 is in operation.

(5) As stated in 40 CFR 63.983(a)(2), closed vent systems used to comply with the provisions of 40 CFR 63, Subpart SS, shall be operated at all times when emissions are vented to, or collected by, them.

(c) Emission Calculations
VOC emissions shall be calculated using USEPA's TANKS program (version 4.0 or its updates) and the given formulas in Condition D.3.7.

(d) Vapor Pressure Determination
The maximum true vapor pressure of the liquids stored in the storage tanks shall be determined using methods pursuant to 326 IAC 8-9-6(i) and (j).

(e) Control Device Operating Plan
No later than sixty (60) days after demonstrating compliance with the limits of Conditions D.3.1 and D.3.2, Wolf Lake Terminals, Inc. shall submit to IDEM for each vessel that is equipped with a closed vent system and control device an operating plan containing documentation demonstrating that the control device will achieve the limited emission requirements.

(f) Fugitive Dust Control Plan
The dust suppression used as control for the fugitive particulate emissions from the fugitive dust sources shall be applied as often as necessary to control fugitive dust.

These requirements are required to ensure compliance with 326 IAC 6.8-10 (Lake County: Fugitive Particulate Matter) and 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels), and to render 326 IAC 2-1.1-5 (Nonattainment NSR), 326 IAC 2-2 (PSD), and 326 IAC 8-19-3 (Control Requirements for VOC Emissions from Process Vents) not applicable.

The compliance monitoring requirements applicable to this source are as follows:

(a) A continuous monitoring system shall be calibrated, maintained, and operated on condenser HX-88A for measuring outlet exhaust temperature. For the purposes of this condition, continuous monitoring shall mean no less often than once per minute. The output of this system shall be recorded as a 3-hour average.

(b) A continuous monitoring system shall be calibrated, maintained, and operated on condenser HX-88B for measuring outlet exhaust temperature. For the purposes of this condition, continuous monitoring shall mean no less often than once per minute. The output of this system shall be recorded as a 3-hour average.

(c) A continuous monitoring system shall be calibrated, maintained, and operated on condenser V-3 for measuring outlet exhaust temperature. For the purposes of this condition, continuous monitoring shall mean no less often than once per minute. The output of this system shall be recorded as a 3-hour average.

(d) A continuous monitoring system shall be calibrated, maintained, and operated on condenser V-4 for measuring outlet exhaust temperature. For the purposes of this condition, continuous monitoring shall mean no less often than once per minute. The output of this system shall be recorded as a 3-hour average.

(e) A continuous monitoring system shall be calibrated, maintained, and operated on condenser V-5 for measuring outlet exhaust temperature. For the purposes of this condition, continuous monitoring shall mean no less often than once per minute. The output of this system shall be recorded as a 3-hour average.

(f) The Permittee shall determine the maximum 3-hour average temperatures that demonstrate compliance with the limits in Conditions D.3.1 and D.3.2 as approved by IDEM.

(g) Once the results from the approved stack tests are available, the Permittee shall then operate the condensers at or below the maximum 3-hour average temperature determined from the most recent compliant stack test following approval of that temperature.

(h) If any of the following operating conditions occur, the Permittee shall take reasonable response steps:

(1) When the 3-hour average temperature reading of the outlet exhaust temperature to condenser HX-88A is above the manufacturer's recommended temperature and the maximum temperature established during the latest valid stack test that demonstrates compliance for any 3-hour average.

(2) When the 3-hour average temperature reading of the outlet exhaust temperature to condenser HX-88B is above the manufacturer's recommended temperature and the maximum temperature established during the latest valid stack test that demonstrates compliance for any 3-hour average.

(3) When the 3-hour average temperature reading of the outlet exhaust temperature to condenser V-3 is above the manufacturer's recommended temperature and the maximum temperature established during the latest valid stack test that demonstrates compliance for any 3-hour average.

(4) When the 3-hour average temperature reading of the outlet exhaust temperature to condenser V-4 is above the manufacturer's recommended temperature and the maximum temperature established during the latest valid stack test that demonstrates compliance for any 3-hour average.

(5) When the 3-hour average temperature reading of the outlet exhaust temperature to condenser V-5 is above the manufacturer's recommended temperature and the maximum temperature established during the latest valid stack test that demonstrates compliance for any 3-hour average.

(i) The instruments used for determining the temperature reading shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.

(j) The outlet exhaust temperature monitoring device of each condenser shall be equipped with a continuous recorder having an accuracy of plus or minus one percent (1%) of the

temperature being monitored expressed in degrees Celsius or plus or minus one and eight-tenths percent (1.8%) of the temperature being measured expressed in degrees Fahrenheit.

(k) In the event that condenser failure of any of the condensers HX-88A, HX-88B, V-3, V-4, and V-5 has been observed, the feed to the process shall be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit.

(l) In the event that failure of the closed vent systems has been observed, the feed to the process shall be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit.

(m) Pursuant to 326 IAC 8-9-4(d), the monitoring standards applicable to each closed vent system and control device are as follows:

The closed vent system shall be designed to collect all VOC vapors and gases discharged from the vessel and operated with no detectable emission as indicated by an instrument reading of less than five hundred (500) parts per million (ppm) above background and visual inspections as determined by the methods specified in 40 CFR 60, Subpart VV, 60.485(C).

(n) Recordkeeping Requirements

(1) The Permittee shall keep all records of the storage tanks as required by 326 IAC 8-9-6.

(2) To document the compliance status with Conditions D.2.1 and D.3.1, the Permittee shall keep records of chemical inventories, Material Safety Data Sheets (MSDS), and throughput for each transfer and storage operation (input and output data of TANKS program).

(3) The Permittee shall maintain continuous temperature records for each condenser and the 3-hour average temperature used to demonstrate compliance during the most recent stack test.

These monitoring conditions are necessary because the condensers must operate properly to ensure compliance with 326 IAC 2-2 (PSD) and 326 IAC 8-19-3 (Control requirements for VOC emissions from process vents).

Recommendation

The staff recommends to the Commissioner that the Part 70 Operating Permit with New Source Review be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the applications and additional information submitted by the applicant.

An application for the purposes of this review was received on November 13, 2009. Additional information was received on December 4, 2009; December 7, 2009; December 21, 2009; December 30, 2009; December 31, 2009; January 14, 2010; January 25, 2010; February 19, 2010; March 10, 2010; March 19, 2010; March 22, 2010; April 16, 2010; May 13, 2010; and May 17, 2010.

Conclusion

The construction and operation of this storage tank facility and biodiesel production facility shall be subject to the conditions of the attached proposed Part 70 Operating Permit with New Source Review No. T089-28673-00230.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to John Haney at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5328 or toll free at 1-800-451-6027 extension 4-5328.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Appendix A: Emissions Calculations
Summary

Company Name: Wolf Lake Terminals, Inc.
Address City IN Zip: 3200 Sheffield Avenue, Hammond, IN 46327
Permit Number: T089-28673-00230
Plt ID: 089-00230
Reviewer: John Haney
Date: May 20, 2010

Uncontrolled Potential to Emit

		Pollutant (tons/yr)											
Emission Unit		PM	PM10	PM2.5	SO2	NOx	CO	VOC	Hexane	Morpholine	DEA	Methanol	Total HAPs
Kewanee Boiler		0.21	0.84	0.84	0.07	10.99	9.23	0.60	0.20	0.00	0.00	0.00	0.21
Insignificant Boilers		0.10	0.42	0.42	0.03	5.48	4.60	0.30	0.10	0.00	0.00	0.00	0.10
Storage Tank Facility		0.00	0.00	0.00	0.00	0.00	0.00	36.97	0.00	0.54	5.46E-04	34.14	34.67
Biodiesel Production	Equipment Leaks	0.00	0.00	0.00	0.00	0.00	0.00	3.40	0.00	0.00	0.00	3.40	3.40
	Tank T-24	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
	Tanks T-99, T-101, T-103	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.15	0.15
	Tanks T-96, T-97	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.05
	Reactor T-88: Loading	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.26	0.26
	Reactor T-88: Reaction	0.00	0.00	0.00	0.00	0.00	0.00	210.85	0.00	0.00	0.00	210.85	210.85
	Reactor T-88: Stripping	0.00	0.00	0.00	0.00	0.00	0.00	990.00	0.00	0.00	0.00	990.00	990.00
	Tank T-3	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.00	0.41	0.41
	Tank T-85	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.17	0.17
	Tank T-118: Loading	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.18	0.18
	Tank T-118: Stripping	0.00	0.00	0.00	0.00	0.00	0.00	2451.38	0.00	0.00	0.00	2451.38	2451.38
	Tank T-91: Washing	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.04	0.04
	Tank T-91: Drying	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Tank T-4	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.06	0.06
	Tanks T-5, T-10, T-15	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
Methanol Stripping (Outside Sources)		0.00	0.00	0.00	0.00	0.00	0.00	175.50	0.00	0.00	0.00	175.50	175.50
Paved Roads		12.32	2.40	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL		**12.64**	**3.65**	**1.61**	**0.10**	**16.47**	**13.83**	**3870.34**	**0.30**	**0.54**	**5.46E-04**	**3866.57**	**3867.42**

Controlled Potential to Emit

		Pollutant (tons/yr)											
Emission Unit		PM	PM10	PM2.5	SO2	NOx	CO	VOC	Hexane	Morpholine	DEA	Methanol	Total HAPs
Kewanee Boiler		0.21	0.84	0.84	0.07	10.99	9.23	0.60	0.20	0.00	0.00	0.00	0.21
Insignificant Boilers		0.10	0.42	0.42	0.03	5.48	4.60	0.30	0.10	0.00	0.00	0.00	0.10
Storage Tank Facility		0.00	0.00	0.00	0.00	0.00	0.00	36.97	0.00	0.54	5.46E-04	34.14	34.67
Biodiesel Production	Equipment Leaks	0.00	0.00	0.00	0.00	0.00	0.00	3.40	0.00	0.00	0.00	3.40	3.40
	Tank T-24	0.00	0.00	0.00	0.00	0.00	0.00	58.58	0.00	0.00	0.00	58.58	58.58
	Tanks T-99, T-101, T-103	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Tanks T-96, T-97	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Reactor T-88: Loading	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Reactor T-88: Reacting	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Reactor T-88: Stripping	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Tank T-3	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Tank T-85	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Tank T-118: Loading	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Tank T-118: Stripping	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Tank T-91: Washing	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Tank T-91: Drying	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Tank T-4	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Tanks T-5, T-10, T-15	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
Methanol Stripping (Outside Sources)		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
Paved Roads		11.27	2.20	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL		**11.58**	**3.45**	**1.58**	**0.10**	**16.47**	**13.83**	**99.85**	**0.30**	**0.54**	**5.46E-04**	**96.12**	**96.96**

Limited Controlled Potential to Emit

		Pollutant (tons/yr)											
Emission Unit		PM	PM10	PM2.5	SO2	NOx	CO	VOC	Hexane	Morpholine	DEA	Methanol	Total HAPs
Kewanee Boiler		0.21	0.84	0.84	0.07	10.99	9.23	0.60	0.20	0.00	0.00	0.00	0.21
Insignificant Boilers		0.10	0.42	0.42	0.03	5.48	4.60	0.30	0.10	0.00	0.00	0.00	0.10
Storage Tank Facility		0.00	0.00	0.00	0.00	0.00	0.00	Less than 99	0.00	0.54	0.00	34.14	34.67
Biodiesel Production	Equipment Leaks	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	3.40	3.40
	Tank T-24	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	58.58	58.58
	Tanks T-99, T-101, T-103	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Tanks T-96, T-97	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Reactor T-88: Loading	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Reactor T-88: Reacting	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Reactor T-88: Stripping	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Tank T-3	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Tank T-85	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Tank T-118: Loading	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Tank T-118: Stripping	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Tank T-91: Washing	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Tank T-91: Drying	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Tank T-4	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
	Tanks T-5, T-10, T-15	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
Methanol Stripping (Outside Sources)		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00		
Paved and Unpaved Roads		5.63	1.10	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL		**5.95**	**2.35**	**1.42**	**0.10**	**16.47**	**13.83**	**<100**	**0.30**	**0.54**	**5.46E-04**	**96.12**	**96.96**

Appendix A: Emissions Calculations
Verification of Prior Source Modifications

Company Name: Wolf Lake Terminals, Inc.
Address City IN Zip: 3200 Sheffield Avenue, Hammond, IN 46327
Permit Number: T089-28673-00230
Plt ID: 089-00230
Reviewer: John Haney
Date: May 20, 2010

Tank ID	2003 Potential VOC Emissions (tons/yr)	2010 Potential VOC Emissions (tons/yr)	Increase?	Increase (tons/yr)	Increase (lbs/day)	Source Modification per 326 IAC 2-7-10.5 (d)(3)(B)(iii)	Source Modification per 326 IAC 2-7-10.5 (d)(9)(A)
1	0.8255	0.0031	N	0	0	N	N
5	0.4255	0.0000	N	0	0	N	N
8	0.6244	0.6616	Y	0.04	0.20	N	N
9	0.5278	0.6616	Y	0.13	0.73	N	N
10	0.8232	0.0000	N	0	0	N	N
11	0.6192	0.0198	N	0	0	N	N
14	0.8209	0.2485	N	0	0	N	N
15	0.8209	0.0000	N	0	0	N	N
19	0.8181	0.6616	N	0	0	N	N
20	0.8209	0.6616	N	0	0	N	N
45	1.8523	0.0010	N	0	0	N	N
50	1.8582	0.6616	N	0	0	N	N
56	0.6272	0.6616	Y	0.03	0.19	N	N
57	0.8238	0.0084	N	0	0	N	N
60	0.6255	0.6616	Y	0.04	0.20	N	N
61	0.6272	0.6616	Y	0.03	0.19	N	N
65	0.8238	0.0005	N	0	0	N	N
66	0.5249	0.0199	N	0	0	N	N
69	0.6288	0.6616	Y	0.03	0.18	N	N
70	0.8256	0.0064	N	0	0	N	N
75	1.6585	0.6616	N	0	0	N	N
76	1.6585	0.6616	N	0	0	N	N
86	1.0915	0.5362	N	0	0	N	N
87	1.0915	0.0066	N	0	0	N	N
88	0.2968	0.0000	N	0	0	N	N
100	0.0919	0.0232	N	0	0	N	N
101	0.0925	0.0000	N	0	0	N	N
102	0.0837	0.0237	N	0	0	N	N
103	1.0925	0.0000	N	0	0	N	N
104	0.1357	0.0268	N	0	0	N	N
107	0.2940	0.0025	N	0	0	N	N
108	0.0785	0.6616	Y	0.58	3.19	N	N
109	0.0813	0.6616	Y	0.58	3.18	N	N
110	0.0813	0.0010	N	0	0	N	N
111	0.1066	0.6616	Y	0.55	3.04	N	N
112	0.1066	0.6616	Y	0.55	3.04	N	N
113	0.1066	0.6616	Y	0.55	3.04	N	N
115	0.0101	0.6616	Y	0.65	3.57	N	N
116	0.0101	0.6616	Y	0.65	3.57	N	N
119	0.5277	0.1593	N	0	0	N	N
120	0.0989	0.1498	Y	0.05	0.28	N	N
122	0.0584	0.0967	Y	0.04	0.21	N	N

This modification would require a Source Modification pursuant to 326 IAC 2-7-10.5(d)(3)(B)(iii) if the change in potential to emit is greater than 10 tons per year
This modification would require a Source Modification pursuant to 326 IAC 2-7-10.5(d)(9)(A) if the change in potential to emit is greater than 15 pounds per day.
2003 potential VOC emissions are based upon the Technical Support Document (TSD) of Registration No. R089-16857-00230, issued on May 22, 2003.
2010 potential VOC emissions for tanks 5, 10, 15, 88, 101, and 103 are based on potential to emit after control
because the condensers controlling these tanks have been considered to be an integral part of the biodiesel production facility.

