INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

TO: Interested Parties / Applicant

DATE: July 16, 2013

RE: Dover Chemical Corporation - Hammond Works / 089 - 32932 - 00227

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:

(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.dot 6/13/2013

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

Dover Chemical Corporation - Hammond Works
3000 Sheffield Ave
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.

Operation Permit No.: T089-32932-00227	
Issued by: Tripurari Sinha Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: July 16, 2013 Expiration Date: July 16, 2018

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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(14)][326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary chlorinated paraffin manufacturing plant.

Source Address:	3000 Sheffield Ave, Hammond, Indiana 46327
General Source Phone Number:	219-852-4899
SIC Code:	2899
County Location:	Lake
Source Location Status:	Nonattainment for PM2.5 standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under Emission Offset Rules Minor Source, 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(14)]

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

SECTION D.1

(a) Group of Boilers

(1) One (1) Cleaver-Brooks natural gas fired boiler, Model CB-300HP, identified as B-4, constructed in 1974, rated at 12.55 MMBtu per hour, and exhausting at one (1) stack, identified as GB-3401.

(2) One (1) Cleaver-Brooks natural gas fired boiler, Model CB-200-500, identified as B-5, constructed in 1980, rated at 20.92 MMBtu per hour, and exhausting at one (1) stack, identified as GB-3402.

(3) One (1) Superior–Mohawk natural gas fired boiler, identified as B-6, constructed in 1988, rated at 20 MMBtu per hour, and exhausting at one (1) stack, identified as GB-3403.

SECTION D.2 Chlorination system

with a nominal capacity of 3,000 pounds per hour of chlorine feed to produce short to long chain chlorination paraffins, olefins, waxes, polybutene, and 4,821 pounds per hour of muriatic acid. The chlorination system consists of the following systems:

(b) The system consisting of:

(1) Seven (7) reactors, identified as TR-2001 (constructed before 1976), TR-2003 (constructed before 1976), TR-2004 (constructed before 1976), TR-2005 (constructed before 1976), TR-2007(constructed in 1977), TR-2008 (constructed in 1977) and TR-2010 (constructed in 1983), with a maximum capacity of 2,000

gallons each;

(2) Three (3) reactors, identified as TR-2002 (constructed in 1988), TR-2009 (constructed in 1982), and TR-2017 (constructed in 1993), with a maximum capacity of 4,000 gallons each;

(3) One (1) sulfur monochloride tank, identified as TS-1058, constructed in 1981, with a maximum capacity of 5,470 gallons;

(4) One (1) acid tower condensate neutralization tank, identified as TP-2030, constructed before 1976, with a maximum capacity of 500 gallons;

(5) Two (2) chlorine railcar track spots, identified as RC-0101 and RC-0201, constructed before 1976, with a maximum capacity of 1 railcar (containing at most 180,600 pounds) each;

(6) One (1) acid tower, identified as CB-2060, constructed before 1976, with a maximum capacity of 4,821 lb/hr muriatic acid;

(7) One (1) tower product acid tank, identified as TP-2033, constructed before 1976, with a maximum capacity of 560-gallons;

(8) One (1) tower water feed tank, identified as TP-2060 (constructed in 1996), with a maximum capacity of 560-gallons; and

(9) Two (2) chlorine vaporizers, identified as XV-2050 and XV-2051, constructed before 1976, and with a maximum feed capacity of 3,000 lb/hr chlorine combined.

all controlled by seven (7) scrubbers, identified as TP-2061 (constructed before 1976), TP-2062 (constructed before 1976), TP-2063 (constructed before 1976), TP-2064 (constructed before 1976), TP-2065 (constructed in 1977), TP-2066 (constructed in 1977), and TP-2067 (constructed in 1995), and exhausting at seven (7) stacks, identified as Stacks TP-2061 to 2067.

(c) The system consisting of:

(1) Three (3) muriatic acid tanks, identified as TS-1090 (constructed in 1979), TS-1091(constructed in 1980), and TS-1093 (constructed in 2000), with a maximum capacity of 16,000, 14,900 and 16,000 gallons, respectively;

(2) Two (2) hypochlorite reduction tanks, identified as TP-3494, and TP-3495 (constructed in 1993), with a maximum capacity of 6,250 gallons each;

(3) One (1) muriatic acid tank truck loading station, constructed in 1979, with a maximum capacity of 1 truck;

controlled by one (1) caustic scrubber identified as TP-1099 constructed in 1980 exhausting at one (1) stack, identified as Stack TP-1099.

(d) The system consisting of:

(1) One (1) chlorinated product tank, identified as TS-2041, constructed before 1976, with a maximum capacity of 4,000 gallons;

(2) Two (2) chlorinated product tanks, identified as TS-2043, and TS-2044,

constructed before 1976, with a maximum capacity of 4,100 gallons each; and

(3) One (1) chlorinated product-drumming tank, identified as TS-2012, constructed in 1978, with a maximum capacity of 1,500 gallons.

SECTION D.3 Sulfurization system

with a nominal capacity of 7000 pounds per hour of sulfurized products consisting of the following equipment:

(e) The system consisting of:

(1) Two (2) sulfurization reactors, identified as TR-2120, and TR-2123, constructed before 1976, with maximum capacity of 3,700, and 7,500 gallons, respectively, and one (1) sulfurization reactor identified as TR-2128, constructed in 2012, with a maximum capacity of 7,500 gallons controlled by two (2) caustic scrubbers operating in series, identified as TP-2162 and TP-2163, followed by an activated carbon system for odor management and exhausting at Stack TP-2163. Three (3) integral reflux condensers associated with sulfurization reactors TR-2120, and TR-2128. Two(2) quench tanks, identified as TP-2121A and TP-2121B, constructed in 1993 and 2010, with maximum capacities of 850 gallons and 1,200 gallons, respectively, which contain olefins and heavy oil, and which function as an emergency quench for reactor malfunctions.

(2) Five (5) blowing tanks, identified as TP-2150 (constructed in 1977), TP-2151 (constructed in 1977), TP-2152 (constructed in 1977), TP-2153 (constructed in 1977), and TP-2154 (constructed in 1997), with maximum capacity of 11,000, 9,650, 11,500, 4,000, and 7,600 gallons, respectively, venting to a blowing tank knockout tank identified as TP-2159 (constructed prior to 1976), controlled by two (2) caustic scrubbers, identified as TP-2162 and TP-2163 and exhausting at Stack TP-2163.

(3) One (1) knockout storage tank, identified as TS-2164, constructed in 1976, with a maximum capacity of 1,500 gallons, exhausted to a containment scrubber, identified as TP-2167, constructed in 1995, and exhausting at Stack TP-2167.

(4) One (1) scrubber liquor storage tank, identified as TS-1028, constructed in 1980, with a maximum capacity of 11,075 gallons.

(5) Two (2) molten sulfur storage tanks, identified as TS-2190 and TP-2190, constructed in 1976.

(6) One (1) filter feed tank, maximum capacity of 3,000 gallons, identified as TP-2207, constructed prior to 1976.