Methodology:
Increase (tons/yr) = 2010 Potential VOC Emissions (tons/yr) - 2003 Potential VOC Emissions (tons/yr)
Increase (lb/day) = Increase (tons/yr) x 2000 lb/ton ÷ 365 days/yr

Appendix A: Emissions Calculations
Storage Tank Facility

Company Name: Wolf Lake Terminals, Inc.
Address City IN Zip: 3200 Sheffield Avenue, Hammond, IN 46327
Permit Number: T089-28673-00230
Plt ID: 089-00230
Reviewer: John Haney
Date: May 20, 2010

Tank ID	Diameter [D] (feet)	Height [H] (feet)	Volume [V] (gallons)	Product	VOC (Y/N?)	CY 2007 Actual Throughput [T] (gal/year)	Vapor Pressure @ 60°F [Pv] (psi)	Vapor Pressure @ 40°F [Pva] (psi)	Vapor Molecular Weight [Mv]	Average Liquid Surface Temperature [TLa] (°R)	Average Liquid Height [Hl] (ft)	Tank Solar Absorptance [∂]	Breather Vent Pressure Setting Range [BVP] (psig)	Vapor Space Outage [Hvo] (ft)	Tank Vapor Space Volume [Vv] (cft)	Vapor Density [Wv] (lbs/cft)	Daily Vapor Temperature Range [ΔTv] (°R)	Vapor Space Expansion Factor [Ke]	Vented Vapor Saturation Factor [Ks]	Number of Turnovers per Year [N]	Product Factor [Kp] (=0.75 for crude oils, 1.0 for all other products)	Turnover Factor [Kn] (=1 unless N>36)	Standing Losses [Ls] (lbs/yr)	Working Losses [Lw] (lbs/yr)	Actual VOC Emissions (TPY)	Potential Throughput (gal/year)	Potential VOC Emissions (TPY)	Potential Methanol Emissions (TPY)	Potential Morpholine Emissions (TPY)	Potential DEA Emissions (TPY)	Potential Total HAP Emissions (TPY)
1	30	24	126,000	Propylene Glycol	y	1,196,455	0.00173	0.00078	76.11	510.843	12	0.17	0.06	12.31	8703.21	0.0000108	19.46	0.0341	0.9989	9	1	1	1.16	3.75	0.0025	1,500,000	0.0031	0.0000	0.0000	0.0000	0.0000
2	30	24	126,000	Polymer Polyols	y	148,216	0.00002	0.00001	76.11	510.843	12	0.17	0.06	12.31	8703.21	0.0000001	19.46	0.0340	1.0000	1	1	1	0.01	0.01	0.0000	500,000	0.0000	0.0000	0.0000	0.0000	0.0000
6	30	24	126,000	Infineum R693	y	192,613	0.03710	0.01663	121	510.843	12	0.17	0.06	12.31	8703.21	0.0003671	19.46	0.0354	0.9764	2	1	1	40.31	20.59	0.0305	500,000	0.0790	0.0000	0.0000	0.0000	0.0000
7	30	24	126,000	MT	n	0	0.00000	0.00000	0	510.843	12	0.17	0.06	12.31	8703.21	0.0000000	19.46	0.0340	1.0000	0	1	1	0.00	0.00	0.0000	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
8	30	24	126,000	Atosol 100	y	464,197	0.25000	0.11207	118.37	510.843	12	0.17	0.06	12.31	8703.21	0.0024199	19.46	0.0434	0.8597	4	1	1	287.12	327.07	0.3071	1,000,000	0.6616	0.6616	0.0000	0.0000	0.6616
9	30	24	126,000	Glycol	y	0	0.00095	0.00042	192.04	510.843	12	0.17	0.06	12.31	8703.21	0.0000149	19.46	0.0341	0.9994	0	1	1	1.61	0.00	0.0008	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
11	30	24	126,000	Low Sulfur Diesel Supreme	y	278,042	0.00757	0.00339	188	510.843	12	0.17	0.06	12.31	8703.21	0.0001164	19.46	0.0343	0.9951	2	1	1	12.62	9.42	0.0110	500,000	0.0198	0.0000	0.0000	0.0000	0.0000
12	30	24	126,000	T11E Tallow Fatty Acid	y	2,579,133	0.00095	0.00042	274.6	510.843	12	0.17	0.06	12.31	8703.21	0.0000212	19.46	0.0341	0.9994	20	1	1	2.30	15.95	0.0091	3,000,000	0.0106	0.0000	0.0000	0.0000	0.0000
13	30	24	126,000	Glycerin/Water	y	82,010	0.34058	0.15267	32.04	510.843	12	0.17	0.06	12.31	8703.21	0.0008923	19.46	0.0469	0.8182	1	1	1	108.75	21.31	0.0650	500,000	0.3965	0.3965	0.0000	0.0000	0.3965
14	30	24	126,000	Atosol 150	y	607,967	0.12000	0.05379	106	510.843	12	0.17	0.06	12.31	8703.21	0.0010402	19.46	0.0385	0.9274	5	1	1	118.05	184.13	0.1511	1,000,000	0.2485	0.0000	0.0000	0.0000	0.0000
16	30	24	126,000	Synacto 246	y	123,907	0.00095	0.00042	268	510.843	12	0.17	0.06	12.31	8703.21	0.0000207	19.46	0.0341	0.9994	1	1	1	2.24	0.75	0.0015	500,000	0.0060	0.0000	0.0000	0.0000	0.0000
17	30	24	126,000	MT	n	0	0.00000	0.00000	0	510.843	12	0.17	0.06	12.31	8703.21	0.0000000	19.46	0.0340	1.0000	0	1	1	0.00	0.00	0.0000	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
18	30	24	126,000	MT	n	0	0.00000	0.00000	0	510.843	12	0.17	0.06	12.31	8703.21	0.0000000	19.46	0.0340	1.0000	0	1	1	0.00	0.00	0.0000	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
19	30	24	126,000	Glycerin/Water	y	0	0.34058	0.15267	32.04	510.843	0	0.17	0.06	24.31	17185.53	0.0008923	19.46	0.0469	0.6950	0	1	1	182.42	0.00	0.0912	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
20	30	24	126,000	Diprop Gly/DPNB/PNB	y	0	0.00189	0.00085	248	510.843	12	0.17	0.06	12.31	8703.21	0.0000384	19.46	0.0341	0.9988	0	1	1	4.15	0.00	0.0021	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
21	42	39.5	420,000	Sulfonic N-95 (Rapid Fluids)	y	812,142	0.01700	0.00762	638	510.843	19.75	0.17	0.06	20.19	27968.68	0.0008869	19.46	0.0347	0.9821	2	1	1	308.17	209.73	0.2589	1,000,000	0.3188	0.0000	0.0000	0.0000	0.0000
22	42	39.5	420,000	RHT 240	y	968,671	0.00170	0.00076	130	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000181	19.46	0.0341	0.9982	2	1	1	6.29	5.11	0.0057	1,500,000	0.0088	0.0000	0.0000	0.0000	0.0000
23	42	39.5	420,000	RHT 70	y	388,049	0.00170	0.00076	130	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000181	19.46	0.0341	0.9982	1	1	1	6.29	2.05	0.0042	500,000	0.0054	0.0000	0.0000	0.0000	0.0000
25	42	39.5	420,000	REO	y	147,404	0.00170	0.00076	130	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000181	19.46	0.0341	0.9982	0	1	1	6.29	0.78	0.0035	500,000	0.0120	0.0000	0.0000	0.0000	0.0000
26	42	39.5	420,000	REO	y	153,659	0.00170	0.00076	130	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000181	19.46	0.0341	0.9982	0	1	1	6.29	0.81	0.0035	500,000	0.0115	0.0000	0.0000	0.0000	0.0000
27	42	39.5	420,000	Deodorizer Distillate	y	490,651	0.00095	0.00042	130	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000101	19.46	0.0341	0.9990	1	1	1	3.49	1.44	0.0025	1,000,000	0.0050	0.0000	0.0000	0.0000	0.0000
28	42	39.5	420,000	L24-7	y	248,507	0.00095	0.00042	190	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000147	19.46	0.0341	0.9990	1	0.75	1	5.10	0.80	0.0030	500,000	0.0059	0.0000	0.0000	0.0000	0.0000
29	42	39.5	420,000	MT	n	0	0.00000	0.00000	190	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000000	19.46	0.0340	1.0000	0	0.75	1	0.00	0.00	0.0000	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
30	42	39.5	420,000	Moly Oil	y	0	0.00095	0.00042	190	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000147	19.46	0.0341	0.9990	0	0.75	1	5.10	0.00	0.0026	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
31	42	39.5	420,000	On Spec Fuel Oil	y	241,208	0.00095	0.00042	190	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000147	19.46	0.0341	0.9990	1	0.75	1	5.10	0.77	0.0029	500,000	0.0061	0.0000	0.0000	0.0000	0.0000
32	42	39.5	420,000	RS Used Oils	y	466,997	0.00095	0.00042	190	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000147	19.46	0.0341	0.9990	1	0.75	1	5.10	1.50	0.0033	1,000,000	0.0071	0.0000	0.0000	0.0000	0.0000
33	42	39.5	420,000	RHT 120 L	y	851,786	0.00170	0.00076	130	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000181	19.46	0.0341	0.9982	2	1	1	6.29	4.49	0.0054	1,000,000	0.0063	0.0000	0.0000	0.0000	0.0000
34	42	39.5	420,000	RHT 240	y	1,090,000	0.00170	0.00076	130	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000181	19.46	0.0341	0.9982	3	1	1	6.29	5.75	0.0060	1,500,000	0.0083	0.0000	0.0000	0.0000	0.0000
35	42	39.5	420,000	Hiboiler	y	117,208	0.00095	0.00042	550	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000425	19.46	0.0341	0.9990	0	1	1	14.78	1.45	0.0081	500,000	0.0346	0.0000	0.0000	0.0000	0.0000
36	42	39.5	420,000	MT	n	0	0.00095	0.00042	275.2	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000213	19.46	0.0341	0.9990	0	1	1	7.39	0.00	0.0000	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
37	42	39.5	420,000	RS Used Oils	y	406,705	0.00001	0.00000	190	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000002	19.46	0.0340	1.0000	1	0.75	1	0.05	0.01	0.0000	1,000,000	0.0001	0.0000	0.0000	0.0000	0.0000
39	42	39.5	420,000	Soy Oil	y	379,445	0.00095	0.00042	190	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000147	19.46	0.0341	0.9990	1	1	1	5.10	1.62	0.0034	500,000	0.0044	0.0000	0.0000	0.0000	0.0000
40	42	39.5	420,000	Soy Oil	y	233,669	0.00095	0.00042	190	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000147	19.46	0.0341	0.9990	1	1	1	5.10	1.00	0.0031	500,000	0.0065	0.0000	0.0000	0.0000	0.0000
41	42	39.5	420,000	#4 Used Oil	y	349,574	0.00095	0.00042	190	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000147	19.46	0.0341	0.9990	1	0.75	1	5.10	1.12	0.0031	500,000	0.0045	0.0000	0.0000	0.0000	0.0000
42	42	39.5	420,000	#4 Used Oil	y	37,357	0.00000	0.00000	190	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000000	19.46	0.0340	1.0000	0	0.75	1	0.00	0.00	0.0000	500,000	0.0000	0.0000	0.0000	0.0000	0.0000
43	42	39.5	420,000	VOD	y	178,461	0.00095	0.00042	130	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000101	19.46	0.0341	0.9990	0	1	1	3.49	0.52	0.0020	500,000	0.0056	0.0000	0.0000	0.0000	0.0000
44	42	39.5	420,000	T-130	y	0	0.00095	0.00042	130	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000101	19.46	0.0341	0.9990	0	1	1	3.49	0.00	0.0017	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
45	42	39.5	420,000	Triethanolamine TEA	y	518,865	0.00017	0.00008	149.19	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000021	19.46	0.0340	0.9998	1	1	1	0.72	0.31	0.0005	1,000,000	0.0010	0.0000	0.0000	0.0000	0.0000
46	42	39.5	420,000	T130 Kosher	y	0	0.00095	0.00042	130	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000101	19.46	0.0341	0.9990	0	1	1	3.49	0.00	0.0017	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
47	42	39.5	420,000	Vegetable Oi	y	0	0.00095	0.00042	130	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000101	19.46	0.0341	0.9990	0	1	1	3.49	0.00	0.0017	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
48	42	39.5	420,000	#4 Used Oil	y	0	0.00095	0.00042	190	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000147	19.46	0.0341	0.9990	0	1	1	5.10	0.00	0.0026	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
49	42	39.5	420,000	Biodiesel	y	836,196	0.00095	0.00042	294	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000227	19.46	0.0341	0.9990	2	1	1	7.90	5.54	0.0067	1,000,000	0.0080	0.0000	0.0000	0.0000	0.0000
50	42	39.5	420,000	#4 Used Oil	y	0	0.00095	0.00042	190	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000147	19.46	0.0341	0.9990	0	1	1	5.10	0.00	0.0026	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
51	30	24	126,000	NPE-9	y	183,497	0.00095	0.00042	190	510.843	12	0.17	0.06	12.31	8703.21	0.0000147	19.46	0.0341	0.9994	1	1	1	1.59	0.79	0.0012	500,000	0.0032	0.0000	0.0000	0.0000	0.0000
52	30	24	126,000	1200 Pale Oi	y	643,221	0.00019	0.00008	130	510.843	12	0.17	0.06	12.31	8703.21	0.0000020	19.46	0.0340	0.9999	5	1	1	0.22	0.38	0.0003	1,000,000	0.0005	0.0000	0.0000	0.0000	0.0000
53	30	24	126,000	6NF Mineral Oi	y	2,504	0.00019	0.00008	130	510.843	12	0.17	0.06	12.31	8703.21	0.0000020	19.46	0.0340	0.9999	0	1	1	0.22	0.00	0.0001	500,000	0.0219	0.0000	0.0000	0.0000	0.0000
54	30	24	126,000	16 USP Mineral Oi	y	0	0.00009	0.00004	130	510.843	12	0.17	0.06	12.31	8703.21	0.0000010	19.46	0.0340	0.9999	0	1	1	0.11	0.00	0.0001	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
55	30	24	126,000	50 USP Mineral Oi	y	0	0.00019	0.00008	130	510.843	12	0.17	0.06	12.31	8703.21	0.0000020	19.46	0.0340	0.9999	0	1	1	0.22	0.00	0.0001	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
56	30	24	126,000	Glycol	y	0	0.00189	0.00085	192.04	510.843	12	0.17	0.06	12.31	8703.21	0.0000297	19.46	0.0341	0.9988	0	1	1	3.21	0.00	0.0016	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
57	30	24	126,000	MPG - DEG	y	81,870	0.00189	0.00085	134	510.843	12	0.17	0.06	12.31	8703.21	0.0000207	19.46	0.0341	0.9988	1	1	1	2.24	0.49	0.0014	500,000	0.0084	0.0000	0.0000	0.0000	0.0000
58	30	24	126,000	20 USP Apex Oi	y	0	0.00019	0.00008	130	510.843	12	0.17	0.06	12.31	8703.21	0.0000020	19.46	0.0340	0.9999	0	1	1	0.22	0.00	0.0001	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
59	30	24	126,000	Superta	y	0	0.00019	0.00008	130	510.843	12	0.17	0.06	12.31	8703.21	0.0000020	19.46	0.0340	0.9999	0	1	1	0.22	0.00	0.0001	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
60	30	24	126,000	Diesel Fuel	y	0	0.00019	0.00008	130	510.843	12	0.17	0.06	12.31	8703.21	0.0000020	19.46	0.0340	0.9999	0	1	1	0.22	0.00	0.0001	500,000	0.6616	0.6616	0.0000	0.0000	0.6616

(continued on next page)

The potential VOC emissions for tanks with no actual throughput for CY 2007 has been estimated as 0.6616 tons per year VOC, assuming worse case potential emissions from all tanks (Tank #8 storing Atosol 100).
The potential HAP emissions for tanks with no actual throughput for CY 2007 has been estimated as 0.6616 tons per year methanol and 0.6616 tons per year total HAPs.

Methodology:
Methodology formulas are from AP 42, Chapter 7.1.
Vapor Pressure @ 40F [Pva] = Vapor Pressure @ 60F [Pv] x 0.448275862
Average Liquid Height [Hl] = Height [H] ÷ 2
Vapor Space Outage [Hvo] = [H] - [Hl] + (0.0625 x (Diameter [D] ÷ 2) ÷ 3) [Equations 1-15, 1-16, and 1-17]
Tank Vapor Space Volume [Vv] = 0.7854 x [D]^2 x [Hvo] [Equation 1-3]
Vapor Density [Wv] = Vapor Moleular Weight [Mv] x [Pva] ÷ (10.731 x Average Liquid Surface Temperature [TLa]) [Equation 1-21]
Daily Vapor Temperature Range [ΔTv] = 13.68 + (34.02 x Tank Solar Absorptance [∂]) [Equations 1-8 and 1-12, Table 7.1-7]
Vapor Space Expansion Factor [Ke] = ([ΔTv] ÷ [TLa]) + (([Pv] - [Pva] - Breather Vent Pressure Setting Range [BVP]) ÷ (14.7 - [Pva])) [Equation 1-7]
Vented Vapor Saturation Factor [Ks] = 1 ÷ (1 + (0.053 x [Pva] x [Hvo])) [Equation 1-20]
Number of Turnovers per Year [N] = 5.614 x (Throughput [T] ÷ 42 gallons/barrel) ÷ ([V] ÷ 7.481$^{3/4}$ gallon) [Equation 1-30]
Standing Losses [Ls] (lbs/yr) = 365 x [Vv] x [Wv] x [Ke] x [Ks] [Equation 1-2]
Working Losses [Lw] (lbs/yr) = 0.001 x [Mv] x [Pv] x ([T] ÷ 42 gallons/barrel) x [Kn] x [Kp] [Equation 1-29]
Actual VOC Emissions (tons/yr) = ([Ls] + [Lw]) ÷ 2000 lbs/ton [Equation 1-1]
Potential VOC Emissions (tons/yr) = Actual VOC Emissions (tons/yr) x Potential Throughput (gallons) ÷ Actual Throughput (gallons)

Appendix A: Emissions Calculations
Storage Tank Facility

Company Name: Wolf Lake Terminals, Inc.
Address City IN Zip: 3200 Sheffield Avenue, Hammond, IN 46327
Permit Number: T089-28673-00230
Plt ID: 089-00230
Reviewer: John Haney
Date: May 20, 2010

Tank ID	Diameter [D] (feet)	Height [H] (feet)	Volume [V] (gallons)	Product	VOC (Y/N?)	CY 2007 Actual Throughput [T] (gal/year)	Vapor Pressure @ 60°F [Pv] (psi)	Vapor Pressure @ 40°F [Pva] (psi)	Vapor Molecular Weight [Mv]	Average Liquid Surface Temperature [TLa] (°R)	Average Liquid Height [Hl] (ft)	Tank Solar Absorptance [∂]	Breather Vent Pressure Setting Range [BVP] (psig)	Vapor Space Outage [Hvo] (ft)	Tank Vapor Space Volume [Vv] (cft)	Vapor Density [Wv] (lbs/cft)	Daily Vapor Temperature Range [ΔTv] (°R)	Vapor Space Expansion Factor [Ke]	Vented Vapor Saturation Factor [Ks]	Number of Turnovers per Year [N]	Product Factor [Kp] (=0.75 for crude oils, 1.0 for all other products)	Turnover Factor [Kn] (=1 unless N>36)	Standing Losses [Ls] (lbs/yr)	Working Losses [Lw] (lbs/yr)	Actual VOC Emissions (TPY)	Potential Throughput (gal/year)	Potential VOC Emissions (TPY)	Potential Methanol Emissions (TPY)	Potential Morpholine Emissions (TPY)	Potential DEA Emissions (TPY)	Potential Total HAP Emissions (TPY)
				(continued from previous page)																											
61	30	24	126,000	Glycol	y	0	0.00189	0.00085	192.04	510.843	12	0.17	0.06	12.31	8703.21	0.0000663	19.46	0.0341	0.9988	0	1	1	7.17	0.00	0.0036	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
62	30	24	126,000	MT	n	0	0.00000	0.00000	0	510.843	12	0.17	0.06	12.31	8703.21	0.0000000	19.46	0.0340	1.0000	0	1	1	0.00	0.00	0.0000	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
63	30	24	126,000	100 Pale Oil	y	413,751	0.00019	0.00008	130	510.843	12	0.17	0.06	12.31	8703.21	0.0000045	19.46	0.0340	0.9999	3	1	1	0.48	0.24	0.0004	1,000,000	0.0009	0.0000	0.0000	0.0000	0.0000
64	30	24	126,000	Carnation	y	0	0.00019	0.00008	130	510.843	12	0.17	0.06	12.31	8703.21	0.0000045	19.46	0.0340	0.9999	0	1	1	0.48	0.00	0.0002	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
65	30	24	126,000	Diethanolamine/DEA	y	229,249	0.00019	0.00008	105.14	510.843	12	0.17	0.06	12.31	8703.21	0.0000036	19.46	0.0340	0.9999	2	1	1	0.39	0.11	0.0003	500,000	0.0005	0.0000	0.0000	0.0005	0.0005
66	30	24	126,000	Biodiesel	y	4,065,399	0.00095	0.00042	294	510.843	12	0.17	0.06	12.31	8703.21	0.0000507	19.46	0.0341	0.9994	32	1	1	5.49	26.92	0.0162	5,000,000	0.0199	0.0000	0.0000	0.0000	0.0000
67	30	24	126,000	Coconut Oil	y	1,213,502	0.00019	0.00008	130	510.843	12	0.17	0.06	12.31	8703.21	0.0000045	19.46	0.0340	0.9999	10	1	1	0.48	0.71	0.0006	1,500,000	0.0007	0.0000	0.0000	0.0000	0.0000
68	30	24	126,000	Soy Oil	y	117,994	0.00019	0.00008	130	510.843	12	0.17	0.06	12.31	8703.21	0.0000045	19.46	0.0340	0.9999	1	1	1	0.48	0.07	0.0003	500,000	0.0012	0.0000	0.0000	0.0000	0.0000
69	30	24	126,000	Glycol	y	0	0.00019	0.00008	192.04	510.843	12	0.17	0.06	12.31	8703.21	0.0000066	19.46	0.0340	0.9999	0	1	1	0.72	0.00	0.0004	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
70	30	24	126,000	Monoethanolamine	y	650,030	0.00384	0.00172	61.05	510.843	12	0.17	0.06	12.31	8703.21	0.0000428	19.46	0.0342	0.9975	5	1	1	4.63	3.63	0.0041	1,000,000	0.0064	0.0000	0.0000	0.0000	0.0000
71	42	39.5	420,000	#4 Used Oil	y	0	0.00095	0.00042	190	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000328	19.46	0.0341	0.9990	0	0.75	1	11.39	0.00	0.0057	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
72	42	39.5	420,000	#4 Used Oil	y	0	0.00095	0.00042	190	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000328	19.46	0.0341	0.9990	0	0.75	1	11.39	0.00	0.0057	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
73	42	39.5	420,000	#4 Used Oil	y	310,741	0.00095	0.00042	190	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000328	19.46	0.0341	0.9990	1	0.75	1	11.39	1.00	0.0062	500,000	0.0100	0.0000	0.0000	0.0000	0.0000
74	42	39.5	420,000	#4 Used Oil	y	0	0.00095	0.00042	190	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000328	19.46	0.0341	0.9990	0	0.75	1	11.39	0.00	0.0057	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
75	42	39.5	420,000	Glycol	y	0	0.00019	0.00008	192.04	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000066	19.46	0.0340	0.9998	0	1	1	2.30	0.00	0.0012	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
76	42	39.5	420,000	Glycol	y	0	0.00019	0.00008	192.04	510.843	19.75	0.17	0.06	20.19	27968.68	0.0000066	19.46	0.0340	0.9998	0	1	1	2.30	0.00	0.0012	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
77	10	20	10,000	Mineral Oil	y	0	0.00019	0.00008	130	510.843	10	0.17	0.06	10.10	793.58	0.0000045	19.46	0.0340	0.9999	0	1	1	0.04	0.00	0.0000	100,000	0.6616	0.6616	0.0000	0.0000	0.6616
78	10	20	10,000	Mineral Oil	y	0	0.00019	0.00008	130	510.843	10	0.17	0.06	10.10	793.58	0.0000045	19.46	0.0340	0.9999	0	1	1	0.04	0.00	0.0000	100,000	0.6616	0.6616	0.0000	0.0000	0.6616
79	10	20	10,000	Mineral Oil	y	0	0.00000	0.00000	0	510.843	10	0.17	0.06	10.10	793.58	0.0000000	19.46	0.0340	1.0000	0	1	1	0.00	0.00	0.0000	100,000	0.6616	0.6616	0.0000	0.0000	0.6616
80	10	20	10,000	Pale Oil Blends	y	145,368	0.00019	0.00008	130	510.843	10	0.17	0.06	10.10	793.58	0.0000045	19.46	0.0340	0.9999	15	1	1	0.04	0.09	0.0001	500,000	0.0002	0.0000	0.0000	0.0000	0.0000
81	12	32	18,000	Mineral Oil	y	0	0.00019	0.00008	130	510.843	16	0.17	0.06	16.13	1823.70	0.0000045	19.46	0.0340	0.9998	0	1	1	0.10	0.00	0.0001	100,000	0.6616	0.6616	0.0000	0.0000	0.6616
82	20	24	56,000	TPC 1285	y	0	0.00019	0.00008	190	510.843	12	0.17	0.06	12.21	3835.37	0.0000066	19.46	0.0340	0.9999	0	1	1	0.31	0.00	0.0002	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
83	20	24	56,000	Glycerin/Water	y	0	0.34058	0.15267	32.04	510.843	12	0.17	0.06	12.21	3835.37	0.0019906	19.46	0.0470	0.8194	1	1	1	107.34	0.00	0.0537	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
84	20	24	56,000	TPC 1160	y	827,453	0.00019	0.00008	190	510.843	12	0.17	0.06	12.21	3835.37	0.0000066	19.46	0.0340	0.9999	15	1	1	0.31	0.71	0.0005	1,000,000	0.0006	0.0000	0.0000	0.0000	0.0000
86	25	24	88,000	Morpholine	y	90,355	0.13447	0.06028	87.07	510.843	12	0.17	0.06	12.26	6018.33	0.0021358	19.46	0.0391	0.9196	1	1	1	168.59	25.19	0.0969	500,000	0.5362	0.0000	0.5362	0.0000	0.5362
87	25	24	88,000	Glycol	y	699,203	0.00403	0.00181	76.11	510.843	12	0.17	0.06	12.26	6018.33	0.0000560	19.46	0.0342	0.9974	8	1	1	4.19	5.11	0.0046	1,000,000	0.0066	0.0000	0.0000	0.0000	0.0000
89	25	24	88,000	H-1500 SPA Blending	y	345,970	0.00095	0.00042	190	510.843	12	0.17	0.06	12.26	6018.33	0.0000328	19.46	0.0341	0.9994	4	1	1	2.45	1.48	0.0020	500,000	0.0028	0.0000	0.0000	0.0000	0.0000
90	25	24	88,000	Riken Ser	y	0	0.00038	0.00017	130	510.843	12	0.17	0.06	12.26	6018.33	0.0000090	19.46	0.0340	0.9998	0	1	1	0.67	0.00	0.0003	500,000	0.6616	0.6616	0.0000	0.0000	0.6616
92	12	28	24,000	Mineral Oil	y	0	0.00000	0.00000	0	510.843	14	0.17	0.06	14.13	1597.50	0.0000000	19.46	0.0340	1.0000	0	1	1	0.00	0.00	0.0000	100,000	0.6616	0.6616	0.0000	0.0000	0.6616
93	12	28	24,000	Mineral Oil	y	2,099	0.00019	0.00008	130	510.843	14	0.17	0.06	14.13	1597.50	0.0000045	19.46	0.0340	0.9999	0	1	1	0.09	0.00	0.0000	100,000	0.0021	0.0000	0.0000	0.0000	0.0000
94	12	28	24,000	Synacto 406	y	58,400	0.00019	0.00008	268	510.843	14	0.17	0.06	14.13	1597.50	0.0000093	19.46	0.0340	0.9999	2	1	1	0.18	0.07	0.0001	500,000	0.0011	0.0000	0.0000	0.0000	0.0000
95	12	18	20,000	Biodiesel	y	0	0.00000	0.00000	0	510.843	9	0.17	0.06	9.13	1032.02	0.0000000	19.46	0.0340	1.0000	0	1	1	0.00	0.00	0.0000	100,000	0.6616	0.6616	0.0000	0.0000	0.6616
98	12	18	16,000	Indopol L-10S	y	7,522	0.00095	0.00042	190	510.843	9	0.17	0.06	9.13	1032.02	0.0000328	19.46	0.0341	0.9995	0	1	1	0.42	0.03	0.0002	100,000	0.0030	0.0000	0.0000	0.0000	0.0000
100	12	18	16,000	Cetane Improve	y	163,634	0.02000	0.00897	121	510.843	9	0.17	0.06	9.13	1032.02	0.0004415	19.46	0.0348	0.9904	10	1	1	5.73	9.43	0.0076	500,000	0.0232	0.0000	0.0000	0.0000	0.0000
102	12	18	16,000	Cetane Improve	y	153,992	0.02000	0.00897	121	510.843	9	0.17	0.06	9.13	1032.02	0.0004415	19.46	0.0348	0.9904	10	1	1	5.73	8.87	0.0073	500,000	0.0237	0.0000	0.0000	0.0000	0.0000
104	14	28	35,800	Infineum F7596	y	58,755	0.00568	0.00254	175	510.843	14	0.17	0.06	14.15	2177.59	0.0001812	19.46	0.0342	0.9958	2	1	1	4.91	1.39	0.0031	500,000	0.0268	0.0000	0.0000	0.0000	0.0000
105	12	16	13,500	MT	n	0	0.00000	0.00000	0	510.843	8	0.17	0.06	8.13	918.92	0.0000000	19.46	0.0340	1.0000	0	1	1	0.00	0.00	0.0000	100,000	0.6616	0.6616	0.0000	0.0000	0.6616
106	12	16	13,500	MT	n	0	0.00000	0.00000	0	510.843	8	0.17	0.06	8.13	918.92	0.0000000	19.46	0.0340	1.0000	0	1	1	0.00	0.00	0.0000	100,000	0.6616	0.6616	0.0000	0.0000	0.6616
107	24	23	78,000	Propylene Glyco	y	1,350,171	0.00192	0.00086	53	510.843	11.5	0.17	0.06	11.75	5315.59	0.0000186	19.46	0.0341	0.9988	17	1	1	1.23	3.27	0.0022	1,500,000	0.0025	0.0000	0.0000	0.0000	0.0000
108	16	13	19,500	Propylene Glyco	y	0	0.00192	0.00086	53	510.843	6.5	0.17	0.06	6.67	1340.42	0.0000186	19.46	0.0341	0.9993	0	1	1	0.31	0.00	0.0002	100,000	0.6616	0.6616	0.0000	0.0000	0.6616
109	16	13	19,500	Propylene Glyco	y	0	0.00192	0.00086	53	510.843	6.5	0.17	0.06	6.67	1340.42	0.0000186	19.46	0.0341	0.9993	0	1	1	0.31	0.00	0.0002	100,000	0.6616	0.6616	0.0000	0.0000	0.6616
110	16	13	18,000	Propylene Glyco	y	25,425	0.00192	0.00086	76.11	510.843	6.5	0.17	0.06	6.67	1340.42	0.0000267	19.46	0.0341	0.9993	1	1	1	0.44	0.09	0.0003	100,000	0.0010	0.0000	0.0000	0.0000	0.0000
111	17	16	25,000	Propylene Glyco	y	0	0.00170	0.00076	76.11	510.843	8	0.17	0.06	8.18	1856.04	0.0000236	19.46	0.0341	0.9993	0	1	1	0.55	0.00	0.0003	100,000	0.6616	0.6616	0.0000	0.0000	0.6616
112	17	16	25,000	Propylene Glyco	y	0	0.00170	0.00076	76.11	510.843	8	0.17	0.06	8.18	1856.04	0.0000236	19.46	0.0341	0.9993	0	1	1	0.55	0.00	0.0003	100,000	0.6616	0.6616	0.0000	0.0000	0.6616
113	17	16	25,000	Propylene Glyco	y	0	0.00170	0.00076	76.11	510.843	8	0.17	0.06	8.18	1856.04	0.0000236	19.46	0.0341	0.9993	0	1	1	0.55	0.00	0.0003	100,000	0.6616	0.6616	0.0000	0.0000	0.6616
114	13	9	9,000	DI Water	n	0	0.00000	0.00000	18	510.843	4.5	0.17	0.06	4.64	615.27	0.0000000	19.46	0.0340	1.0000	0	1	1	0.00	0.00	0.0000	100,000	0.6616	0.6616	0.0000	0.0000	0.6616
115	6	12	2,400	Propylene Glyco	y	0	0.00170	0.00076	76.095	510.843	6	0.17	0.06	6.06	171.41	0.0000236	19.46	0.0341	0.9995	0	1	1	0.05	0.00	0.0000	100,000	0.6616	0.6616	0.0000	0.0000	0.6616
116	6	12	2,400	Propylene Glyco	y	0	0.00170	0.00076	76.095	510.843	6	0.17	0.06	6.06	171.41	0.0000236	19.46	0.0341	0.9995	0	1	1	0.05	0.00	0.0000	100,000	0.6616	0.6616	0.0000	0.0000	0.6616
117	12	36	30,500	Genapol SSM	y	0	0.04919	0.02205	242	510.843	18	0.17	0.06	18.13	2049.89	0.0021715	19.46	0.0359	0.9549	0	1	1	55.63	0.00	0.0278	100,000	0.6616	0.6616	0.0000	0.0000	0.6616
119	12	36	30,500	Sulfonic N-100	y	137,031	0.01729	0.00775	638	510.843	18	0.17	0.06	18.13	2049.89	0.0020123	19.46	0.0347	0.9837	4	1	1	51.34	35.99	0.0437	500,000	0.1593	0.0000	0.0000	0.0000	0.0000
120	12	36	30,500	Sulfonic N-120	y	206,619	0.01729	0.00775	748	510.843	18	0.17	0.06	18.13	2049.89	0.0023592	19.46	0.0347	0.9837	7	1	1	60.19	63.62	0.0619	500,000	0.1498	0.0000	0.0000	0.0000	0.0000
121	12	36	30,500	Dipropylene Glyco	y	233,604	0.00173	0.00078	134	510.843	18	0.17	0.06	18.13	2049.89	0.0000423	19.46	0.0341	0.9983	8	1	1	1.08	1.29	0.0012	500,000	0.0025	0.0000	0.0000	0.0000	0.0000
122	12	36	30,500	Sulfonic N-60	y	207,810	0.01729	0.00775	484	510.843	18	0.17	0.06	18.13	2049.89	0.0015266	19.46	0.0347	0.9837	7	1	1	38.95	41.41	0.0402	500,000	0.0967	0.0000	0.0000	0.0000	0.0000
123	16	16	24,000	MT	y	0	0.00000	0.00000	0	510.843	8	0.17	0.06	8.17	1642.01	0.0000000	19.46	0.0340	1.0000	0	1	1	0.00	0.00	0.0000	100,000	0.6616	0.6616	0.0000	0.0000	0.6616
127	10	12.5	7,500	Max Flight Slurry	y	58,678	0.32658	0.14640	76.11	510.843	6.25	0.17	0.06	6.35	499.06	0.0045342	19.46	0.0465	0.9009	8	1	1	34.57	34.73	0.0346	500,000	0.2952	0.0000	0.0000	0.0000	0.0000
128	10	12.5	7,500	Max Flight Slurry	y	63,572	0.32658	0.14640	76.11	510.843	6.25	0.17	0.06	6.35	499.06	0.0045342	19.46	0.0465	0.9009	8	1	1	34.57	37.62	0.0361	500,000	0.2839	0.0000	0.0000	0.0000	0.0000
129	10	12.5	7,500	Max Flight Slurry	y	52,188	0.32658	0.14640	76.11	510.843	6.25	0.17	0.06	6.35	499.06	0.0045342	19.46	0.0465	0.9009	7	1	1	34.57	30.89	0.0327	500,000	0.3136	0.0000	0.0000	0.0000	0.0000
																										TOTALS	**36.97**	**34.14**	**0.54**	**5.46E-04**	**34.67**

The potential VOC emissions for tanks with no actual throughput for CY 2007 has been estimated as 0.6616 tons per year VOC, assuming worse case potential emissions from all tanks (Tank #8 storing Atosol 100).
The potential HAP emissions for tanks with no actual throughput for CY 2007 has been estimated as 0.6616 tons per year methanol and 0.6616 tons per year total HAPs.