SECTION D.4 Hi-Temp System

with a maximum rated capacity of 4,200 pounds per hour of Hi-Temp products consisting of the following equipment:

(f) The system consisting of:

(1) One (1) reactor, identified as TR-2620, constructed in 1989, with a maximum capacity of 4,000 gallons;

(2) Two (2) recovered methanol tanks, identified as TS-2602 and TS-2603,

constructed in 1989, with maximum capacity of 2,500, and 4,000 gallons, respectively;

(3) One (1) sludge tank, identified as TP-2604, constructed in 1989, with a maximum capacity of 750 gallons, equipped with a sludge drumming operation followed by an activated carbon filter for odor management;

(4) One (1) scrubber liquor tank, identified as TS-2610, constructed in 2001, with a maximum capacity of 10,000 gallons; and

(5) One (1) intermediate holding tank, identified as TP-2601, constructed in 1989, with a maximum capacity of 4,550 gallons;

all controlled by two (2) caustic scrubbers identified as TP-2624 and TP-2626, constructed in 1989; and one flare, identified as GB-2627, constructed in 1990, in series, and exhausting at one (1) stack, identified as Stack GB-2627.

(g) One (1) scrubber liquor truck loading station, constructed in 1989, controlled by a carbon drum, identified as TF-2610 constructed in 2001.

(h) The system consisting of:

(1) One (1) reactor, identified as TP-2553, constructed in 1993, with a maximum capacity of 2,100 gallons.

(2) One (1) reactor, identified as TR-2541, constructed in 2005, with a maximum capacity of 3,500 gallons.

(3) Three (3) wash water tanks, identified as TP-2556, TP-2557, and TP-2558, constructed in 1996, each with a maximum capacity of 700 gallons.

All controlled by one (1) caustic scrubber, identified as TP-2589, exhausting at Stack-2589.

(i) One (1) filter feed tank, constructed in 1993, identified as TP-2554, with a maximum capacity of 2,100 gallons.

(j) One (1) PIB heat up tank, identified as TP-2542, constructed in 2010, with a maximum capacity of 5,000 gallons.

(k) One (1) overflow tank, identified as TP-2537, permitted in 2010, with a maximum capacity of 2,000 gallons.

(l) One (1) reactor, constructed in 1990, identified as TR-2630, with a maximum capacity of 4,000 gallons, equipped with an integral multi-stage steam educator and condenser system followed by a carbon drum and one (1) emergency overflow tank, identified as TP-2760, permitted in 2010, with a maximum capacity of 1,300 gallons, and one (1) reactor, identified as TR-2016, constructed in 1990, with a maximum capacity of 4,000 gallons, with emissions controlled by a scrubber, TP-2072.

(m) The system consisting of:

(1) One (1) filter feed tank, identified as TP-2720, constructed in 1995, with maximum capacity of 5,000 gallons.

(2) One (1) filter, identified at GF-2724, constructed in 1995, with a maximum capacity of 69 cubic feet per filter cake.

(3) One (1) filter, identified as GF-2734, constructed in 2005, with a maximum capacity of 41 cubic feet per filter cake.

(4) One (1) pre-coat tank, identified as TP-2722, constructed in 1995, with a maximum capacity of 1,300 gallons.

(5) One (1) flush tank, identified as TP-2726, constructed in 2010, with a maximum capacity of 1,300 gallons.

All controlled by a carbon drum, identified as TF-2728, exhausting to Stack TF-2728.

(n) Two (2) filtrate tanks, identified as TP-2730 and TP-2732, constructed in 1995 and 2010, respectively, with a maximum capacity of 5,000 gallons each.

(o) Two (2) neutralization storage tanks, identified as TP-2538 and TP-2539, permitted in 2010, with a maximum capacity of 12,500 gallons, each.

(p) One (1) amine storage tank, identified as TS-2391, permitted in 2010, with a maximum capacity of 7,950 gallons.

(q) Three (3) reactors, identified as TR-2006 (constructed before 1976), TR-2014 (constructed in 1990), with a maximum capacity of 2,000 gallons each, and TR-2015 (constructed in 1990), with a maximum capacity of 4,000 gallons.

all controlled by seven (7) scrubbers, identified as TP-2061 (constructed before 1976), TP-2062 (constructed before 1976), TP-2063 (constructed before 1976), TP-2064 (constructed before 1976), TP-2065 (constructed in 1977), TP-2066 (constructed in 1977), and TP-2067 (constructed in 1995), and exhausting at seven (7) stacks, identified as Stacks TP-2061 to 2067 all controlled by a scrubber identified as TP-2072 (constructed in 1985), and exhausting at a stack identified as Stack TP-2072.

SECTION D.5 Fuel Additive system

with a maximum rated capacity of 12,000 pounds per hour of fuel additives (prior to blending) consisting of the following equipment:

(r) Three (3) fuel additive blending tanks, identified as TP-1030, TP-1031, and TP-1032, all constructed in 1985, with maximum capacities of 11,740, 15,220, and 11,740 gallons, respectively.

SECTION D.6 Miscellaneous system

with a maximum rated capacity of 3,000 pounds per hour consisting of the following equipment:

(s) Four (4) reactors, identified as TR-2224 (constructed in 1980), TR-2226 (constructed before 1976), TR-2227 (constructed before 1976), and TR-2322 (constructed in 1984), maximum capacity of 5,500, 7,000, 400, 2000 gallons respectively; controlled by two (2) wet scrubbers, identified as PE-2228, and TP-2332, and exhausting at stacks identified as Stack PE-2228, and Stack TP-2332.

(t) One (1) reactor, identified as TR-2329 (constructed in 1986), maximum capacity of 1,500 gallons.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)]

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

SECTION D.7 VOC STORAGE TANKS

(a) Storage tanks emitting less than one (1) ton per year collectively of a combination of HAPs and less than fifteen (15) pounds per day of VOC. [326 IAC 12, and 40 CFR 60.112b(a)]

(1) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1001, constructed in 1997.

(2) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1002, constructed in 1997.

(3) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1003, constructed in 1993.

(4) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1004, constructed in 1978.

(5) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1005, constructed in 1978.

(6) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1006, constructed in 1978.

(7) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1007, constructed in 1978.

(8) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1008, constructed in 1978.

(9) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1009, constructed in 1978.

(10) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1010, constructed in 1978.

(11) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1011, constructed in 1978.

(12) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1012, constructed in 1978.

(13) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1013, constructed in 1978.

(14) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1014, constructed in 1978.

(15) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1015, constructed in 1987.

(16) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1016,

constructed in 1978.

(17) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1017, constructed in 1978.

(18) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1018, constructed in 1978.

(19) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1019, constructed in 1996.

(20) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1020, constructed in 1997.

(21) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1021, constructed in 1997.

(22) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1022, constructed in 1996.

(23) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1023, constructed in 1996.

(24) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1024, constructed in 1997.

(25) One (1) storage tank, maximum capacity of 28,760 gallons, identified as TS-1026, constructed in 1980.

(26) One (1) storage tank, identified as TS-1027, constructed in 1985, maximum capacity of 14,930 gallons, controlled by a carbon adsorption drum identified as TF-1027, and exhausting at stack identified as Stack TF-1027.

(27) One (1) storage tank, maximum capacity of 15,220 gallons, identified as TS-1033, constructed in 1986.

(28) One (1) storage tank, maximum capacity of 15,380 gallons, identified as TS-1039, constructed in 1987.

(29) One (1) storage tank, maximum capacity of 15,380 gallons, identified as TS-1040, constructed in 1987.

(30) One (1) storage tank, maximum capacity of 15,540 gallons, identified as TS-1042, constructed in 1989.

(31) One (1) storage or blend tank, maximum capacity of 14,900 gallons, identified as TS-1043, constructed in 1990.

(32) One (1) wax storage tank, maximum capacity of 20,390 gallons, identified as TS-1056, constructed in 1978.

(33) One (1) storage tank, maximum capacity of 20,390 gallons, identified as TS-1057, constructed in 1978.

(34) One (1) storage tank, maximum capacity of 4,010 gallons, identified as TS-1081, constructed in 1989.

(35) One (1) storage tank, maximum capacity of 15,220 gallons, identified as TS-1082, constructed in 1989.

(36) One (1) storage tank, maximum capacity of 10,360 gallons, identified as TS-2160, constructed before 1976.

(37) One (1) storage tank, maximum capacity of 10,360 gallons, identified as TS-2163, constructed before 1976.

(38) One (1) storage tank, maximum capacity of 15,270 gallons, identified as TS-2168, constructed before 1976.

(39) One (1) storage tank, maximum capacity of 15,270 gallons, identified as TS-2169, constructed before 1976.

(40) One (1) storage tank, maximum capacity of 15,270 gallons, identified as TS-2170, constructed before 1976.

(41) One (1) storage tank, maximum capacity of 23,310 gallons, identified as TS-2178, constructed in 1998.

(42) One (1) storage tank, maximum capacity of 2,600 gallons, identified as TS-2209, constructed before 1979.

(43) One (1) storage tank, maximum capacity of 10,800 gallons, identified as TS-2218, constructed before 1979.

(44) One (1) storage tank, maximum capacity of 10,690 gallons, identified as TS-2252, constructed prior to 1976.

(45) One (1) storage tank, maximum capacity of 6,760 gallons, identified as TS-2253, constructed before 1976.

(46) One (1) storage tank, maximum capacity of 23,310 gallons, identified as TS-2255, constructed before 1976.

(47) One (1) storage tank, maximum capacity of 10,360 gallons, identified as TS-2264, constructed before 1979.

(48) One (1) storage tank, maximum capacity of 31,070 gallons, identified as TS-2265, constructed before 1979.

(49) One (1) storage tank, maximum capacity of 3,920 gallons, identified as TS-2271, constructed in 2005.

(50) One (1) storage tank, maximum capacity of 3,920 gallons, identified as TS-2272, constructed in 2005.

(51) One (1) storage tank, maximum capacity of 23,310 gallons, identified as TS-2275, constructed before 1979.

(52) One (1) storage tank, maximum capacity of 23,310 gallons, identified as TS-2276, constructed before 1979.

(53) One (1) storage tank, maximum capacity of 23,310 gallons, identified as TS-2277,

constructed before 1976.

(54) One (1) storage tank, maximum capacity of 10,570 gallons, identified as TS-2605, constructed in 1990.

(55) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2315, constructed in 1990.

(56) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2362, constructed in 1990.

(57) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2364, constructed in 1990.

(58) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2365, constructed in 1990.

(59) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2367, constructed in 1990.

(60) One (1) storage tank, maximum capacity of 10,570 gallons, identified as TS-2606, constructed in 1989.

(61) One (1) storage tank, permitted in 2010, identified as TS-2607, with a maximum capacity of 30,000 gallons.

(62) One (1) storage tank, maximum capacity of 4,760 gallons, identified as TS-2611, constructed in 1990.

(63) One (1) storage tank, maximum capacity of 4,760 gallons, identified as TS-2612, constructed in 1990.

(64) One (1) storage tank, maximum capacity of 30,080 gallons, identified as TS-2613, constructed in 1990.

(65) One (1) storage tank, maximum capacity of 10,570 gallons, identified as TS-2618, constructed in 1990.

(66) One (1) storage tank, maximum capacity of 16,920 gallons, identified as TS-2619, constructed in 1990.

(67) One (1) storage tank, maximum capacity of 2,750 gallons, identified as TP-2550, constructed in 1996, and modified in 2007 to vent to scrubber TP-2636 which exhausts to stack TP-2636.

(68) One (1) storage tank, maximum capacity of 2,750 gallons, identified as TP-2551, constructed in 1996, and modified in 2007 to vent to scrubber TP-2636 which exhausts to stack TP-2636.

(69) One (1) storage tank, maximum capacity of 2,970 gallons, identified as TP-2617, constructed in 1990.

SECTION D.8 5.7 MMBtu/hr Boiler

(b) One (1) natural gas fired boiler, identified as boiler no. B-3, constructed in 1974, rated at 5.7 MMBtu per hour, exhausting at one (1) stack, identified as GB-3404.

(c) Wastewater treatment plant air strippers.

(d) Two (2) parts washers, identified as PW-1M and PW-2L, constructed in 2005, with a rated capacity of 40 gallons.

(e) One (1) diesel emergency generator, identified as EG-1, constructed in 2002, with a rated capacity of 130 kilowatts (174.3 hp).

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, T089-32932-00227, 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 or of permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control).

(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(35), 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(35).

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(35).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][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(35).

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(35).

(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) 464-0233; fax: (219) 464-0553**.**

(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(35).

(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)(8) 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 T089-32932-00227 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, except for permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control)

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(35).

(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(35).

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] [40 CFR 72]

(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) Pursuant to 326 IAC 2-7-11(b) and 326 IAC 2-7-12(a), administrative Part 70 operating permit amendments and permit modifications for purposes of the acid rain portion of a Part 70 permit shall be governed by regulations promulgated under Title IV of the Clean Air Act. [40 CFR 72]

(c) 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(35).

(d) 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) or (c) 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)(1) and (c)(1). 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) and (c)(1).

(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(35).

(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.

(f) This condition does not apply to emission trades of SO_2 or NO_X under 326 IAC 21 or 326 IAC 10-4.

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(35).

(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 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.6 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(35).

(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.7 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(35).

(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(35).

(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.8 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.9 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)][40 CFR 64][326 IAC 3-8]

(a) 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(35).

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.

(b) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(c) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

C.10 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.11 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

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 [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5] [326 IAC 2-7-6]

(l) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, 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.

(II)

(a) CAM *Response to excursions or exceedances.*

(1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the 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 emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(2) 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, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

(b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing

document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

(c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a QIP. The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.

(d) Elements of a QIP:
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).

(e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

(f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:

(1) Failed to address the cause of the control device performance problems; or

(2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

(h) *CAM recordkeeping requirements.*

(1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(a)(2) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements

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(35).

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 2007 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(35).

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

(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. Support information includes the following:

(AA) All calibration and maintenance records.

(BB) All original strip chart recordings for continuous monitoring instrumentation.

(CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.

(BB) The dates analyses were performed.