Methodology:
Methodology formulas are from AP 42, Chapter 7.1.
Vapor Pressure @ 40F [Pva] = Vapor Pressure @ 60F [Pv] x 0.448275862
Average Liquid Height [Hl] = Height [H] ÷ 2
Vapor Space Outage [Hvo] = [H] - [Hl] + (0.0625 x (Diameter [D] ÷ 2) ÷ 3) [Equations 1-15, 1-16, and 1-17]
Tank Vapor Space Volume [Vv] = 0.7854 x [D]^2 x [Hvo] [Equation 1-3]
Vapor Density [Wv] = Vapor Moleular Weight [Mv] x [Pva] ÷ (10.731 x Average Liquid Surface Temperature [TLa]) [Equation 1-21]
Daily Vapor Temperature Range [ΔTv] = 13.68 + (34.02 x Tank Solar Absorptance [∂]) [Equations 1-8 and 1-12, Table 7.1-7]
Vapor Space Expansion Factor [Ke] = ([ΔTv] ÷ [TLa]) + (([Pv] - [Pva] - Breather Vent Pressure Setting Range [BVP]) ÷ (14.7 - [Pva])) [Equation 1-7]
Vented Vapor Saturation Factor [Ks] = 1 ÷ (1 + (0.053 x [Pva] x [Hvo])) [Equation 1-20]
Number of Turnovers per Year [N] = 5.614 x (Throughput [T] ÷ 42 gallons/barrel) ÷ ([V] ÷ 7.481^3/gallon) [Equation 1-30]
Standing Losses [Ls] (lbs/yr) = 365 x [Vv] x [Wv] x [Ke] x [Ks] [Equation 1-2]
Working Losses [Lw] (lbs/yr) = 0.001 x [Mv] x [Pv] x ([T] ÷ 42 gallons/barrel) x [Kn] x [Kp] [Equation 1-29]
Actual VOC Emissions (tons/yr) = ([Ls] + [Lw]) ÷ 2000 lbs/ton [Equation 1-1]
Potential VOC Emissions (tons/yr) = Actual VOC Emissions (tons/yr) x Potential Throughput (gallons) ÷ Actual Throughput (gallons)

Appendix A: Emissions Calculations
Natural Gas Combustion Only (MMBtu/hr <100)

Company Name: Wolf Lake Terminals, Inc.
Address City IN Zip: 3200 Sheffield Avenue, Hammond, IN 46327
Permit Number: T089-28673-00230
Plt ID: 089-00230
Reviewer: John Haney
Date: May 20, 2010

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
25.1	219.9

	Pollutant					
	PM*	PM10*	PM2.5	SO2	NOx	VOC
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5
Potential Emission in tons/yr	0.21	0.84	0.84	0.07	10.99	0.60

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	2.31E-04	1.32E-04	8.25E-03	1.98E-01	3.74E-04

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	5.50E-05	1.21E-04	1.54E-04	4.18E-05	2.31E-04

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
PM2.5 emissions are assumed to be the same as PM10.
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr ÷ 1,000 MMBtu/MMCF
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only (MMBtu/hr <100)

Company Name: **Wolf Lake Terminals, Inc.**
Address City IN Zip: **3200 Sheffield Avenue, Hammond, IN 46327**
Permit Number: **T089-28673-00230**
Plt ID: **089-00230**
Reviewer: **John Haney**
Date: **May 20, 2010**

Cleaver Brooks	9.0 MMBtu/hr
Johnson	3.5 MMBtu/hr

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
12.5	109.5

	Pollutant					
	PM*	PM10*	PM2.5	SO2	NOx	VOC
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5
Potential Emission in tons/y	0.10	0.42	0.42	0.03	5.48	0.30

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/y	1.15E-04	6.57E-05	4.11E-03	9.86E-02	1.86E-04

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/y	2.74E-05	6.02E-05	7.67E-05	2.08E-05	1.15E-04

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
PM2.5 emissions are assumed to be the same as PM10.
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr ÷ 1,000 MMBtu/MMCF
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Biodiesel Production Facility
Fugitive Equipment Leak Emissions

Company Name: **Wolf Lake Terminals, Inc.**
Address City IN Zip: **3200 Sheffield Avenue, Hammond, IN 46327**
Permit Number: **T089-28673-00230**
Plt ID: **089-00230**
Reviewer: **John Haney**
Date: **May 20, 2010**

Current emissions were based on a combined annual product throughput of 5,000,000 gallons per year.
This modification will increase annual product throughput to 36,000,000 gallons per year.
The emissions were calculated as 100% methanol.
It is estimated that there will be a 30% increase in fugitive emissions.

Potential VOC Emissions

Equipment Type	Service	Emission Factor (kg/hr/component)	Number of Components	VOC Emissions (lb/hr)	VOC Emissions (tons/yr)	Methanol Emissions (tons/yr)
Valves	Gas	0.00597	0	0.0000	0.0000	0.0000
	Light Liquid	0.00403	0	0.0000	0.0000	0.0000
	Heavy Liquid	0.00023	32	0.0165	0.0722	0.0722
Pump Seals	Light Liquid	0.01990	0	0.0000	0.0000	0.0000
	Heavy Liquid	0.00862	2	0.0386	0.1692	0.1692
Compressor Seals	Gas	0.22800	0	0.0000	0.0000	0.0000
Pressure Relief Valves	Gas	0.10400	0	0.0000	0.0000	0.0000
Connectors	All	0.00183	132	0.5412	2.3706	2.3706
Open-Ended Lines	All	0.00170	0	0.0000	0.0000	0.0000
Sampling Connections	All	0.01500	0	0.0000	0.0000	0.0000
Current Emissions					2.61	2.61
Uncontrolled Emissions					**3.40**	**3.40**

Emission factors are from EPA Protocol for Equipment Leak Emission Estimates, Table 2-1.

Methodology:
VOC Emissions (lb/hr) = (Number of Components) x Emission Factor (kg/hr/component) x 2.24062 lb/kg
VOC Emissions (tons/yr) = VOC Emissions (lb/hr) x 8760 hr/yr ÷ 2000 lbs/ton
Current Emissions (tons/yr) = Σ VOC Emissions(tons/yr)
Uncontrolled Emissions (tons/yr) = 1.3 x Current Emissions (tons/yr)

Appendix A: Emissions Calculations
Biodiesel Production Facility
Soy Oil Feedstock Storage Tank T-24

Company Name: **Wolf Lake Terminals, Inc.**
Address City IN Zip: **3200 Sheffield Avenue, Hammond, IN 46327**
Permit Number: **T089-28673-00230**
Plt ID: **089-00230**
Reviewer: **John Haney**
Date: **May 20, 2010**

Current emissions were based on an annual product throughput of 5,000,000 gallons per year.
This modification will increase annual product throughput to 36,000,000 gallons per year.

Potential VOC Emissions

	TANKS Emissions[1] (lbs/yr)	Uncontrolled Emissions (tons/yr)
Working Losses[2]	0	0.00
Breathing Losses	19.17	0.01
TOTAL		**0.01**

[1] See Appendix B for TANKS 4.0.9d Emission Report calculations.
[2] All tanks used in the biodiesel production facility are tied into a commong venting system that allows working losses to be displaced from one tank to another. All inbound raw material transports and outbound shipment transports (both tank truck and rail car) are included in the vapor displacement method. Therefore, the working losses are zero.

Methodology:
Uncontrolled Emissions (tons/yr) = TANKS Emissions (lbs/yr) ÷ 2000 lbs/ton

Appendix A: Emissions Calculations
Biodiesel Production Facility
Methanol Feedstock Storage Tanks T-99, T-101, and T-103

Company Name: **Wolf Lake Terminals, Inc.**
Address City IN Zip: **3200 Sheffield Avenue, Hammond, IN 46327**
Permit Number: **T089-28673-00230**
Plt ID: **089-00230**
Reviewer: **John Haney**
Date: **May 20, 2010**

Emissions were based on annual throughput of 5,880,000 gallons of methanol per year.
This is split three ways between identical tanks T-99, T-101, and T-103.

Potential VOC Emissions

	TANKS Emissions[1] (lbs/yr/tank)	Uncontrolled Emissions (tons/yr)
Working Losses[2]	0	0.00
Breathing Losses	102.41	0.15
TOTAL		**0.15**

Potential HAP (Methanol) Emissions

	TANKS Emissions[1] (lbs/yr/tank)	Uncontrolled Emissions (tons/yr)
Working Losses[2]	0	0.00
Breathing Losses	102.41	0.15
TOTAL		**0.15**

[1] See Appendix B for TANKS 4.0.9d Emission Report calculations.
[2] All tanks used in the biodiesel production facility are tied into a commong venting system that allows working losses to be displaced from one tank to another. All inbound raw material transports and outbound shipment transports (both tank truck and rail car) are included in the vapor displacement method. Therefore, the working losses are zero.

Methodology:
Uncontrolled Emissions (tons/yr) = (3 tanks) x TANKS Emissions (lbs/yr/tank) ÷ 2,000 lbs/ton

Appendix A: Emissions Calculations
Biodiesel Production Facility
Catalyst Feedstock Storage Tanks T-96 and T-97

Company Name: **Wolf Lake Terminals, Inc.**
Address City IN Zip: **3200 Sheffield Avenue, Hammond, IN 46327**
Permit Number: **T089-28673-00230**
Plt ID: **089-00230**
Reviewer: **John Haney**
Date: **May 20, 2010**

Emissions were based on annual throughput of 889,200 gallons of 30% sodium methylate catalyst per year, which is 70% methanol. This is split two ways between identical tanks T-96 and T-97.

Potential VOC Emissions

	TANKS Emissions[1] (lbs/yr/tank)	Uncontrolled Emissions (tons/yr)
Working Losses[2]	0	0.00
Breathing Losses	45.53	0.05
TOTAL		**0.05**

Potential HAP (Methanol) Emissions

	TANKS Emissions[1] (lbs/yr/tank)	Uncontrolled Emissions (tons/yr)
Working Losses[2]	0	0.00
Breathing Losses	45.53	0.05
TOTAL		**0.05**

[1] See Appendix B for TANKS 4.0.9d Emission Report calculations.
[2] All tanks used in the biodiesel production facility are tied into a commong venting system that allows working losses to be displaced from one tank to another. All inbound raw material transports and outbound shipment transports (both tank truck and rail car) are included in the vapor displacement method. Therefore, the working losses are zero.

Methodology:
Uncontrolled Emissions (tons/yr) = (2 tanks) x TANKS Emissions (lbs/yr/tank) ÷ 2,000 lbs/ton

Appendix A: Emissions Calculations
Biodiesel Production Facility
Reactor T-88: Loading

Company Name: **Wolf Lake Terminals, Inc.**
Address City IN Zip: **3200 Sheffield Avenue, Hammond, IN 46327**
Permit Number: **T089-28673-00230**
Plt ID: **089-00230**
Reviewer: **John Haney**
Date: **May 20, 2010**

This modification will increase annual product throughput to 36,000,000 gallons of biodiesel per year.

Potential VOC Emissions

	TANKS Emissions[1] (lbs/yr)	Uncontrolled Emissions (tons/yr)
Working Losses[2]	0	0.00
Breathing Losses	523.24	0.26
TOTAL		**0.26**

Potential HAP (Methanol) Emissions

	TANKS Emissions[1] (lbs/yr)	Uncontrolled Emissions (tons/yr)
Working Losses[2]	0	0.00
Breathing Losses	523.24	0.26
TOTAL		**0.26**

[1] See Appendix B for TANKS 4.0.9d Emission Report calculations.
[2] All tanks used in the biodiesel production facility are tied into a commong venting system that allows working losses to be displaced from one tank to another. All inbound raw material transports and outbound shipment transports (both tank truck and rail car) are included in the vapor displacement method. Therefore, the working losses are zero.

Methodology:
Uncontrolled Emissions (tons/yr) = TANKS Emissions (lbs/yr) ÷ 2000 lbs/ton

Appendix A: Emissions Calculations
Biodiesel Production Facility
Reactor T-88: Reaction

Company Name: **Wolf Lake Terminals, Inc.**
Address City IN Zip: **3200 Sheffield Avenue, Hammond, IN 46327**
Permit Number: **T089-28673-00230**
Plt ID: **089-00230**
Reviewer: **John Haney**
Date: **May 20, 2010**

Emissions were based on refluxing at 6 hours per batch.
This modification will increase annual production to 600 batches per year.

Potential VOC Emissions

	Steam Input (lb/hr)	Steam Heat of Vaporization[1] (Btu/lb)	Heat Input (Btu/hr)	Methanol Heat of Vaporization[2] (Btu/lb)	VOC Emissions (lbs/hr)	Uncontrolled Emissions (tons/yr)
Working Losses[3]	---	---	---	---	0.00	0.00
Breathing Losses	57	972.1	55408.2	473.0	117.14	210.85
TOTAL						**210.85**

Potential HAP (Methanol) Emissions

	Steam Input (lb/hr)	Steam Heat of Vaporization[1] (Btu/lb)	Heat Input (Btu/hr)	Methanol Heat of Vaporization[2] (Btu/lb)	Methanol Emissions (lbs/hr)	Uncontrolled Emissions (tons/yr)
Working Losses[3]	---	---	---	---	0.00	0.00
Breathing Losses	57	972.1	55408.2	473.0	117.14	210.85
TOTAL						**210.85**

[1] Perry, R.H.; Green, D.W. (1984). Perry's Chemical Engineers' Handbook (6th Edition). (p: 3-120). McGraw-Hill.
[2] Perry, R.H.; Green, D.W. (1984). Perry's Chemical Engineers' Handbook (6th Edition). (p: 3-126). McGraw-Hill.
[3] All tanks used in the biodiesel production facility are tied into a commong venting system that allows working losses to be displaced from one tank to another. All inbound raw material transports and outbound shipment transports (both tank truck and rail car) are included in the vapor displacement method. Therefore, the working losses are zero.

Methodology:
Steam Heat of Vaporization (Btu/lb) = Steam Heat of Vaporization (cal/mol) ÷ 251.996 cal/Btu ÷ 18.0152 g H_20/mol H_20 x 453.59 g/lb
Methanol Heat of Vaporization (Btu/lb) = Methanol Heat of Vaporization (cal/g) ÷ 251.996 cal/Btu x 453.59 g/lb
Heat Input (Btu/hr) = Steam Input (lb/hr) x Steam Heat of Vaporization (Btu/lb)
VOC Emissions (lb/hr) = Heat Input (Btu/hr) ÷ Methanol Heat of Vaporization (Btu/lb)
Uncontrolled Emissions (tons/yr) = VOC Emissions (lb/hr) x 6 hrs/batch x 600 batches/yr ÷ 2,000 lbs/ton

Appendix A: Emissions Calculations
Biodiesel Production Facility
Reactor T-88: Stripping

Company Name: **Wolf Lake Terminals, Inc.**
Address City IN Zip: **3200 Sheffield Avenue, Hammond, IN 46327**
Permit Number: **T089-28673-00230**
Plt ID: **089-00230**
Reviewer: **John Haney**
Date: **May 20, 2010**

Emissions were based on 500 gallons of methanol remaining in each batch of biodiesel prior to stripping.
This modification will increase annual production to 600 bathces per year.

Potential VOC Emissions

	Throughput (gal/batch)	Uncontrolled Emissions (tons/yr)
Working Losses[1]	0	0.00
Breathing Losses	500	990.00
TOTAL		**990.00**

Potential HAP (Methanol) Emissions

	Throughput (gal/batch)	Uncontrolled Emissions (tons/yr)
Working Losses[1]	0	0.00
Breathing Losses	500	990.00
TOTAL		**990.00**

[1] All tanks used in the biodiesel production facility are tied into a commong venting system that allows working losses to be displaced from one tank to another. All inbound raw material transports and outbound shipment transports (both tank truck and rail car) are included in the vapor displacement method. Therefore, the working losses are zero.

Methodology:
Density of methanol = 6.6 lbs/gallon
Uncontrolled Emissions (tons/yr) = Throughput (gal/batch) x 6.6 lb/gal x 600 batches/yr ÷ 2,000 lbs/ton

Appendix A: Emissions Calculations
Biodiesel Production Facility
Crude Glycerin Storage Tank T-3

Company Name: **Wolf Lake Terminals, Inc.**
Address City IN Zip: **3200 Sheffield Avenue, Hammond, IN 46327**
Permit Number: **T089-28673-00230**
Plt ID: **089-00230**
Reviewer: **John Haney**
Date: **May 20, 2010**

Emissions were based on annual storage of 4,190,400 gallons of glycerin mixture per year, which is 88% by weight glycerin and 12% methanol. The emissions were calculated as 100% methanol.

Potential VOC Emissions

	TANKS Emissions[1] (lb/yr)	Uncontrolled Emissions (tons/yr)
Working Losses[2]	0	0.00
Breathing Losses	822.19	0.41
TOTAL		**0.41**

Potential HAP (Methanol) Emissions

	TANKS Emissions[1] (lb/yr)	Uncontrolled Emissions (tons/yr)
Working Losses[2]	0	0.00
Breathing Losses	822.19	0.41
TOTAL		**0.41**

[1] See Appendix B for TANKS 4.0.9d Emission Report calculations.
[2] All tanks used in the biodiesel production facility are tied into a commong venting system that allows working losses to be displaced from one tank to another. All inbound raw material transports and outbound shipment transports (both tank truck and rail car) are included in the vapor displacement method. Therefore, the working losses are zero.

Methodology:
Uncontrolled Emissions (tons/yr) = TANKS Emissions (lb/yr) ÷ 2,000 lbs/ton

Appendix A: Emissions Calculations
Biodiesel Production Facility
Crude Glycerin Storage Tank T-85

Company Name: **Wolf Lake Terminals, Inc.**
Address City IN Zip: **3200 Sheffield Avenue, Hammond, IN 46327**
Permit Number: **T089-28673-00230**
Plt ID: **089-00230**
Reviewer: **John Haney**
Date: **May 20, 2010**

Emissions were based on annual storage of 576,000 gallons of glycerin mixture per year, which is 88% by weight glycerin and 12% methanol. The emissions were calculated as 100% methanol.