(CC) The company or entity that performed the analyses.

(DD) The analytical techniques or methods used.

(EE) The results of such analyses.

(FF) The operating conditions as existing at the time of sampling or measurement.

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) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A), 326 IAC 2-2-8 (b)(6)(B), 326 IAC 2-3-2 (l)(6)(A), and/or 326 IAC 2-3-2 (l)(6)(B)) that a “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

(1) Before beginning actual construction of the “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, document and maintain the following records:

(A) A description of the project.

(B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.

(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

(i) Baseline actual emissions;

(ii) Projected actual emissions;

(iii) Amount of emissions excluded under section

326 IAC 2-2-1(pp)(2)(A)(iii) and/or 326 IAC 2-3-1 (kk)(2)(A)(iii); and

(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

(d) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)) that a "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

(1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and

(2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-3] [40 CFR 64][326 IAC 3-8]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. 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(35). 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) 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.

(e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (oo) and/or 326 IAC 2-3-1 (jj)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (ww) and/or 326 IAC 2-3-1 (pp), for that regulated NSR pollutant, and

(2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).

(f) The report for project at an existing emissions unit shall be submitted no later than sixty (60) days after the end of the year and contain the following:

(1) The name, address, and telephone number of the major stationary source.

(2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.

(3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).

(4) Any other information that the Permittee wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part 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

(g) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

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.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Group of Boilers

(1) One (1) Cleaver-Brooks natural gas fired boiler, Model CB-300HP, identified as B-4, constructed in 1974, rated at 12.55 MMBtu per hour, and exhausting at one (1) stack, identified as GB-3401.

(2) One (1) Cleaver-Brooks natural gas fired boiler, Model CB-200-500, identified as B-5, constructed in 1980, rated at 20.92 MMBtu per hour, and exhausting at one (1) stack, identified as GB-3402.

(3) One (1) Superior–Mohawk natural gas fired boiler, identified as B-6, constructed in 1988, rated at 20 MMBtu per hour, and exhausting at one (1) stack, identified as GB-3403.

(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 Lake County PM10 Emission Requirements [326 IAC 6.8-2] [326 IAC 6-2-4]

(a) Pursuant to 326 IAC 6.8-2-19 (Lake County PM_{10} emission requirements) PM_{10} emissions from the Cleaver-Brooks boiler B-4 (Stack GB-3401) shall be limited to seven-thousandths (0.007) pounds per million Btu, and 0.09 pounds per hour.

(b) Pursuant to 326 IAC 6.8-2-19 (Lake County PM_{10} emission requirements) PM_{10} emissions from the Cleaver-Brooks boiler B-5 (Stack GB-3402) shall be limited to seven-thousandths (0.007) pounds per million Btu, and 0.14 pounds per hour.

(c) Pursuant to 326 IAC 6-2-4 (Emission limitations for facilities specified in 326 IAC 6-2-1(d)) the particulate emissions from the combustion of natural gas from boiler B-6 (Stack GB-3403 shall be limited to 0.38 pounds per million Btu.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Chlorination process with a nominal capacity of 3,000 pounds per hour of chlorine feed to produce short to long chain chlorination paraffins, olefins, waxes, polybutene, and 4,821 pounds per hour of muriatic acid. The chlorination system consists of the following systems:

(b) The system consisting of:

(1) Seven (7) reactors, identified as TR-2001 (constructed before 1976), TR-2003 (constructed before 1976), TR-2004 (constructed before 1976), TR-2005 (constructed before 1976), TR-2007(constructed in 1977), TR-2008 (constructed in 1977) and TR-2010 (constructed in 1983), with a maximum capacity of 2,000 gallons each;

(2) Three (3) reactors, identified as TR-2002 (constructed in 1988), TR-2009 (constructed in 1982), and TR-2017 (constructed in 1993), with a maximum capacity of 4,000 gallons each;

(3) One (1) sulfur monochloride tank, identified as TS-1058, constructed in 1981, with a maximum capacity of 5,470 gallons;

(4) One (1) acid tower condensate neutralization tank, identified as TP-2030, constructed before 1976, with a maximum capacity of 500 gallons;

(5) Two (2) chlorine railcar track spots, identified as RC-0101 and RC-0201, constructed before 1976, with a maximum capacity of 1 railcar (containing at most 180,600 pounds) each;

(6) One (1) acid tower, identified as CB-2060, constructed before 1976, with a maximum capacity of 4,821 lb/hr muriatic acid;

(7) One (1) tower product acid tank, identified as TP-2033, constructed before 1976, with a maximum capacity of 560-gallons;

(8) One (1) tower water feed tank, identified as TP-2060 (constructed in 1996), with a maximum capacity of 560-gallons; and

(9) Two (2) chlorine vaporizers, identified as XV-2050 and XV-2051, constructed before 1976, and with a maximum feed capacity of 3,000 lb/hr chlorine combined.

all controlled by seven (7) scrubbers, identified as TP-2061 (constructed before 1976), TP-2062 (constructed before 1976), TP-2063 (constructed before 1976), TP-2064 (constructed before 1976), TP-2065 (constructed in 1977), TP-2066 (constructed in 1977), and TP-2067 (constructed in 1995), and exhausting at seven (7) stacks, identified as Stacks TP-2061 to 2067.

(c) The system consisting of:

(1) Three (3) muriatic acid tanks, identified as TS-1090 (constructed in 1979), TS-1091(constructed in 1980), and TS-1093 (constructed in 2000), with a maximum capacity of 16,000, 14,900 and 16,000 gallons, respectively;

(2) Two (2) hypochlorite reduction tanks, identified as TP-3494, and TP-3495 (constructed in 1993), with a maximum capacity of 6,250 gallons each;

(3) One (1) muriatic acid tank truck loading station, constructed in 1979, with a maximum capacity of 1 truck;

controlled by one (1) caustic scrubber identified as TP-1099 constructed in 1980 exhausting at one (1) stack, identified as Stack TP-1099.

(d) The system consisting of:

(1) One (1) chlorinated product tank, identified as TS-2041, constructed before 1976, with a maximum capacity of 4,000 gallons;

(2) Two (2) chlorinated product tanks, identified as TS-2043, and TS-2044, constructed before 1976, with a maximum capacity of 4,100 gallons each; and

(3) One (1) chlorinated product-drumming tank, identified as TS-2012, constructed in 1978, with a maximum capacity of 1,500 gallons.

(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.2.1 Lake County PM10 Emission Requirements [326 IAC 6.8-2] [326 IAC 6.8-1-5]

Pursuant to 326 IAC 6.8-2-19, the allowable PM_{10} emission rate from the Chlorination process shall not exceed 0.001 pounds per ton, and 0.003 pounds per hour. Pursuant to 326 IAC 6.8-1-5(d), the Chlorination process shall comply with both limits.

D.2.2 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

Pursuant to 326 IAC 8-9, the Permittee shall maintain a record and submit to Compliance Branch, OAQ, IDEM a report containing the following information:

(a) The vessel identification number

(b) The vessels dimension

(c) The vessel capacity

for each of the following vessels.

(1) TS-2012
(2) TS-2041
(3) TS-2043
(4) TS-2044

D.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, is required for the chlorination process and any 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.2.4 Scrubber Operation Requirements

The scrubber control system shall be in operation at all times when the chlorination system is in operation.

D.2.5 Hydrochloric Acid (HCl) and Chlorine (Cl2)

Caustic Scrubber: The caustic strength operations limit shall be no less than 4%. If a representative sample taken during any 8-hour shift shows a caustic percent reading of 4% or less, then the Permittee shall take one of the following steps:

(1) Fresh caustic will be added to the scrubber; or

(2) The caustic solution will be changed within 8 hours of test reading; or

(3) The process will be vented to the backup scrubbers; or

(4) The process shall be shutdown and the caustic solution changed before the process is started up.

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

D.2.6 Parametric Monitoring

The Permittee shall monitor the concentration (% by weight) of caustic in the chlorination scrubbers once per day.

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

D.2.7 Record Keeping Requirement

(a) In order to document the compliance status with Condition D.2.5, the Permittee shall maintain records once per day of the caustic concentration in the chlorination scrubbers. The Permittee shall include in its daily record when a caustic concentration is not taken and the reason for the lack of caustic concentration (e.g. the process did not operate that day).

(b) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the record keeping required by this condition.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Sulfurization system with a nominal capacity of 7000 pounds per hour of sulfurized products consisting of the following equipment:

(e) The system consisting of:

(1) Two (2) sulfurization reactors, identified as TR-2120, and TR-2123, constructed before 1976, with maximum capacity of 3,700, and 7,500 gallons, respectively, and one (1) sulfurization reactor identified as TR-2128, constructed in 2012, with a maximum capacity of 7,500 gallons controlled by two (2) caustic scrubbers operating in series, identified as TP-2162 and TP-2163, followed by an activated carbon system for odor management and exhausting at Stack TP-2163. Three (3) integral reflux condensers associated with sulfurization reactors TR-2120, and TR-2128. Two (2) quench tanks, identified as TP-2121A and TP-2121B, constructed in 1993 and 2010, with maximum capacities of 850 gallons and 1,200 gallons, respectively, which contain olefins and heavy oil, and which function as an emergency quench for reactor malfunctions.

(2) Five (5) blowing tanks, identified as TP-2150 (constructed in 1977), TP-2151 (constructed in 1977), TP-2152 (constructed in 1977), TP-2153 (constructed in 1977), and TP-2154 (constructed in 1997), with maximum capacity of 11,000, 9,650, 11,500, 4,000, and 7,600 gallons, respectively, venting to a blowing tank knockout tank identified as TP-2159 (constructed prior to 1976), controlled by two (2) caustic scrubbers, identified as TP-2162 and TP-2163 and exhausting at Stack TP-2163.

(3) One (1) knockout storage tank, identified as TS-2164, constructed in 1976, with a maximum capacity of 1,500 gallons, exhausted to a containment scrubber, identified as TP-2167, constructed in 1995, and exhausting at Stack TP-2167.

(4) One (1) scrubber liquor storage tank, identified as TS-1028, constructed in 1980, with a maximum capacity of 11,075 gallons.

(5) Two (2) molten sulfur storage tanks, identified as TS-2190 and TP-2190, constructed in 1976.

(6) One (1) filter feed tank, maximum capacity of 3,000 gallons, identified as TP-2207, constructed prior to 1976.

(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 Lake County PM10 Emission Requirements [326 IAC 6.8-2] [326 IAC 6.8-1-5]

Pursuant to 326 IAC 6.8-2-19, the allowable PM_{10} emission rate from the Sulfurization process shall not exceed 0.157 pounds per ton, and 0.23 pounds per hour. Pursuant to 326 IAC 6.8-1-5(d), the Sulfurization process shall comply with both limits.

D.3.2 PSD Minor Limits [326 IAC 2-2]

H2S emissions from the sulfurization process shall not exceed ten (10) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the above limit shall limit H2S emissions from the sulfurization process to less than ten (10) tons per year and shall render 326 IAC 2-2 not applicable to the sulfurization process

D.3.3 Emission Offset Minor Limit [326 IAC 2-3]

VOC emissions from the sulfurization process shall not exceed twenty five (25) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the above limit shall limit VOC emissions from the sulfurization process to less than twenty five (25) tons per year and shall render 326 IAC 2-3 not applicable to the entire source.

D.3.4 Volatile Organic Liquid Storage Vessel [326 IAC 8-9]

Pursuant to 326 IAC 8-9, the Permittee shall maintain a record and submit to Compliance Branch, OAQ, IDEM a report containing the following information for VOC storage tank TS-1028:

(a) The vessel identification number

(b) The vessels dimension

(c) The vessel capacity

D.3.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, is required for the sulfurization process and any 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.3.6 H_2S Emission Calculations

Compliance with the limit in Condition D.3.2 shall be demonstrated using the following equation:

H2S emissions (tons/month) = $T_{sulfurization\ process}$ * $EF_{sulfurH2S}$* 1 ton/2000 lbs

Where

$T_{sulfurization\ process}$= Throughput of sulfurized product to the sulfurization process (tons/month)
$EF_{sulfurH2S}$= 1.936 lbs of H2S per ton of sulfur processed (or an emission factor determined by the most recent valid compliance demonstration)

D.3.7 VOC Emission Calculations

Compliance with the limit in Condition D.3.3 shall be demonstrated using the following equation:

VOC emissions (tons/month) = $T_{sulfurized\ products\ processed}$ * $EF_{sulfurVOC}$* 1 ton/2000 lbs

Where

$T_{sulfurized\ products}$ = Throughput of sulfurized products processed to the sulfurization process (tons/month)
$EF_{sulfurVOC}$= 0.736 lbs of VOC per ton of sulfur processed (or an emission factor

determined by the most recent valid compliance demonstration)

D.3.8 Hydrogen Sulfide (H2S) and VOC [326 IAC 2-7-10.5]

(a) In demonstrate compliance with D.3.2 and D.3.3, the sulfurization scrubber for H_2S controls shall be in operation and control emissions from the sulfurization process at all times the sulfurization process is in operation.

(b) Caustic Scrubber - First Stage of Series: The caustic strength operations limit shall be no less than 1%. If a representative sample taken during any 8-hour shift shows a caustic percent reading of 1% or less, then the Permittee shall take one of the following steps:

(1) The caustic solution will be changed within 8 hours of test reading; or

(2) The process shall be shutdown and the caustic solution changed before the process is started up.

(c) Caustic Scrubber - Second Stage of Series: The caustic strength at the second stage operations limit shall be no less than 10%.

(d) The on-site Quality Control laboratory shall randomly test one of the 5-day split samples retained per week, unless the process is down for five consecutive days to verify the accuracy of operations data. Enough sample of the randomly tested sample shall also be retained so that an analysis can be run if so requested by the IDEM, OAQ within 5 day holding period. Upon request of IDEM, OAQ, a sample of the scrubber caustic solution shall be provided and/or the IDEM, OAQ may witness a sample collection and test of the scrubber solution.