Potential VOC Emissions

	TANKS Emissions[1] (lbs/yr)	Uncontrolled Emissions (tons/yr)
Working Losses[2]	0	0.00
Breathing Losses	334.05	0.17
TOTAL		**0.17**

Potential HAP (Methanol) Emissions

	TANKS Emissions[1] (lbs/yr)	Uncontrolled Emissions (tons/yr)
Working Losses[2]	0	0.00
Breathing Losses	334.05	0.17
TOTAL		**0.17**

[1] See Appendix B for TANKS 4.0.9d Emission Report calculations.
[2] All tanks used in the biodiesel production facility are tied into a commong venting system that allows working losses to be displaced from one tank to another. All inbound raw material transports and outbound shipment transports (both tank truck and rail car) are included in the vapor displacement method. Therefore, the working losses are zero.

Methodology:
Uncontrolled Emissions (tons/yr) = TANKS Emissions (lbs/yr) ÷ 2000 lbs/ton

Appendix A: Emissions Calculations
Biodiesel Production Facility
Process Tank T-118: Loading

Company Name: **Wolf Lake Terminals, Inc.**
Address City IN Zip: **3200 Sheffield Avenue, Hammond, IN 46327**
Permit Number: **T089-28673-00230**
Plt ID: **089-00230**
Reviewer: **John Haney**
Date: **May 20, 2010**

Emissions were based on annual storage of 4,190,400 gallons of glycerin mixture per year, which is 88% by weight glycerin and 12% methanol. The emissions were calculated as 100% methanol.

Potential VOC Emissions

	TANKS Emissions[1] (lbs/yr)	Uncontrolled Emissions (tons/yr)
Working Losses[2]	0	0.00
Breathing Losses	350.04	0.18
TOTAL		**0.18**

Potential HAP (Methanol) Emissions

	TANKS Emissions[1] (lbs/yr)	Uncontrolled Emissions (tons/yr)
Working Losses[2]	0	0.00
Breathing Losses	350.04	0.18
TOTAL		**0.18**

[1] See Appendix B for TANKS 4.0.9d Emission Report calculations.
[2] All tanks used in the biodiesel production facility are tied into a commong venting system that allows working losses to be displaced from one tank to another. All inbound raw material transports and outbound shipment transports (both tank truck and rail car) are included in the vapor displacement method. Therefore, the working losses are zero.

Methodology:
Uncontrolled Emissions = TANKS Emissions (lbs/yr) ÷ 2000 lbs/ton

Appendix A: Emissions Calculations
Biodiesel Production Facility
Process Tank T-118: Stripping

Company Name: **Wolf Lake Terminals, Inc.**
Address City IN Zip: **3200 Sheffield Avenue, Hammond, IN 46327**
Permit Number: **T089-28673-00230**
Plt ID: **089-00230**
Reviewer: **John Haney**
Date: **May 20, 2010**

Emissions were based on annual throughput of 4,190,400 gallons of glycerin mixture per year, which is 88% by weight glycerin and 12% methanol. This modification will allow for the processing of 200 batches per year.

Potential VOC Emissions

	Throughput (gal/batch)	Uncontrolled Emissions (lbs/batch)	Uncontrolled Emissions (tons/yr)
Working Losses[1]	---	0.00	0.00
Breathing Losses	20952	24513.84	2451.38
TOTAL			**2451.38**

Potential HAP (Methanol) Emissions

	Throughput (gal/batch)	Uncontrolled Emissions (lbs/batch)	Uncontrolled Emissions (tons/yr)
Working Losses[1]	---	0.00	0.00
Breathing Losses	20952	24513.84	2451.38
TOTAL			**2451.38**

[1] All tanks used in the biodiesel production facility are tied into a commong venting system that allows working losses to be displaced from one tank to another. All inbound raw material transports and outbound shipment transports (both tank truck and rail car) are included in the vapor displacement method. Therefore, the working losses are zero.

Methodology:
Density of glycerin/methanol mixture = 9.75 lbs/gallon
Uncontrolled Emissions (lbs/batch) = Throughput (gal/batch) x 9.75 lb/gal x (12% methanol by weight)
Uncontrolled Emissions (tons/yr) = Uncontrolled Emissions (lbs/batch) x 200 batches/yr ÷ 2,000 lbs/ton

Appendix A: Emissions Calculations
Biodiesel Production Facility
Wash/Dry Tank T-91: Washing

Company Name: **Wolf Lake Terminals, Inc.**
Address City IN Zip: **3200 Sheffield Avenue, Hammond, IN 46327**
Permit Number: **T089-28673-00230**
Plt ID: **089-00230**
Reviewer: **John Haney**
Date: **May 20, 2010**

Emissions were based on annual production of 4,190,400 gallons of glycerin mixture per year, which is 88% by weight glycerin and 12% methanol. The emissions were calculated as 100% methanol.

Potential VOC Emissions

	TANKS Emissions[1] (lbs/yr)	Uncontrolled Emissions (tons/yr)
Working Losses[2]	0	0.00
Breathing Losses	78.10	0.04
TOTAL		**0.04**

[1] See Appendix B for TANKS 4.0.9d Emission Report calculations.

[2] All tanks used in the biodiesel production facility are tied into a commong venting system that allows working losses to be displaced from one tank to another. All inbound raw material transports and outbound shipment transports (both tank truck and rail car) are included in the vapor displacement method. Therefore, the working losses are zero.

Methodology:
Uncontrolled Emissions (tons/yr) = TANKS Emissions (lbs/yr) ÷ 2000 lbs/ton

Appendix A: Emissions Calculations
Biodiesel Production Facility
Wash/Dry Tank T-91: Drying

Company Name: **Wolf Lake Terminals, Inc.**
Address City IN Zip: **3200 Sheffield Avenue, Hammond, IN 46327**
Permit Number: **T089-28673-00230**
Plt ID: **089-00230**
Reviewer: **John Haney**
Date: **May 20, 2010**

Emissions were based on annual production of 4,190,400 gallons of glycerin mixture per year, which is 88% by weight glycerin and 12% methanol. The emissions were calculated as 100% methanol.

Potential VOC Emissions

	TANKS Emissions[1] (lbs/yr)	Uncontrolled Emissions (tons/yr)
Working Losses[2]	0	0.00
Breathing Losses	1.63	0.00
TOTAL		**0.00**

[1] See Appendix B for TANKS 4.0.9d Emission Report calculations.

[2] All tanks used in the biodiesel production facility are tied into a commong venting system that allows working losses to be displaced from one tank to another. All inbound raw material transports and outbound shipment transports (both tank truck and rail car) are included in the vapor displacement method. Therefore, the working losses are zero.

Methodology:
Uncontrolled Emissions (tons/yr) = TANKS Emissions (tons/yr) ÷ 2000 lbs/ton

Appendix A: Emissions Calculations
Biodiesel Production Facility
Wash Water By-Product Storage Tank T-4

Company Name: **Wolf Lake Terminals, Inc.**
Address City IN Zip: **3200 Sheffield Avenue, Hammond, IN 46327**
Permit Number: **T089-28673-00230**
Plt ID: **089-00230**
Reviewer: **John Haney**
Date: **May 20, 2010**

This modification will increase annual product throughput to 36,000,000 gallons of biodiesel per year.

Potential VOC Emissions

	TANKS Emissions[1] (lbs/yr)	Uncontrolled Emissions (tons/yr)
Working Losses[2]	0	0.00
Breathing Losses	115.14	0.06
TOTAL		**0.06**

[1] See Appendix B for TANKS 4.0.9d Emission Report calculations.

[2] All tanks used in the biodiesel production facility are tied into a commong venting system that allows working losses to be displaced from one tank to another. All inbound raw material transports and outbound shipment transports (both tank truck and rail car) are included in the vapor displacement method. Therefore, the working losses are zero.

Methodology:
Uncontrolled Emissions (tons/yr) = TANKS Emissions (lbs/yr) ÷ 2000 lbs/ton

Appendix A: Emissions Calculations
Biodiesel Production Facility
Biodiesel Product Storage Tanks T-5, T-10, and T-15

Company Name: **Wolf Lake Terminals, Inc.**
Address City IN Zip: **3200 Sheffield Avenue, Hammond, IN 46327**
Permit Number: **T089-28673-00230**
Plt ID: **089-00230**
Reviewer: **John Haney**
Date: **May 20, 2010**

This modification will increase annual product throughput to 36,000,000 gallons per year.
This is split three ways between identical tanks T-5, T-10, and T-15.

Potential VOC Emissions

	TANKS Emissions[1] (lbs/yr/tank)	Uncontrolled Emissions (tons/yr)
Working Losses[2]	0	0.00
Breathing Losses	11.85	0.02
TOTAL		**0.02**

[1] See Appendix B for TANKS 4.0.9d Emission Report calculations.
[2] All tanks used in the biodiesel production facility are tied into a commong venting system that allows working losses to be displaced from one tank to another. All inbound raw material transports and outbound shipment transports (both tank truck and rail car) are included in the vapor displacement method. Therefore, the working losses are zero.

Methodology:
Uncontrolled Emissions (tons/yr) = (3 tanks) x TANKS Emissions (lbs/yr/tank) ÷ 2000 lbs/ton

Appendix A: Emissions Calculations
Biodiesel Production Facility
Methanol Stripping for Outside Sources

Company Name: **Wolf Lake Terminals, Inc.**
Address City IN Zip: **3200 Sheffield Avenue, Hammond, IN 46327**
Permit Number: **T089-28673-00230**
Plt ID: **089-00230**
Reviewer: **John Haney**
Date: **May 20, 2010**

Emissions were based on annual throughput of 300,000 gallons of glycerin mixture per year, which is 88% by weight glycerin and 12% methanol.
This stripping process will be accomplished in Tank T-118.
This modification will allow for the processing of 200 batches per year.

Potential VOC Emissions

	Throughput (gal/yr)	Uncontrolled Emissions (tons/yr)
Working Losses[1]	---	0.00
Breathing Losses	300000	175.50
TOTAL		**175.50**

Potential HAP (Methanol) Emissions

	Throughput (gal/yr)	Uncontrolled Emissions (tons/yr)
Working Losses[1]	---	0.00
Breathing Losses	300000	175.50
TOTAL		**175.50**

[1] All tanks used in the biodiesel production facility are tied into a commong venting system that allows working losses to be displaced from one tank to another. All inbound raw material transports and outbound shipment transports (both tank truck and rail car) are included in the vapor displacement method. Therefore, the working losses are zero.

Methodology:
Density of glycerin/methanol mixture = 9.75 lbs/gallon
Uncontrolled Emissions (lbs/batch) = Throughput (gal/batch) x 9.75 lb/gal x (12% methanol by weight)
Uncontrolled Emissions (tons/yr) = Uncontrolled Emissions (lbs/batch) x 200 batches/yr ÷ 2,000 lbs/ton

Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads

Company Name: Wolf Lake Terminals, Inc.
Address City IN Zip: 3200 Sheffield Avenue, Hammond, IN 46327
Permit Number: T089-28673-00230
Plt ID: 089-00230
Reviewer: John Haney
Date: May 20, 2010

Paved Roads at Industrial Site
The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (12/2003).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle (entering plant) (one-way trip)	37.0	1.0	37.0	40.0	1480.0	2640	0.500	18.5	6752.5
Vehicle (leaving plant) (one-way trip)	37.0	1.0	37.0	40.0	1480.0	2640	0.500	18.5	6752.5
		Total	**74.0**		**2960.0**			**37.0**	**13505.0**

Average Vehicle Weight Per Trip = 40.0 tons/trip
Average Miles Per Trip = 0.50 miles/trip

Unmitigated Emission Factor, Ef = [k * (sL/2)^0.65 * (W/3)^1.5 - C] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.082	0.016	0.0024	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	40.0	40.0	40.0	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	0.00036	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sL =	0.6	0.6	0.6	g/m^2 = Ubitiguous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)]
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	1.82	0.36	0.05	lb/mile
Mitigated Emission Factor, Eext =	1.67	0.33	0.05	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Unmitigated PTE of PM (tons/yr)	Mitigated PTE of PM (tons/yr)	Controlled PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Controlled PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Vehicle (entering plant) (one-way trip)	6.16	5.63	2.82	1.20	1.10	0.55	0.18	0.16	0.08
Vehicle (leaving plant) (one-way trip)	6.16	5.63	2.82	1.20	1.10	0.55	0.18	0.16	0.08
	12.32	**11.27**	**5.63**	**2.40**	**2.20**	**1.10**	**0.36**	**0.33**	**0.16**

Methodology

Total Weight driven per day (ton/day)	= [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (miles/trip)	= [Maximum one-way distance (feet/trip)] / (5280 ft/mile)
Maximum one-way miles (miles/day)	= [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)
Average Vehicle Weight Per Trip (tons/trip)	= SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)
Average Miles Per Trip (miles/trip)	= SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)
Unmitigated PTE (tons/yr)	= [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Mitigated PTE (tons/yr)	= [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Controlled PTE (tons/yr)	= [Mitigated PTE (tons/yr)] * [1 - Dust Control Efficiency]

Appendix A: Emissions Calculations
Biodiesel Production Facility
Condensers HX-88A, HX-88B, and V-4

Company Name: **Wolf Lake Terminals, Inc.**
Address City IN Zip: **3200 Sheffield Avenue, Hammond, IN 46327**
Permit Number: **T089-28673-00230**
Plt ID: **089-00230**
Reviewer: **John Haney**
Date: **May 20, 2010**

Limited VOC/Methanol Emissions

Condenser ID	Uncontrolled VOC Emissions from Breathing Losses (tons/year)	Control Efficiency (%)	Controlled VOC Emissions (tons/year)	Controlled VOC Emissions (lb/hr)	Limit
HX-88A & HX-88B	3829.02	98.47	58.58	13.38	326 IAC 2-2

Methodology:
Controlled VOC Emissions (tons/yr) = Uncontrolled VOC Emissions from Breathing Losses (tons/yr) x (1 - Control Efficiency / 100)
Controlled VOC Emissions (lbs/hr) = Controlled VOC Emissions (tons/yr) x 2000 lbs/ton ÷ 8760 hrs/yr

TSD Appendix B: Emissions Calculations
Biodiesel Production Facility

TANKS 4.0.9d Emission Reports

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	T-91: Washing
City:	Hammond
State:	Indiana
Company:	Wolf Lake Terminals
Type of Tank:	Vertical Fixed Roof Tank
Description:	Washing and Drying Process Tank T-91

Tank Dimensions

Shell Height (ft):		25.00
Diameter (ft):		24.00
Liquid Height (ft) :		25.00
Avg. Liquid Height (ft):		12.00
Volume (gallons):		88,000.00
Turnovers:		409.09
Net Throughput(gal/yr):		36,000,000.00
Is Tank Heated (y/n):	N	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome	
Height (ft)		0.75
Radius (ft) (Dome Roof)		24.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Chicago, Illinois (Avg Atmospheric Pressure = 14.38 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

T-91: Washing - Vertical Fixed Roof Tank
Hammond, Indiana

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Press Calculations
Water and Biodiesel	All	50.66	45.76	55.55	49.02	0.3200	0.3000	0.3400	18.0100			104.15	

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

T-91: Washing - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calcaulations

Standing Losses (lb):	78.0978
Vapor Space Volume (cu ft):	6,050.9283
Vapor Density (lb/cu ft):	0.0011
Vapor Space Expansion Factor:	0.0412
Vented Vapor Saturation Factor:	0.8151
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	6,050.9283
Tank Diameter (ft):	24.0000
Vapor Space Outage (ft):	13.3755
Tank Shell Height (ft):	25.0000
Average Liquid Height (ft):	12.0000
Roof Outage (ft):	0.3755
Roof Outage (Dome Roof)	
Roof Outage (ft):	0.3755
Dome Radius (ft):	24.0000
Shell Radius (ft):	12.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0011
Vapor Molecular Weight (lb/lb-mole):	18.0100
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.3200
Daily Avg. Liquid Surface Temp. (deg. R):	510.3272
Daily Average Ambient Temp. (deg. F):	49.0000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	508.6900
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,225.5876
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0412
Daily Vapor Temperature Range (deg. R):	19.5858
Daily Vapor Pressure Range (psia):	0.0400
Breather Vent Press. Setting Range(psia):	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.3200
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.3000
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.3400
Daily Avg. Liquid Surface Temp. (deg R):	510.3272
Daily Min. Liquid Surface Temp. (deg R):	505.4307
Daily Max. Liquid Surface Temp. (deg R):	515.2236
Daily Ambient Temp. Range (deg. R):	19.1000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.8151
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.3200
Vapor Space Outage (ft):	13.3755
Working Losses (lb):	1,185.5726
Vapor Molecular Weight (lb/lb-mole):	18.0100
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.3200
Annual Net Throughput (gal/yr.):	36,000,000.0000
Annual Turnovers:	409.0909
Turnover Factor:	0.2400
Maximum Liquid Volume (gal):	88,000.0000
Maximum Liquid Height (ft):	25.0000
Tank Diameter (ft):	24.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	1,263.6704

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

T-91: Washing - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Water and Biodiesel	1,185.57	78.10	1,263.67

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	T-91: Drying
City:	Hammond
State:	Indiana
Company:	Wolf Lake Terminals
Type of Tank:	Vertical Fixed Roof Tank
Description:	Washing and Drying Process Tank T-91