D.3.9 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]

(a) In order to demonstrate the compliance status with Condition D.3.2, the Permittee shall conduct a H2S performance test as per condition D.3.6 and establish the caustic concentration (% by weight), hourly average operating temperature and minimum liquid circulation volume in the second stage sulfurization scrubber using methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

(b) In order to demonstrate the compliance status with Condition D.3.2, the Permittee shall conduct a VOC performance test as per condition D.3.7 and establish the caustic concentration (% by weight), hourly average operating temperature and minimum liquid circulation volume in the second stage sulfurization scrubber using methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

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

D.3.10 Parametric Monitoring [40 CFR 64]

(a) The Permittee shall calibrate, maintain, and operate a continuous monitoring system on the second stage sulfurization scrubber for measuring hourly average operating temperature. From the date of issuance of this permit until the approved stack test results are available the hourly average temperature of the scrubber shall not exceed 170^{o}F.

(b) (1) The Permittee shall monitor the concentration (% by weight) of caustic once per day and the scrubber liquid flow rate in second stage sulfurization scrubber once

per hour. From the date of issuance of this permit until the approved stack test results are available the concentration (% by weight) of caustic and the scrubber liquid flow rate of the scrubber shall not be lower than 10% and 80 gallons per minute, respectively.

(2) The Permittee shall test the concentration (% by weight) of caustic in first stage sulfurization scrubber once per day.

(c) The Permittee shall monitor the volume and caustic concentration charged to the scrubbers during the recharge operations once per day.

(d) Split samples taken from the second stage scrubber shall be maintained at the facility for the most current five day calendar period.

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

D.3.11 Record Keeping Requirement

(a) In order to document the compliance status with Conditions D.3.2, D.3.3, D.3.5, and D.3.6, the Permittee shall maintain records of:

(1) The amount of sulfur used and sulfurization products manufactured for each month.

(2) In order to document the compliance status with Condition D.3.2, the Permittee shall maintain record of H2S emission calculations performed using the equation found in Condition D.3.6

(3) In order to document the compliance status with Condition D.3.3, the Permittee shall maintain record of VOC emission calculations performed using the equation found in Condition D.3.7

(4) The hourly average operating temperature of the second stage of the scrubber.

(5) Records of the per day caustic concentration and per hour liquid flow rate in second stage of the scrubber.

(6) Per day records of the caustic concentration in the first stage of the scrubber.

(7) Daily volume and caustic concentration charged to the scrubbers during recharge.

(b) Pursuant to 326 IAC 8-9-6, the Permittee shall keep readily accessible records of each storage tank listed in Condition D.3.4 for the life of the tank.

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

D.3.12 Reporting Requirement

A quarterly summary of the information to document the compliance status with Conditions D.3.2 and D.3.3 shall be submitted not later than thirty (30) days following the end of each calendar quarter. 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 C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Hi-Temp System - with a maximum rated capacity of 4,200 pounds per hour of Hi-Temp products consisting of the following equipment:

(f) The system consisting of:

(1) One (1) reactor, identified as TR-2620, constructed in 1989, with a maximum capacity of 4,000 gallons;

(2) Two (2) recovered methanol tanks, identified as TS-2602 and TS-2603, constructed in 1989, with maximum capacity of 2,500, and 4,000 gallons, respectively;

(3) One (1) sludge tank, identified as TP-2604, constructed in 1989, with a maximum capacity of 750 gallons, equipped with a sludge drumming operation followed by an activated carbon filter for odor management;

(4) One (1) scrubber liquor tank, identified as TS-2610, constructed in 2001, with a maximum capacity of 10,000 gallons; and

(5) One (1) intermediate holding tank, identified as TP-2601, constructed in 1989, with a maximum capacity of 4,550 gallons;

all controlled by two (2) caustic scrubbers identified as TP-2624 and TP-2626, constructed in 1989; and one flare, identified as GB-2627, constructed in 1990, in series, and exhausting at one (1) stack, identified as Stack GB-2627.

(g) One (1) scrubber liquor truck loading station, constructed in 1989, controlled by a carbon drum, identified as TF-2610 constructed in 2001.

(h) The system consisting of:

(4) One (1) reactor, identified as TP-2553, constructed in 1993, with a maximum capacity of 2,100 gallons.

(5) One (1) reactor, identified as TR-2541, constructed in 2005, with a maximum capacity of 3,500 gallons.

(6) Three (3) wash water tanks, identified as TP-2556, TP-2557, and TP-2558, constructed in 1996, each with a maximum capacity of 700 gallons.

All controlled by one (1) caustic scrubber, identified as TP-2589, exhausting at Stack-2589.

(i) One (1) filter feed tank, constructed in 1993, identified as TP-2554, with a maximum capacity of 2,100 gallons.

(j) One (1) PIB heat up tank, identified as TP-2542, constructed in 2010, with a maximum capacity of 5,000 gallons.

(k) One (1) overflow tank, identified as TP-2537, permitted in 2010, with a maximum capacity of 2,000 gallons.

(l) One (1) reactor, constructed in 1990, identified as TR-2630, with a maximum capacity of 4,000 gallons, equipped with an integral multi-stage steam educator and condenser system followed by a carbon drum and one (1) emergency overflow tank, identified as TP-2760, permitted in 2010, with a maximum capacity of 1,300 gallons, and one (1) reactor, identified as TR-2016, constructed in 1990, with a maximum capacity of 4,000 gallons, with emissions controlled by a scrubber, TP-2072.

(m) The system consisting of:

(6) One (1) filter feed tank, identified as TP-2720, constructed in 1995, with maximum capacity of 5,000 gallons.

(7) One (1) filter, identified at GF-2724, constructed in 1995, with a maximum capacity of 69 cubic feet per filter cake.

(8) One (1) filter, identified as GF-2734, constructed in 2005, with a maximum capacity of 41 cubic feet per filter cake.

(9) One (1) pre-coat tank, identified as TP-2722, constructed in 1995, with a maximum capacity of 1,300 gallons.

(10) One (1) flush tank, identified as TP-2726, constructed in 2010, with a maximum capacity of 1,300 gallons.

All controlled by a carbon drum, identified as TF-2728, exhausting to Stack TF-2728.

(n) Two (2) filtrate tanks, identified as TP-2730 and TP-2732, constructed in 1995 and 2010, respectively, with a maximum capacity of 5,000 gallons each.

(o) Two (2) neutralization storage tanks, identified as TP-2538 and TP-2539, permitted in 2010, with a maximum capacity of 12,500 gallons, each.

(p) One (1) amine storage tank, identified as TS-2391, permitted in 2010, with a maximum capacity of 7,950 gallons.

(q) Three (3) reactors, identified as TR-2006 (constructed before 1976), TR-2014 (constructed in 1990), with a maximum capacity of 2,000 gallons each, and TR-2015 (constructed in 1990), with a maximum capacity of 4,000 gallons.

all controlled by seven (7) scrubbers, identified as TP-2061 (constructed before 1976), TP-2062 (constructed before 1976), TP-2063 (constructed before 1976), TP-2064 (constructed before 1976), TP-2065 (constructed in 1977), TP-2066 (constructed in 1977), and TP-2067 (constructed in 1995), and exhausting at seven (7) stacks, identified as Stacks TP-2061 to 2067 all controlled by a scrubber identified as TP-2072 (constructed in 1985), and exhausting at a stack identified as Stack TP-2072.