Tank Dimensions

Shell Height (ft):		25.00
Diameter (ft):		24.00
Liquid Height (ft) :		25.00
Avg. Liquid Height (ft):		12.00
Volume (gallons):		88,000.00
Turnovers:		409.09
Net Throughput(gal/yr):		36,000,000.00
Is Tank Heated (y/n):	N	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome	
Height (ft)		0.75
Radius (ft) (Dome Roof)		24.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Chicago, Illinois (Avg Atmospheric Pressure = 14.38 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

T-91: Drying - Vertical Fixed Roof Tank
Hammond, Indiana

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pres Calculations
Biodiesel	All	50.66	45.76	55.55	49.02	0.0018	0.0017	0.0019	292.2000			104.15	

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

T-91: Drying - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calcaulations

Standing Losses (lb):	8.1334
Vapor Space Volume (cu ft):	6,050.9283
Vapor Density (lb/cu ft):	0.0001
Vapor Space Expansion Factor:	0.0384
Vented Vapor Saturation Factor:	0.9987
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	6,050.9283
Tank Diameter (ft):	24.0000
Vapor Space Outage (ft):	13.3755
Tank Shell Height (ft):	25.0000
Average Liquid Height (ft):	12.0000
Roof Outage (ft):	0.3755
Roof Outage (Dome Roof)	
Roof Outage (ft):	0.3755
Dome Radius (ft):	24.0000
Shell Radius (ft):	12.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0001
Vapor Molecular Weight (lb/lb-mole):	292.2000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0018
Daily Avg. Liquid Surface Temp. (deg. R):	510.3272
Daily Average Ambient Temp. (deg. F):	49.0000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	508.6900
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,225.5876
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0384
Daily Vapor Temperature Range (deg. R):	19.5858
Daily Vapor Pressure Range (psia):	0.0002
Breather Vent Press. Setting Range(psia):	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0018
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0017
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0019
Daily Avg. Liquid Surface Temp. (deg R):	510.3272
Daily Min. Liquid Surface Temp. (deg R):	505.4307
Daily Max. Liquid Surface Temp. (deg R):	515.2236
Daily Ambient Temp. Range (deg. R):	19.1000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9987
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0018
Vapor Space Outage (ft):	13.3755
Working Losses (lb):	108.1975
Vapor Molecular Weight (lb/lb-mole):	292.2000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0018
Annual Net Throughput (gal/yr.):	36,000,000.0000
Annual Turnovers:	409.0909
Turnover Factor:	0.2400
Maximum Liquid Volume (gal):	88,000.0000
Maximum Liquid Height (ft):	25.0000
Tank Diameter (ft):	24.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	116.3309

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

T-91: Drying - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Biodiesel	108.20	8.13	116.33

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	T-4
City:	Hammond
State:	Indiana
Company:	Wolf Lake Terminals
Type of Tank:	Vertical Fixed Roof Tank
Description:	Wash Water By-Product Storage Tank T-4

Tank Dimensions

Shell Height (ft):		24.00
Diameter (ft):		30.00
Liquid Height (ft) :		24.00
Avg. Liquid Height (ft):		12.00
Volume (gallons):		126,000.00
Turnovers:		283.68
Net Throughput(gal/yr):		36,000,000.00
Is Tank Heated (y/n):	N	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome	
Height (ft)		0.94
Radius (ft) (Dome Roof)		30.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Chicago, Illinois (Avg Atmospheric Pressure = 14.38 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

T-4 - Vertical Fixed Roof Tank
Hammond, Indiana

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Press Calculations
Wash Water	All	50.66	45.76	55.55	49.02	0.3200	0.3000	0.3400	18.0000			104.15	

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

T-4 - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calcaulations

Standing Losses (lb):	115.1420
Vapor Space Volume (cu ft):	8,814.2488
Vapor Density (lb/cu ft):	0.0011
Vapor Space Expansion Factor:	0.0412
Vented Vapor Saturation Factor:	0.8254
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	8,814.2488
Tank Diameter (ft):	30.0000
Vapor Space Outage (ft):	12.4696
Tank Shell Height (ft):	24.0000
Average Liquid Height (ft):	12.0000
Roof Outage (ft):	0.4696
Roof Outage (Dome Roof)	
Roof Outage (ft):	0.4696
Dome Radius (ft):	30.0000
Shell Radius (ft):	15.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0011
Vapor Molecular Weight (lb/lb-mole):	18.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.3200
Daily Avg. Liquid Surface Temp. (deg. R):	510.3272
Daily Average Ambient Temp. (deg. F):	49.0000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	508.6900
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,225.5876
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0412
Daily Vapor Temperature Range (deg. R):	19.5858
Daily Vapor Pressure Range (psia):	0.0400
Breather Vent Press. Setting Range(psia):	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.3200
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.3000
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.3400
Daily Avg. Liquid Surface Temp. (deg R):	510.3272
Daily Min. Liquid Surface Temp. (deg R):	505.4307
Daily Max. Liquid Surface Temp. (deg R):	515.2236
Daily Ambient Temp. Range (deg. R):	19.1000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.8254
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.3200
Vapor Space Outage (ft):	12.4696
Working Losses (lb):	1,344.9783
Vapor Molecular Weight (lb/lb-mole):	18.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.3200
Annual Net Throughput (gal/yr.):	36,000,000.0000
Annual Turnovers:	283.6780
Turnover Factor:	0.2724
Maximum Liquid Volume (gal):	126,000.0000
Maximum Liquid Height (ft):	24.0000
Tank Diameter (ft):	30.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	1,460.1203

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

T-4 - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Wash Water	1,344.98	115.14	1,460.12

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	T-24
City:	Hammond
State:	Indiana
Company:	Wolf Lake Terminals
Type of Tank:	Vertical Fixed Roof Tank
Description:	Soy Oil Feedstock Storage Tank T-24

Tank Dimensions

Shell Height (ft):	39.50
Diameter (ft):	42.00
Liquid Height (ft) :	39.50
Avg. Liquid Height (ft):	19.75
Volume (gallons):	420,000.00
Turnovers:	85.71
Net Throughput(gal/yr):	36,000,000.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft)	1.31
Radius (ft) (Dome Roof)	42.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Chicago, Illinois (Avg Atmospheric Pressure = 14.38 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

T-24 - Vertical Fixed Roof Tank
Hammond, Indiana

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pres Calculations
Soy Oil	All	50.66	45.76	55.55	49.02	0.0003	0.0003	0.0003	884.0000			104.15	

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

T-24 - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calcaulations

Standing Losses (lb):	19.1736
Vapor Space Volume (cu ft):	28,273.2147
Vapor Density (lb/cu ft):	0.0000
Vapor Space Expansion Factor:	0.0384
Vented Vapor Saturation Factor:	0.9997
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	28,273.2147
Tank Diameter (ft):	42.0000
Vapor Space Outage (ft):	20.4074
Tank Shell Height (ft):	39.5000
Average Liquid Height (ft):	19.7500
Roof Outage (ft):	0.6574
Roof Outage (Dome Roof)	
Roof Outage (ft):	0.6574
Dome Radius (ft):	42.0000
Shell Radius (ft):	21.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0000
Vapor Molecular Weight (lb/lb-mole):	884.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0003
Daily Avg. Liquid Surface Temp. (deg. R):	510.3272
Daily Average Ambient Temp. (deg. F):	49.0000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	508.6900
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,225.5876
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0384
Daily Vapor Temperature Range (deg. R):	19.5858
Daily Vapor Pressure Range (psia):	0.0000
Breather Vent Press. Setting Range(psia):	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0003
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0003
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0003
Daily Avg. Liquid Surface Temp. (deg R):	510.3272
Daily Min. Liquid Surface Temp. (deg R):	505.4307
Daily Max. Liquid Surface Temp. (deg R):	515.2236
Daily Ambient Temp. Range (deg. R):	19.1000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9997
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0003
Vapor Space Outage (ft):	20.4074
Working Losses (lb):	117.4457
Vapor Molecular Weight (lb/lb-mole):	884.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0003
Annual Net Throughput (gal/yr.):	36,000,000.0000
Annual Turnovers:	85.7143
Turnover Factor:	0.5167
Maximum Liquid Volume (gal):	420,000.0000
Maximum Liquid Height (ft):	39.5000
Tank Diameter (ft):	42.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	136.6193

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

T-24 - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Soy Oil	117.45	19.17	136.62

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification	Tank 99 Methanol Storage uncontrolled
City:	Hammond
State:	Indiana
Company	Wolf Lake Terminals
Type of Tank	Vertical Fixed Roof Tank
Description	The annual use of methanol is 5,680,000 gals for 36,000,000 gals of BD-100 not including recyle This is split 3 ways between identical tanks T-99, T-101, and T-103

Tank Dimensions

Shell Height (ft):	18.00
Diameter (ft):	12.00
Liquid Height (ft)	17.00
Avg. Liquid Height (ft):	9.00
Volume (gallons):	15,200.00
Turnovers	129.00
Net Throughput(gal/yr):	1,960,800.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft)	1.00
Radius (ft) (Dome Roof)	12.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Chicago, Illinois (Avg Atmospheric Pressure = 14.38 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Tank 99 Methanol Storage uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F) Avg	Min	Max	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg	Min	Max	Vapor Mol Weight	Liquid Mass Fract	Vapor Mass Fract	Mol Weight	Basis for Vapor Pressure Calculations
Methyl alcohol	All	50.06	45.78	55.55	49.62	1.0677	0.9072	1.2519	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Tank 99 Methanol Storage uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calculations

Standing Losses (lb)	102.4112
Vapor Space Volume (cu ft)	1 074 9463
Vapor Density (lb/cu ft)	0 0062
Vapor Space Expansion Factor	0 0643
Vented Vapor Saturation Factor	0 6503
Tank Vapor Space Volume	
Vapor Space Volume (cu ft)	1 074 9463
Tank Diameter (ft)	12 0000
Vapor Space Outage (ft)	8 5046
Tank Shell Height (ft)	18 0000
Average Liquid Height (ft)	8 0000
Roof Outage (ft)	0 5046
Roof Outage (Dome Roof)	
Roof Outage (ft)	0 5046
Dome Radius (ft)	12 0000
Shell Radius (ft)	6 0000
Vapor Density	
Vapor Density (lb/cu ft)	0 0062
Vapor Molecular Weight (lb/lb-mole)	32 0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1 0677
Daily Avg. Liquid Surface Temp. (deg. R)	510 3272
Daily Average Ambient Temp. (deg. F)	49 0000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R))	10 731
Liquid Bulk Temperature (deg. R)	508 6900
Tank Paint Solar Absorptance (Shell)	0 1700
Tank Paint Solar Absorptance (Roof)	0 1700
Daily Total Solar Insulation Factor (Btu/sq ft day)	1,225 5876
Vapor Space Expansion Factor	
Vapor Space Expansion Factor	0 0643
Daily Vapor Temperature Range (deg. R)	19 5858
Daily Vapor Pressure Range (psia)	0 3448
Breather Vent Press. Setting Range(psia)	0 0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1 0677
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia)	0 9072
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia)	1 2519
Daily Avg. Liquid Surface Temp. (deg R)	510 3272
Daily Min. Liquid Surface Temp. (deg R)	505 4307
Daily Max. Liquid Surface Temp. (deg R)	515 2236
Daily Ambient Temp. Range (deg. R)	19 1000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor	0 6503
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1 0677
Vapor Space Outage (ft)	8 5046
Working Losses (lb)	637 5744
Vapor Molecular Weight (lb/lb-mole)	32 0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1 0677
Annual Net Throughput (gal/yr.)	1 980 600 0000
Annual Turnovers	129 0000
Turnover Factor	0 2692
Maximum Liquid Volume (gal)	15 200 0000
Maximum Liquid Height (ft)	17 0000
Tank Diameter (ft)	12 0000
Working Loss Product Factor	1 0000
Total Losses (lb)	739 9856

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tank 99 Methanol Storage uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Methyl alcohol	637.57	102.41	739.99

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification	Tank 101 Methanol Storage uncontrolled
City:	Hammond
State:	Indiana
Company:	Wolf Lake Terminals
Type of Tank:	Vertical Fixed Roof Tank
Description:	The annual use of methanol is 5,860,000 gals for 36,000,000 gals of BD-100 not including recyle. This is split 3 ways between identical tanks T-99, T-101, and T-103

Tank Dimensions

Shell Height (ft):	18.00
Diameter (ft):	12.00
Liquid Height (ft) :	17.00
Avg. Liquid Height (ft):	9.00
Volume (gallons)	15,200.00
Turnovers:	129.00
Net Throughput(gal/yr):	1,960,800.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade	White/White
Shell Condition	Good
Roof Color/Shade	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft)	1.00
Radius (ft) (Dome Roof)	12.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Chicago, Illinois (Avg Atmospheric Pressure = 14.38 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Tank 101 Methanol Storage uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F) Avg	Min	Max	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg	Min	Max	Vapor Mol Weight	Liquid Mass Fract	Vapor Mass Fract	Mol Weight	Basis for Vapor Pressure Calculations
Methyl alcohol	All	50.66	45.76	55.55	45.02	1.0577	0.9072	1.2519	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Tank 101 Methanol Storage uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calculations

Standing Losses (lb)	102.4112
Vapor Space Volume (cu ft)	1,074.9483
Vapor Density (lb/cu ft)	0.0082
Vapor Space Expansion Factor	0.0643
Vented Vapor Saturation Factor	0.6503
Tank Vapor Space Volume	
Vapor Space Volume (cu ft)	1,074.9483
Tank Diameter (ft)	12.0000
Vapor Space Outage (ft)	9.5046
Tank Shell Height (ft)	18.0000
Average Liquid Height (ft)	0.0000
Roof Outage (ft)	0.5046
Roof Outage (Dome Roof)	
Roof Outage (ft)	0.5046
Dome Radius (ft)	12.0000
Shell Radius (ft)	6.0000
Vapor Density	
Vapor Density (lb/cu ft)	0.0082
Vapor Molecular Weight (lb/lb-mole)	32.0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1.0677
Daily Avg. Liquid Surface Temp. (deg. R)	510.3272
Daily Average Ambient Temp. (deg. F)	49.0000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R))	10.731
Liquid Bulk Temperature (deg. R)	508.6900
Tank Paint Solar Absorptance (Shell)	0.1700
Tank Paint Solar Absorptance (Roof)	0.1700
Daily Total Solar Insulation Factor (Btu/sq.ft.-day)	1,225.5876
Vapor Space Expansion Factor	
Vapor Space Expansion Factor	0.0643
Daily Vapor Temperature Range (deg. R)	19.5858
Daily Vapor Pressure Range (psia)	0.3448
Breather Vent Press. Setting Range (psia)	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1.0677
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia)	0.9372
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia)	1.2519
Daily Avg. Liquid Surface Temp. (deg R)	510.3272
Daily Min. Liquid Surface Temp. (deg R)	505.4307
Daily Max. Liquid Surface Temp. (deg R)	515.2238
Daily Ambient Temp. Range (deg. R)	19.1000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor	0.6503
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1.0677
Vapor Space Outage (ft)	9.5046
Working Losses (lb)	637.5744
Vapor Molecular Weight (lb/lb-mole)	32.0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1.0677
Annual Net Throughput (gal/yr.)	1,960,800.0000
Annual Turnovers	129.0000
Turnover Factor	0.3992
Maximum Liquid Volume (gal)	15,200.0000
Maximum Liquid Height (ft)	17.0000
Tank Diameter (ft)	12.0000
Working Loss Product Factor	1.0000
Total Losses (lb)	739.9856

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tank 101 Methanol Storage uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Methyl alcohol	637.57	102.41	739.99

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Tank 103 Methanol Storage uncontrolled
City:	Hammond
State:	Indiana
Company:	Wolf Lake Terminals
Type of Tank:	Vertical Fixed Roof Tank
Description:	The annual use of methanol is 5,880,000 gals for 36,000,000 gals of BD-100 not including recyle. This is split 3 ways between identical tanks T-99, T-101, and T-103

Tank Dimensions

Shell Height (ft):	18.00
Diameter (ft):	12.00
Liquid Height (ft):	17.00
Avg. Liquid Height (ft):	9.00
Volume (gallons):	15,200.00
Turnovers:	129.00
Net Throughput(gal/yr):	1,960,800.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft):	1.00
Radius (ft) (Dome Roof):	12.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig):	0.00

Meterological Data used in Emissions Calculations: Chicago, Illinois (Avg Atmospheric Pressure = 14.38 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Tank 103 Methanol Storage uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F) Avg.	Min	Max	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg	Min	Max	Vapor Mol Weight	Liquid Mass Fract	Vapor Mass Fract	Mol Weight	Basis for Vapor Pressure Calculations
Methyl alcohol	All	50.88	45.76	55.55	48.02	1.0677	0.8072	1.2519	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Tank 103 Methanol Storage uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calculations