(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.4.1 Particulate Emissions Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (e), (Particulate Emissions Limitations for Manufacturing Processes), the allowable particulate matter (PM) emissions from the from the Hi-Temp Process emission units, identified as TR-2620, TR-2630 and filtration shall be limited by the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour was determined by use of the equation:

$E = 4.10\ P^{0.67}$

Where:

P = process weight rate in tons per hour (10.27 tons/hour); and
E = rate of emission in pounds per hour.

D.4.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Fuel Additive System - with a maximum rated capacity of 12,000 pounds per hour of fuel additives (prior to blending) consisting of the following equipment:

(r) Three (3) fuel additive blending tanks, identified as TP-1030, TP-1031, and TP-1032, all constructed in 1985, with maximum capacities of 11,740, 15,220, and 11,740 gallons, respectively.

(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.5.1 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

Pursuant to 326 IAC 8-9, the Permittee shall maintain a record and submit to Compliance Branch, OAQ, IDEM a report containing the following information:

(a) The vessel identification number

(b) The vessels dimension

(c) The vessel capacity

for each of the following vessels:

(1) TP-1030

(2) TP-1031

(3) TP-1032

D.5.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, is required for the Fuel Additive System and any control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

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

D.5.3 Record Keeping Requirement

(a) Pursuant to 326 IAC 8-9-6, the Permittee shall keep readily accessible records of each storage tank listed in Condition D.5.1 for the life of the storage tank.

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

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Miscellaneous system - with a maximum rated capacity of 3,000 pounds per hour consisting of the following equipment:

(s) Four (4) reactors, identified as TR-2224 (constructed in 1980), TR-2226 (constructed before 1976), TR-2227 (constructed before 1976), and TR-2322 (constructed in 1984), maximum capacity of 5,500, 7,000, 400, 2000 gallons respectively; controlled by two (2) wet scrubbers, identified as PE-2228, and TP-2332, and exhausting at stacks identified as Stack PE-2228, and Stack TP-2332.

(t) One (1) reactor, identified as TR-2329 (constructed in 1986), maximum capacity of 1,500 gallons.

(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.6.1 Particulate Emissions Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (e), (Particulate Emissions Limitations for Manufacturing Processes), the allowable particulate matter (PM) emissions from the Miscellaneous Process emission units, identified as TR-2224, TR-2226, TR-2227, TR-2329 and TR-2322 shall be limited by the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour was determined by use of the equation:

$E = 4.10\ P^{0.67}$

Where:
P = process weight rate in tons per hour (10.27 tons/hour); and
E = rate of emission in pounds per hour.

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Specifically Regulated Insignificant Activities

(a) Storage tanks emitting less than one (1) ton per year collectively of a combination of HAPs and less than fifteen (15) pounds per day of VOC. [326 IAC 12, and 40 CFR 60.112b(a)]

(1) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1001, constructed in 1997.

(2) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1002, constructed in 1997.

(3) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1003, constructed in 1993.

(4) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1004, constructed in 1978.

(5) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1005, constructed in 1978.

(6) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1006, constructed in 1978.

(7) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1007, constructed in 1978.

(8) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1008, constructed in 1978.

(9) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1009, constructed in 1978.

(10) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1010, constructed in 1978.

(11) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1011, constructed in 1978.

(12) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1012, constructed in 1978.

(13) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1013, constructed in 1978.

(14) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1014, constructed in 1978.

(15) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1015, constructed in 1987.

(16) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1016, constructed in 1978.

(17) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1017, constructed in 1978.

(18) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1018, constructed in 1978.

(19) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1019, constructed in 1996.

(20) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1020, constructed in 1997.

(21) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1021, constructed in 1997.

(22) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1022, constructed in 1996.

(23) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1023, constructed in 1996.

(24) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1024, constructed in 1997.

(25) One (1) storage tank, maximum capacity of 28,760 gallons, identified as TS-1026, constructed in 1980.

(26) One (1) storage tank, identified as TS-1027, constructed in 1985, maximum capacity of 14,930 gallons, controlled by a carbon adsorption drum identified as TF-1027, and exhausting at stack identified as Stack TF-1027.

(27) One (1) storage tank, maximum capacity of 15,220 gallons, identified as TS-1033, constructed in 1986.

(28) One (1) storage tank, maximum capacity of 15,380 gallons, identified as TS-1039, constructed in 1987.

(29) One (1) storage tank, maximum capacity of 15,380 gallons, identified as TS-1040, constructed in 1987.

(30) One (1) storage tank, maximum capacity of 15,540 gallons, identified as TS-1042, constructed in 1989.

(31) One (1) storage or blend tank, maximum capacity of 14,900 gallons, identified a TS-1043, constructed in 1990.

(32) One (1) wax storage tank, maximum capacity of 20,390 gallons, identified as TS-1056, constructed in 1978.

(33) One (1) storage tank, maximum capacity of 20,390 gallons, identified as TS-1057, constructed in 1978.

(34) One (1) storage tank, maximum capacity of 4,010 gallons, identified as TS-1081 constructed in 1989.

(35) One (1) storage tank, maximum capacity of 15,220 gallons, identified as TS-1082, constructed in 1989.

(36) One (1) storage tank, maximum capacity of 10,360 gallons, identified as TS-2160, constructed before 1976.

(37) One (1) storage tank, maximum capacity of 10,360 gallons, identified as TS-2163, constructed before 1976.

(38) One (1) storage tank, maximum capacity of 15,270 gallons, identified as TS-2168, constructed before 1976.

(39) One (1) storage tank, maximum capacity of 15,270 gallons, identified as TS-2169, constructed before 1976.

(40) One (1) storage tank, maximum capacity of 15,270 gallons, identified as TS-2170, constructed before 1976.

(41) One (1) storage tank, maximum capacity of 23,310 gallons, identified as TS-2178, constructed in 1998.

(42) One (1) storage tank, maximum capacity of 2,600 gallons, identified as TS-2209 constructed before 1979.

(43) One (1) storage tank, maximum capacity of 10,800 gallons, identified as TS-2218, constructed before 1979.

(44) One (1) storage tank, maximum capacity of 10,690 gallons, identified as TS-2252, constructed prior to 1976.

(45) One (1) storage tank, maximum capacity of 6,760 gallons, identified as TS-2253 constructed before 1976.

(46) One (1) storage tank, maximum capacity of 23,310 gallons, identified as TS-2255, constructed before 1976.

(47) One (1) storage tank, maximum capacity of 10,360 gallons, identified as TS-2264, constructed before 1979.

(48) One (1) storage tank, maximum capacity of 31,070 gallons, identified as TS-2265, constructed before 1979.

(49) One (1) storage tank, maximum capacity of 3,920 gallons, identified as TS-2271 constructed in 2005.

(50) One (1) storage tank, maximum capacity of 3,920 gallons, identified as TS-2272 constructed in 2005.