Standing Losses (lb)	102.4112
Vapor Space Volume (cu ft)	1,074.9463
Vapor Density (lb/cu ft)	0.0062
Vapor Space Expansion Factor	0.0043
Vented Vapor Saturation Factor	0.6503
Tank Vapor Space Volume	
Vapor Space Volume (cu ft)	1,074.9463
Tank Diameter (ft)	12.0000
Vapor Space Outage (ft)	9.5046
Tank Shell Height (ft)	18.0000
Average Liquid Height (ft)	9.0000
Roof Outage (ft)	0.5046
Roof Outage (Dome Roof)	
Roof Outage (ft)	0.5046
Dome Radius (ft)	12.0000
Shell Radius (ft)	6.0000
Vapor Density	
Vapor Density (lb/cu ft)	0.0062
Vapor Molecular Weight (lb/lb-mole)	32.0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1.0877
Daily Avg. Liquid Surface Temp. (deg. R)	510.3272
Daily Average Ambient Temp. (deg. F)	49.0000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R))	10.731
Liquid Bulk Temperature (deg. R)	508.6000
Tank Paint Solar Absorptance (Shell)	0.1700
Tank Paint Solar Absorptance (Roof)	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day)	1,225.5678
Vapor Space Expansion Factor	
Vapor Space Expansion Factor	0.0043
Daily Vapor Temperature Range (deg. R)	19.5858
Daily Vapor Pressure Range (psia)	0.3446
Breather Vent Press. Setting Range(psia)	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1.0877
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia)	0.9072
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia)	1.2519
Daily Avg. Liquid Surface Temp. (deg.R)	510.3272
Daily Min. Liquid Surface Temp. (deg.R)	505.4307
Daily Max. Liquid Surface Temp. (deg.R)	515.2236
Daily Ambient Temp. Range (deg. R)	19.1000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor	0.6503
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1.0877
Vapor Space Outage (ft)	9.5046
Working Losses (lb)	637.5744
Vapor Molecular Weight (lb/lb-mole)	32.0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1.0877
Annual Net Throughput (gal/yr.)	1,960,800.0000
Annual Turnovers	129.0000
Turnover Factor	0.3962
Maximum Liquid Volume (gal)	15,200.0000
Maximum Liquid Height (ft)	17.0000
Tank Diameter (ft)	12.0000
Working Loss Product Factor	1.0000
Total Losses (lb)	738.9856

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tank 103 Methanol Storage uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Methyl alcohol	637.57	102.41	739.99

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	T-96 Uncontrolled
City:	Hammond
State:	Indiana
Company:	Wolf Lake Terminals
Type of Tank:	Vertical Fixed Roof Tank
Description:	Tank 96 is a 30% Sodium Methylate Storage Tank. 30% SM contains 70% Methanol by weight This run is to show uncontrolled emissions at ambient conditions There are two identical storage tanks (T-96 and T-97) so each tank will show half the annual storage

Tank Dimensions

Shell Height (ft):		18.00
Diameter (ft):		8.00
Liquid Height (ft):		18.20
Avg. Liquid Height (ft):		9.00
Volume (gallons):		5,091.41
Turnovers:		72.99
Net Throughput(gal/yr):		444,600.07
Is Tank Heated (y/n):	N	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome	
Height (ft):		1.00
Radius (ft) (Dome Roof):		0.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig):	0.00

Meterological Data used in Emissions Calculations: Chicago, Illinois (Avg Atmospheric Pressure = 14.38 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

T-96 Uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F) Avg	Min	Max	Liquid Surf Temp (deg F)	Vapor Pressure (psia) Avg	Min	Max	Vapor Mol. Weight	Liquid Mass Fract	Vapor Mass Fract	Mol Weight	Basis for Vapor Pressure Calculations
Methyl alcohol	All	50.66	45.76	55.55	49.62	1.0077	0.9073	1.2519	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

T-96 Uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calculations

Standing Losses (lb)	45.5341
Vapor Space Volume (cu ft)	478.0457
Vapor Density (lb/cu ft)	0.0062
Vapor Space Expansion Factor	0.0643
Vented Vapor Saturation Factor	0.6501
Tank Vapor Space Volume	
Vapor Space Volume (cu ft)	478.0457
Tank Diameter (ft)	8.0000
Vapor Space Outage (ft)	9.5104
Tank Shell Height (ft)	18.0000
Average Liquid Height (ft)	9.0000
Roof Outage (ft)	0.5104
Roof Outage (Dome Roof)	
Roof Outage (ft)	0.5104
Dome Radius (ft)	0.0000
Shell Radius (ft)	4.0000
Vapor Density	
Vapor Density (lb/cu ft)	0.0062
Vapor Molecular Weight (lb/lb-mole)	32.0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1.0677
Daily Avg. Liquid Surface Temp. (deg. R)	510.3272
Daily Average Ambient Temp. (deg. F)	49.0000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R))	10.731
Liquid Bulk Temperature (deg. R)	508.6000
Tank Paint Solar Absorptance (Shell)	0.1700
Tank Paint Solar Absorptance (Roof)	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day)	1,225.5876
Vapor Space Expansion Factor	
Vapor Space Expansion Factor	0.0643
Daily Vapor Temperature Range (deg. R)	19.5858
Daily Vapor Pressure Range (psia)	0.3446
Breather Vent Press. Setting Range(psia)	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1.0677
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia)	0.9072
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia)	1.2519
Daily Avg. Liquid Surface Temp. (deg R)	510.3272
Daily Min. Liquid Surface Temp. (deg R)	505.4307
Daily Max. Liquid Surface Temp. (deg R)	515.2238
Daily Ambient Temp. Range (deg. R)	19.1006
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor	0.6501
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1.0677
Vapor Space Outage (ft)	9.5104
Working Losses (lb)	209.1928
Vapor Molecular Weight (lb/lb-mole)	32.0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1.0677
Annual Net Throughput (gal/yr.)	444,800.0728
Annual Turnovers	72.9880
Turnover Factor	0.5777
Maximum Liquid Volume (gal)	6,091.9133
Maximum Liquid Height (ft)	18.2000
Tank Diameter (ft)	8.0000
Working Loss Product Factor	1.0000
Total Losses (lb)	254.7369

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

T-96 Uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Methyl alcohol	209.19	45.53	254.73

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	T-97 Uncontrolled
City:	Hammond
State:	Indiana
Company:	Wolf Lake Terminals
Type of Tank:	Vertical Fixed Roof Tank
Description:	Tank 96 is a 30% Sodium Methylate Storage Tank. 30% SM contains 70% Methanol by weight This run is to show uncontrolled emissions at ambient conditions. There are two identical storage tanks (T-96 and T-97) so each tank will show half the annual storage

Tank Dimensions

Shell Height (ft):	18.00
Diameter (ft):	8.00
Liquid Height (ft):	16.20
Avg. Liquid Height (ft):	9.00
Volume (gallons):	6,091.41
Turnovers:	72.99
Net Throughput(gal/yr):	444,612.28
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft):	1.00
Radius (ft) (Dome Roof):	0.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig):	0.03

Meterological Data used in Emissions Calculations: Chicago, Illinois (Avg Atmospheric Pressure = 14.38 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

T-97 Uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F) Avg	Min	Max	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg	Min	Max	Vapor Mol Weight	Liquid Mass Fract	Vapor Mass Fract	Mol Weight	Basis for Vapor Pressure Calculations
Methyl alcohol	All	50.66	45.78	55.55	49.02	1.0677	0.9072	1.2519	32.040C			32.04	Cohen 2 A=7.897, B=1474.08, C=229.13

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

T-97 Uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calculations

Standing Losses (lb)	42.3412
Vapor Space Volume (cu ft)	478.0457
Vapor Density (lb/cu ft)	0.0062
Vapor Space Expansion Factor	0.0598
Vented Vapor Saturation Factor	0.8501
Tank Vapor Space Volume	
Vapor Space Volume (cu ft)	478.0457
Tank Diameter (ft)	8.0000
Vapor Space Outage (ft)	9.5104
Tank Shell Height (ft)	18.0000
Average Liquid Height (ft)	8.0000
Roof Outage (ft)	0.5104
Roof Outage (Dome Roof)	
Roof Outage (ft)	0.5104
Dome Radius (ft)	0.0000
Shell Radius (ft)	4.0000
Vapor Density	
Vapor Density (lb/cu ft)	0.0062
Vapor Molecular Weight (lb/lb-mole)	32.0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1.0677
Daily Avg. Liquid Surface Temp. (deg. R)	510.3272
Daily Average Ambient Temp. (deg. F)	49.0000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R))	10.731
Liquid Bulk Temperature (deg. R)	508.8800
Tank Paint Solar Absorptance (Shell)	0.1700
Tank Paint Solar Absorptance (Roof)	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day)	1,225.5876
Vapor Space Expansion Factor	
Vapor Space Expansion Factor	0.0598
Daily Vapor Temperature Range (deg. R)	19.5858
Daily Vapor Pressure Range (psia)	0.3446
Breather Vent Press. Setting Range(psia)	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1.0677
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia)	0.9072
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia)	1.2519
Daily Avg. Liquid Surface Temp. (deg R)	510.3272
Daily Min. Liquid Surface Temp. (deg R)	505.4307
Daily Max. Liquid Surface Temp. (deg R)	515.2236
Daily Ambient Temp. Range (deg. R)	19.1000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor	0.8501
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1.0677
Vapor Space Outage (ft)	9.5104
Working Losses (lb)	209.1945
Vapor Molecular Weight (lb/lb-mole)	32.0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	1.0677
Annual Net Throughput (gal/yr.)	444,612.2557
Annual Turnovers	72.9900
Turnover Factor	0.5777
Maximum Liquid Volume (gal)	6,091.4133
Maximum Liquid Height (ft)	18.2000
Tank Diameter (ft)	8.0000
Working Loss Product Factor	1.0000
Total Losses (lb)	251.5356

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

T-97 Uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Methyl alcohol	209.19	42.34	251.54

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	T-88
City:	Hammond
State:	Indiana
Company:	Wolf Lake Terminals
Type of Tank:	Vertical Fixed Roof Tank
Description:	Reactor T-88 (Loading)

Tank Dimensions

Shell Height (ft):		24.00
Diameter (ft):		25.00
Liquid Height (ft) :		24.00
Avg. Liquid Height (ft):		12.00
Volume (gallons):		88,000.00
Turnovers:		409.09
Net Throughput(gal/yr):		36,000,000.00
Is Tank Heated (y/n):	N	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome	
Height (ft)		0.78
Radius (ft) (Dome Roof)		25.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Chicago, Illinois (Avg Atmospheric Pressure = 14.38 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

T-88 - Vertical Fixed Roof Tank
Hammond, Indiana

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Press Calculations
Soy Oil/Methanol/Catalyst Mixture	All	50.66	45.76	55.55	49.02	1.0677	0.9072	1.2519	32.0000			104.15	

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

T-88 - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calcaulations

Standing Losses (lb):	523.2383
Vapor Space Volume (cu ft):	6,082.4219
Vapor Density (lb/cu ft):	0.0062
Vapor Space Expansion Factor:	0.0643
Vented Vapor Saturation Factor:	0.5878
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	6,082.4219
Tank Diameter (ft):	25.0000
Vapor Space Outage (ft):	12.3910
Tank Shell Height (ft):	24.0000
Average Liquid Height (ft):	12.0000
Roof Outage (ft):	0.3910
Roof Outage (Dome Roof)	
Roof Outage (ft):	0.3910
Dome Radius (ft):	25.0000
Shell Radius (ft):	12.5000
Vapor Density	
Vapor Density (lb/cu ft):	0.0062
Vapor Molecular Weight (lb/lb-mole):	32.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	1.0677
Daily Avg. Liquid Surface Temp. (deg. R):	510.3272
Daily Average Ambient Temp. (deg. F):	49.0000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	508.6900
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,225.5876
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0643
Daily Vapor Temperature Range (deg. R):	19.5858
Daily Vapor Pressure Range (psia):	0.3447
Breather Vent Press. Setting Range(psia):	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	1.0677
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.9072
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	1.2519
Daily Avg. Liquid Surface Temp. (deg R):	510.3272
Daily Min. Liquid Surface Temp. (deg R):	505.4307
Daily Max. Liquid Surface Temp. (deg R):	515.2236
Daily Ambient Temp. Range (deg. R):	19.1000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.5878
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	1.0677
Vapor Space Outage (ft):	12.3910
Working Losses (lb):	7,028.5166
Vapor Molecular Weight (lb/lb-mole):	32.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	1.0677
Annual Net Throughput (gal/yr.):	36,000,000.0000
Annual Turnovers:	409.0909
Turnover Factor:	0.2400
Maximum Liquid Volume (gal):	88,000.0000
Maximum Liquid Height (ft):	24.0000
Tank Diameter (ft):	25.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	7,551.7548

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

T-88 - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Soy Oil/Methanol/Catalyst Mixture	7,028.52	523.24	7,551.75

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification		
User Identification:	T-3 Glycerin Storage uncontrolled	
City:	Hammond	
State:	Indiana	
Company:	Wolf Lake Terminals	
Type of Tank:	Vertical Fixed Roof Tank	
Description:	If T-118 is not used for recycling methanol then T-3 is used for storage and shipped off site. So its on or the other T-3 or T-118	
Tank Dimensions		
Shell Height (ft):		30.00
Diameter (ft):		24.00
Liquid Height (ft) :		28.00
Avg. Liquid Height (ft):		26.00
Volume (gallons):		94,755.32
Turnovers:		44.22
Net Throughput(gal/yr):		4,190,459.17
Is Tank Heated (y/n):	Y	
Paint Characteristics		
Shell Color/Shade:	White/White	
Shell Condition:	Good	
Roof Color/Shade:	White/White	
Roof Condition:	Good	
Roof Characteristics		
Type:	Dome	
Height (ft):		1.00
Radius (ft) (Dome Roof):		24.00
Breather Vent Settings		
Vacuum Settings (psig):		0.00
Pressure Settings (psig):		0.00

Meterological Data used in Emissions Calculations: Chicago, Illinois (Avg Atmospheric Pressure = 14.38 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

T-3 Glycerin Storage uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F) Avg	Min	Max	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg	Min	Max	Vapor Mol Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol Weight	Basis for Vapor Pressure Calculations
Methyl alcohol	All	90.00	85.00	95.00	90.00	3.4920	3.0380	4.0040	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

T-3 Glycerin Storage uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calculations

Standing Losses (lb)	822.1917
Vapor Space Volume (cu ft)	2,036.2756
Vapor Density (lb/cu ft)	0.0190
Vapor Space Expansion Factor	0.1069
Vented Vapor Saturation Factor	0.5455
Tank Vapor Space Volume	
Vapor Space Volume (cu ft)	2,036.2756
Tank Diameter (ft)	24.0000
Vapor Space Outage (ft)	4.5012
Tank Shell Height (ft)	30.0000
Average Liquid Height (ft)	26.0000
Roof Outage (ft)	0.5012
Roof Outage (Dome Roof)	
Roof Outage (ft)	0.5012
Dome Radius (ft)	24.0000
Shell Radius (ft)	12.0000
Vapor Density	
Vapor Density (lb/cu ft)	0.0190
Vapor Molecular Weight (lb/lb-mole)	32.0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	3.4929
Daily Avg. Liquid Surface Temp. (deg. R)	549.6700
Daily Average Ambient Temp. (deg. R)	49.0000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R))	10.731
Liquid Bulk Temperature (deg. R)	549.6700
Tank Paint Solar Absorptance (Shell)	0.1700
Tank Paint Solar Absorptance (Roof)	0.1700
Daily Total Solar Insulation Factor (Btu/sq ft day)	1,225.5876
Vapor Space Expansion Factor	
Vapor Space Expansion Factor	0.1069
Daily Vapor Temperature Range (deg. R)	10.0000
Daily Vapor Pressure Range (psia)	0.0660
Breather Vent Press. Setting Range(psia)	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	3.4929
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia)	3.0380
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia)	4.0040
Daily Avg. Liquid Surface Temp. (deg R)	549.6700
Daily Min. Liquid Surface Temp. (deg R)	544.6700
Daily Max. Liquid Surface Temp. (deg R)	554.6700
Daily Ambient Temp. Range (deg. R)	19.1000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor	0.5455
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	3.4929
Vapor Space Outage (ft)	4.5012
Working Losses (lb)	9,435.5833
Vapor Molecular Weight (lb/lb-mole)	32.0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	3.4929
Annual Net Throughput (gal/yr.)	4,190,450.1737
Annual Turnovers	44.2240
Turnover Factor	0.8450
Maximum Liquid Volume (gal)	94,755.3178
Maximum Liquid Height (ft)	26.0000
Tank Diameter (ft)	24.0000
Working Loss Product Factor	1.0000
Total Losses (lb)	10,257.5551

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

T-3 Glycerin Storage uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Methyl alcohol	9,435.36	822.19	10,257.56

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	T-85
City:	Hammond
State:	Indiana
Company:	Wolf Lake Terminals
Type of Tank:	Vertical Fixed Roof Tank
Description:	Byproduct Storage Tank T-85

Tank Dimensions

Shell Height (ft):		24.00
Diameter (ft):		20.00
Liquid Height (ft) :		24.00
Avg. Liquid Height (ft):		12.00
Volume (gallons):		56,000.00
Turnovers:		10.29
Net Throughput(gal/yr):		576,000.00
Is Tank Heated (y/n):	N	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome	
Height (ft)		0.63
Radius (ft) (Dome Roof)		20.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Chicago, Illinois (Avg Atmospheric Pressure = 14.38 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

T-85 - Vertical Fixed Roof Tank
Hammond, Indiana

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Press Calculations
Crude Glycerin	All	50.66	45.76	55.55	49.02	1.0677	0.9072	1.2519	32.0400			104.15	

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

T-85 - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calcaulations

Standing Losses (lb):	334.0456
Vapor Space Volume (cu ft):	3,868.2138
Vapor Density (lb/cu ft):	0.0062
Vapor Space Expansion Factor:	0.0643
Vented Vapor Saturation Factor:	0.5894
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	3,868.2138
Tank Diameter (ft):	20.0000
Vapor Space Outage (ft):	12.3129
Tank Shell Height (ft):	24.0000
Average Liquid Height (ft):	12.0000
Roof Outage (ft):	0.3129
Roof Outage (Dome Roof)	
Roof Outage (ft):	0.3129
Dome Radius (ft):	20.0000
Shell Radius (ft):	10.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0062
Vapor Molecular Weight (lb/lb-mole):	32.0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	1.0677
Daily Avg. Liquid Surface Temp. (deg. R):	510.3272
Daily Average Ambient Temp. (deg. F):	49.0000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	508.6900
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,225.5876
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0643
Daily Vapor Temperature Range (deg. R):	19.5858
Daily Vapor Pressure Range (psia):	0.3447
Breather Vent Press. Setting Range(psia):	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	1.0677
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.9072
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	1.2519
Daily Avg. Liquid Surface Temp. (deg R):	510.3272
Daily Min. Liquid Surface Temp. (deg R):	505.4307
Daily Max. Liquid Surface Temp. (deg R):	515.2236
Daily Ambient Temp. Range (deg. R):	19.1000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.5894
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	1.0677
Vapor Space Outage (ft):	12.3129
Working Losses (lb):	469.1535
Vapor Molecular Weight (lb/lb-mole):	32.0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	1.0677
Annual Net Throughput (gal/yr.):	576,000.0000
Annual Turnovers:	10.2857
Turnover Factor:	1.0000
Maximum Liquid Volume (gal):	56,000.0000
Maximum Liquid Height (ft):	24.0000
Tank Diameter (ft):	20.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	803.1990

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

T-85 - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Crude Glycerin	469.15	334.05	803.20

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	T118 Methanol- Glycerin (GMS) recycle uncontrolled
City:	Hammond
State:	Indiana
Company:	
Type of Tank:	Vertical Fixed Roof Tank
Description:	GMS is Glycerin, Methanol and Soap. It is accumulated in this tank and then distilled. This represents the 90 deg F annual storage temp before stripping

Tank Dimensions

Shell Height (ft)	30.00
Diameter (ft):	12.00
Liquid Height (ft) :	24.77
Avg. Liquid Height (ft):	12.00
Volume (gallons):	20,952.00
Turnovers:	200.00
Net Throughput(gal/yr):	4,190,400.00
Is Tank Heated (y/n):	Y

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft)	1.00
Radius (ft) (Dome Roof)	12.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Chicago, Illinois (Avg Atmospheric Pressure = 14.38 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

T118 Methanol- Glycerin (GMS) recycle uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F) Avg	Min	Max	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg	Min	Max	Vapor Mol Weight	Liquid Mass Fract	Vapor Mass Fract	Mol Weight	Basis for Vapor Pressure Calculations
Methyl alcohol	All	90.00	85.00	95.00	90.00	3.4029	3.0360	4.0040	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

T118 Methanol- Glycerin (GMS) recycle uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calculations

Standing Losses (lb)	350.0427
Vapor Space Volume (cu ft)	2,092.8243
Vapor Density (lb/cu ft)	0.0190
Vapor Space Expansion Factor	0.1069
Vented Vapor Saturation Factor	0.2260
Tank Vapor Space Volume	
Vapor Space Volume (cu ft)	2,092.8243
Tank Diameter (ft)	12.0000
Vapor Space Outage (ft)	18.5046
Tank Shell Height (ft)	30.0000
Average Liquid Height (ft)	12.0000
Roof Outage (ft)	0.5046
Roof Outage (Dome Roof)	
Roof Outage (ft)	0.5046
Dome Radius (ft)	17.0000
Shell Radius (ft)	6.0000
Vapor Density	
Vapor Density (lb/cu ft)	0.0190
Vapor Molecular Weight (lb/lb-mole)	32.0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	3.4929
Daily Avg. Liquid Surface Temp. (deg. R)	548.6700
Daily Average Ambient Temp. (deg. F)	49.0000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R))	10.731
Liquid Bulk Temperature (deg. R)	549.6700
Tank Paint Solar Absorptance (Shell)	0.1700
Tank Paint Solar Absorptance (Roof)	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day)	1,225.5878
Vapor Space Expansion Factor	
Vapor Space Expansion Factor	0.1069
Daily Vapor Temperature Range (deg. R)	10.0000
Daily Vapor Pressure Range (psia)	0.9050
Breather Vent Press. Setting Range(psia)	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	3.4929
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia)	3.0380
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia)	4.0040
Daily Avg. Liquid Surface Temp. (deg.R)	549.6700
Daily Min. Liquid Surface Temp. (deg.R)	544.6700
Daily Max. Liquid Surface Temp. (deg.R)	554.6700
Daily Ambient Temp. Range (deg. R)	19.1000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor	0.2260
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	3.4929
Vapor Space Outage (ft)	18.5046
Working Losses (lb)	3,535.7538
Vapor Molecular Weight (lb/lb-mole)	32.0400
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)	3.4929
Annual Net Throughput (gal/yr.)	4,190,400.0000
Annual Turnovers	200.0000
Turnover Factor	0.3187
Maximum Liquid Volume (gal)	20,952.0000
Maximum Liquid Height (ft)	24.7851
Tank Diameter (ft)	12.0000
Working Loss Product Factor	1.0000
Total Losses (lb)	3,885.7965

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

T118 Methanol- Glycerin (GMS) recycle uncontrolled - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Methyl alcohol	3,535.75	350.04	3,885.80

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	T-5
City:	Hammond
State:	Indiana
Company:	Wolf Lake Terminals
Type of Tank:	Vertical Fixed Roof Tank
Description:	Biodiesel Product Storage Tanks T-5, T-10, and T-15. This modification will increase annual production throughput to 36,000,000 gallons per year. This is split three ways between identical tanks T-5, T-10, and T-15.

Tank Dimensions

Shell Height (ft):		24.00
Diameter (ft):		30.00
Liquid Height (ft) :		24.00
Avg. Liquid Height (ft):		12.00
Volume (gallons):		126,000.00
Turnovers:		95.24
Net Throughput(gal/yr):		12,000,000.00
Is Tank Heated (y/n):	N	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome	
Height (ft)		0.94
Radius (ft) (Dome Roof)		30.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Chicago, Illinois (Avg Atmospheric Pressure = 14.38 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

T-5 - Vertical Fixed Roof Tank
Hammond, Indiana

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pres Calculations
Biodiesel	All	50.66	45.76	55.55	49.02	0.0018	0.0017	0.0019	292.2000			104.15	

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

T-5 - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calcaulations	
Standing Losses (lb):	11.8488
Vapor Space Volume (cu ft):	8,814.2488
Vapor Density (lb/cu ft):	0.0001
Vapor Space Expansion Factor:	0.0384
Vented Vapor Saturation Factor:	0.9988
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	8,814.2488
Tank Diameter (ft):	30.0000
Vapor Space Outage (ft):	12.4696
Tank Shell Height (ft):	24.0000
Average Liquid Height (ft):	12.0000
Roof Outage (ft):	0.4696
Roof Outage (Dome Roof)	
Roof Outage (ft):	0.4696
Dome Radius (ft):	30.0000
Shell Radius (ft):	15.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0001
Vapor Molecular Weight (lb/lb-mole):	292.2000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0018
Daily Avg. Liquid Surface Temp. (deg. R):	510.3272
Daily Average Ambient Temp. (deg. F):	49.0000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	508.6900
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,225.5876
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0384
Daily Vapor Temperature Range (deg. R):	19.5858
Daily Vapor Pressure Range (psia):	0.0002
Breather Vent Press. Setting Range(psia):	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0018
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0017
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0019
Daily Avg. Liquid Surface Temp. (deg R):	510.3272
Daily Min. Liquid Surface Temp. (deg R):	505.4307
Daily Max. Liquid Surface Temp. (deg R):	515.2236
Daily Ambient Temp. Range (deg. R):	19.1000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9988
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0018
Vapor Space Outage (ft):	12.4696
Working Losses (lb):	72.3821
Vapor Molecular Weight (lb/lb-mole):	292.2000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0018
Annual Net Throughput (gal/yr.):	12,000,000.0000
Annual Turnovers:	95.2381
Turnover Factor:	0.4817
Maximum Liquid Volume (gal):	126,000.0000
Maximum Liquid Height (ft):	24.0000
Tank Diameter (ft):	30.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	84.2309

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

T-5 - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Biodiesel	72.38	11.85	84.23

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	T-10
City:	Hammond
State:	Indiana
Company:	Wolf Lake Terminals
Type of Tank:	Vertical Fixed Roof Tank
Description:	Biodiesel Product Storage Tanks T-5, T-10, and T-15. This modification will increase annual production throughput to 36,000,000 gallons per year. This is split three ways between identical tanks T-5, T-10, and T-15.

Tank Dimensions

Shell Height (ft):		24.00
Diameter (ft):		30.00
Liquid Height (ft) :		24.00
Avg. Liquid Height (ft):		12.00
Volume (gallons):		126,000.00
Turnovers:		95.24
Net Throughput(gal/yr):		12,000,000.00
Is Tank Heated (y/n):	N	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome	
Height (ft)		0.94
Radius (ft) (Dome Roof)		30.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Chicago, Illinois (Avg Atmospheric Pressure = 14.38 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

T-10 - Vertical Fixed Roof Tank
Hammond, Indiana

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pres: Calculations
Biodiesel	All	50.66	45.76	55.55	49.02	0.0018	0.0017	0.0019	292.2000			104.15	

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

T-10 - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calcaulations

Standing Losses (lb):	11.8488
Vapor Space Volume (cu ft):	8,814.2488
Vapor Density (lb/cu ft):	0.0001
Vapor Space Expansion Factor:	0.0384
Vented Vapor Saturation Factor:	0.9988
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	8,814.2488
Tank Diameter (ft):	30.0000
Vapor Space Outage (ft):	12.4696
Tank Shell Height (ft):	24.0000
Average Liquid Height (ft):	12.0000
Roof Outage (ft):	0.4696
Roof Outage (Dome Roof)	
Roof Outage (ft):	0.4696
Dome Radius (ft):	30.0000
Shell Radius (ft):	15.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0001
Vapor Molecular Weight (lb/lb-mole):	292.2000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0018
Daily Avg. Liquid Surface Temp. (deg. R):	510.3272
Daily Average Ambient Temp. (deg. F):	49.0000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	508.6900
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,225.5876
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0384
Daily Vapor Temperature Range (deg. R):	19.5858
Daily Vapor Pressure Range (psia):	0.0002
Breather Vent Press. Setting Range(psia):	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0018
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0017
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0019
Daily Avg. Liquid Surface Temp. (deg R):	510.3272
Daily Min. Liquid Surface Temp. (deg R):	505.4307
Daily Max. Liquid Surface Temp. (deg R):	515.2236
Daily Ambient Temp. Range (deg. R):	19.1000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9988
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0018
Vapor Space Outage (ft):	12.4696
Working Losses (lb):	72.3821
Vapor Molecular Weight (lb/lb-mole):	292.2000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0018
Annual Net Throughput (gal/yr.):	12,000,000.0000
Annual Turnovers:	95.2381
Turnover Factor:	0.4817
Maximum Liquid Volume (gal):	126,000.0000
Maximum Liquid Height (ft):	24.0000
Tank Diameter (ft):	30.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	84.2309

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

T-10 - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Biodiesel	72.38	11.85	84.23

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	T-15
City:	Hammond
State:	Indiana
Company:	Wolf Lake Terminals
Type of Tank:	Vertical Fixed Roof Tank
Description:	Biodiesel Product Storage Tanks T-5, T-10, and T-15. This modification will increase annual production throughput to 36,000,000 gallons per year. This is split three ways between identical tanks T-5, T-10, and T-15.

Tank Dimensions

Shell Height (ft):		24.00
Diameter (ft):		30.00
Liquid Height (ft) :		24.00
Avg. Liquid Height (ft):		12.00
Volume (gallons):		126,000.00
Turnovers:		95.24
Net Throughput(gal/yr):		12,000,000.00
Is Tank Heated (y/n):	N	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome	
Height (ft)		0.94
Radius (ft) (Dome Roof)		30.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Chicago, Illinois (Avg Atmospheric Pressure = 14.38 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

T-15 - Vertical Fixed Roof Tank
Hammond, Indiana

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pres: Calculations
Biodiesel	All	50.66	45.76	55.55	49.02	0.0018	0.0017	0.0019	292.2000			104.15	

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

T-15 - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calcaulations

Standing Losses (lb):	11.8488
Vapor Space Volume (cu ft):	8,814.2488
Vapor Density (lb/cu ft):	0.0001
Vapor Space Expansion Factor:	0.0384
Vented Vapor Saturation Factor:	0.9988
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	8,814.2488
Tank Diameter (ft):	30.0000
Vapor Space Outage (ft):	12.4696
Tank Shell Height (ft):	24.0000
Average Liquid Height (ft):	12.0000
Roof Outage (ft):	0.4696
Roof Outage (Dome Roof)	
Roof Outage (ft):	0.4696
Dome Radius (ft):	30.0000
Shell Radius (ft):	15.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0001
Vapor Molecular Weight (lb/lb-mole):	292.2000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0018
Daily Avg. Liquid Surface Temp. (deg. R):	510.3272
Daily Average Ambient Temp. (deg. F):	49.0000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	508.6900
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,225.5876
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0384
Daily Vapor Temperature Range (deg. R):	19.5858
Daily Vapor Pressure Range (psia):	0.0002
Breather Vent Press. Setting Range(psia):	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0018
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0017
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0019
Daily Avg. Liquid Surface Temp. (deg R):	510.3272
Daily Min. Liquid Surface Temp. (deg R):	505.4307
Daily Max. Liquid Surface Temp. (deg R):	515.2236
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Maximum Liquid Volume (gal):	126,000.0000
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Total Losses (lb):	84.2309

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

T-15 - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Gary Brum
Wolf Lake Terminals, Inc.
3200 S Sheffield Ave
Hammond, IN 46327

DATE: August 6, 2010

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Part 70
089-28673-00230

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Lauren Pecina (Bruce Carter Associates)
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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Toll Free (800) 451-6027
www.idem.IN.gov

August 6, 2010

TO: Lake County Public Library

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: **Wolf Lake Terminals, Inc.**

Permit Number: **089-28673-00230**

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Governor

Thomas W. Easterly
Commissioner

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Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: August 6, 2010

RE: Wolf Lake Terminals, Inc. / 089-28673-00230

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

In order to conserve paper and reduce postage costs, IDEM's Office of Air Quality is now sending many permit decisions on CDs in Adobe PDF format. The enclosed CD contains information regarding the company named above.

This permit is also available on the IDEM website at:
http://www.in.gov/ai/appfiles/idem-caats/

If you would like to request a paper copy of the permit document, please contact IDEM's central file room at:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

Please Note: *If you feel you have received this information in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV.*

Enclosures
CD Memo.dot 11/14/08

Mail Code 61-53

IDEM Staff	CDENNY 8/6/2010 Wolf Lake Terminals, Inc. 089-28673-00230 (final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Gary Brum Wolf Lake Terminals, Inc. 3200 S Sheffield Ave Hammond IN 46327 (Source CAATS)									
2		East Chicago City Council 4525 Indianapolis Blvd East Chicago IN 46312 *(Local Official)*									
3		Gary - Hobart Water Corp 650 Madison St, P.O. Box M486 Gary IN 46401-0486 *(Affected Party)*									
4		Lake County Health Department-Gary 1145 W. 5th Ave Gary IN 46402-1795 *(Health Department)*									
5		WJOB / WZVN Radio 6405 Olcott Ave Hammond IN 46320 *(Affected Party)*									
6		Hammond City Council and Mayors Office 5925 Calumet Avenue Hammond IN 46320 *(Local Official)*									
7		Laurence A. McHugh Barnes & Thornburg 100 North Michigan South Bend IN 46601-1632 *(Affected Party)*									
8		Lake Co Public Library 1919 W 81st Ave Merrillville IN 46410-5382 *(Library)*									
9		Shawn Sobocinski 3229 E. Atlanta Court Portage IN 46368 *(Affected Party)*									
10		Ms. Carolyn Marsh Lake Michigan Calumet Advisory Council 1804 Oliver St Whiting IN 46394-1725 *(Affected Party)*									
11		Mark Coleman 9 Locust Place Ogden Dunes IN 46368 *(Affected Party)*									
12		Mr. Chris Hernandez Pipefitters Association, Local Union 597 8762 Louisiana St., Suite G Merrillville IN 46410 *(Affected Party)*									
13		Craig Hogarth 7901 West Morris Street Indianapolis IN 46231 (Affected Party)									
14		Lake County Commissioners 2293 N. Main St, Building A 3rd Floor Crown Point IN 46307 *(Local Official)*									
15		Anthony Copeland 2006 E. 140th Street East Chicago IN 46312 *(Affected Party)*									

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.

FACSIMILIE OF PS Form 3877

Mail Code 61-53

IDEM Staff	CDENNY 8/6/2010 Wolf Lake Terminals, Inc. 089-28673-00230 (final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Barbara G. 506 Lilac Street East Chicago IN 46312 (Affected Party)									
2		Mr. Robert Garcia 3733 Parrish Avenue East Chicago IN 46312 *(Affected Party)*									
3		Lauren Pecina Bruce Carter Associates 616 S 4th Street Elkhart IN 46516 *(Consultant)*									
4		Ms. Karen Kroczek 8212 Madison Ave Munster IN 46321-1627 *(Affected Party)*									
5		Calumet Township Trustee 31 E 5th Avenue Gary IN 46402 *(Affected Party)*									
6		Joseph Hero 11723 S Oakridge Drive St. John IN 46373 *(Affected Party)*									
7		Gary City Council 401 Broadway # 209 Gary IN 46402 *(Local Official)*									
8		Ron Novak Hammond Dept. of Environmental Management 5925 Calumnet Ave. Hammond IN 46320 *(Local Official)*									
9		Mr. Larry Davis 268 South, 600 West Hebron IN 46341 *(Affected Party)*									
10		Geri Wendorf 4831 Columbia Avenue Hammond IN 46327-1851 *(Affected Party)*									
11											
12											
13											
14											
15											

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.

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