(51) One (1) storage tank, maximum capacity of 23,310 gallons, identified as TS-2275, constructed before 1979.

(52) One (1) storage tank, maximum capacity of 23,310 gallons, identified as TS-2276, constructed before 1979.

(53) One (1) storage tank, maximum capacity of 23,310 gallons, identified as TS-

2277, constructed before 1976.

(54) One (1) storage tank, maximum capacity of 10,570 gallons, identified as TS-2605, constructed in 1990.

(55) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2315, constructed in 1990.

(56) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2362, constructed in 1990.

(57) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2364, constructed in 1990.

(58) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2365, constructed in 1990.

(59) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2367, constructed in 1990.

(60) One (1) storage tank, maximum capacity of 10,570 gallons, identified as TS-2606, constructed in 1989.

(61) One (1) storage tank, permitted in 2010, identified as TS-2607, with a maximum capacity of 30,000 gallons.

(62) One (1) storage tank, maximum capacity of 4,760 gallons, identified as TS-2611 constructed in 1990.

(63) One (1) storage tank, maximum capacity of 4,760 gallons, identified as TS-2612 constructed in 1990.

(64) One (1) storage tank, maximum capacity of 30,080 gallons, identified as TS-2613, constructed in 1990.

(65) One (1) storage tank, maximum capacity of 10,570 gallons, identified as TS-2618, constructed in 1990.

(66) One (1) storage tank, maximum capacity of 16,920 gallons, identified as TS-2619, constructed in 1990.

(67) One (1) storage tank, maximum capacity of 2,750 gallons, identified as TP-2550 constructed in 1996, and modified in 2007 to vent to scrubber TP-2636 which exhausts to stack TP-2636.

(68) One (1) storage tank, maximum capacity of 2,750 gallons, identified as TP-2551 constructed in 1996, and modified in 2007 to vent to scrubber TP-2636 which exhausts to stack TP-2636.

(69) One (1) storage tank, maximum capacity of 2,970 gallons, identified as TP-2617 constructed in 1990.

(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.7.1 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

Pursuant to 326 IAC 8-9, the Permittee shall maintain a record and submit to Compliance Branch, OAQ, IDEM a report containing the following information:

(a) The vessel identification number

(b) The vessels dimension

(c) The vessel capacity

for each of the following vessels.

(1) TS-1004
(2) TS-1005
(3) TS-1006
(4) TS-1007
(5) TS-1008
(6) TS-1009
(7) TS-1010
(8) TS-1011
(9) TS-1012
(10) TS-1013
(11) TS-1014
(12) TS-1016
(13) TS-1017
(14) TS-1018
(15) TS-1026
(16) TS-1027
(17) TP-1033
(18) TS-1039
(19) TS-1040
(20) TS-1042
(21) TS-1043
(22) TS-1056
(23) TS-1057
(24) TS-1081
(25) TS-1082
(26) TS-2160
(27) TS-2163
(28) TS-2168
(29) TS-2169
(30) TS-2170
(31) TS-2209
(32) TS-2218
(33) TS-2252
(34) TS-2253
(35) TS-2255
(36) TS-2264
(37) TS-2265
(38) TS-2271
(39) TS-2272
(40) TS-2275
(41) TS-2276
(42) TS-2277

(43) TS-2605
(44) TS-2611
(45) TS-2612
(46) TS-2618
(47) TS-2619
(48) TP-2550
(49) TP-2551
(50) TP-2617

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

D.7.2 Record Keeping Requirement

(a) Pursuant to 326 IAC 8-9-6, the Permittee shall keep readily accessible records of each storage tank required by D.7.1 for the life of the storage tanks.

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

SECTION D.8 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b) One (1) natural gas fired boiler, identified as boiler no. B-3, constructed in 1974, rated at 5.7 MMBtu per hour, exhausting at one (1) stack, identified as GB-3404.

(c) Wastewater treatment plant air strippers.

(d) Two (2) parts washers, identified as PW-1M and PW-2L, constructed in 2005, with a rated capacity of 40 gallons.

(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.8.1 Particulate Matter Limitation (PM10) [326 IAC 6.8-2]

Pursuant to 326 IAC 6.8-2-19 (Lake County PM_{10} emission requirements) PM_{10} emissions from the Cleaver-Brooks boiler B-3 (Stack GB-3404) shall be limited to seven-thousandths (0.007) pounds per million Btu, and 0.04 pounds per hour.

D.8.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

(a) Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and Operating Requirements), for cold cleaning degreasers without remote solvent reservoirs constructed after July 1, 1990:

(1) Equip the degreaser with a cover.

(2) Equip the degreaser with a device for draining cleaned parts.

(3) Close the degreaser cover whenever parts are not being handled in the degreaser.

(4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases.

(5) Provide a permanent, conspicuous label that lists the operating requirements in (a)(3), (a)(4), (a)(6), and (a)(7) of this condition.

(6) Store waste solvent only in closed containers.

(7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.

(b) The Permittee shall ensure the following additional control equipment and operating requirements are met:

(1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent used is insoluble in, and heavier than, water.

(C) A refrigerated chiller.

(D) Carbon adsorption.

(E) An alternative system of demonstrated equivalent or better control as those outlined in (b)(1)(A) through (D) of this condition that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.

(2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.

(3) If used, solvent spray:

(A) must be a solid, fluid stream; and

(B) shall be applied at a pressure that does not cause excessive splashing.

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Chlorination system - with a nominal capacity of 3,000 pounds per hour of chlorine feed to produce short to long chain chlorination paraffins, olefins, waxes, polybutene, and 4,821 pounds per hour of muriatic acid. The chlorination system consists of the following systems:

(b) The system consisting of:

(1) Seven (7) reactors, identified as TR-2001 (constructed before 1976), TR-2003 (constructed before 1976), TR-2004 (constructed before 1976), TR-2005 (constructed before 1976), TR-2007(constructed in 1977), TR-2008 (constructed in 1977) and TR-2010 (constructed in 1983), with a maximum capacity of 2,000 gallons each;

(2) Three (3) reactors, identified as TR-2002 (constructed in 1988), TR-2009 (constructed in 1982), and TR-2017 (constructed in 1993), with a maximum capacity of 4,000 gallons each;

(3) One (1) sulfur monochloride tank, identified as TS-1058, constructed in 1981, with a maximum capacity of 5,470 gallons;

(4) One (1) acid tower condensate neutralization tank, identified as TP-2030, constructed before 1976, with a maximum capacity of 500 gallons;

(5) Two (2) chlorine railcar track spots, identified as RC-0101 and RC-0201, constructed before 1976, with a maximum capacity of 1 railcar (containing at most 180,600 pounds) each;

(6) One (1) acid tower, identified as CB-2060, constructed before 1976, with a maximum capacity of 4,821 lb/hr muriatic acid;

(7) One (1) tower product acid tank, identified as TP-2033, constructed before 1976, with a maximum capacity of 560-gallons;

(8) One (1) tower water feed tank, identified as TP-2060 (constructed in 1996), with a maximum capacity of 560-gallons; and

(9) Two (2) chlorine vaporizers, identified as XV-2050 and XV-2051, constructed before 1976, and with a maximum feed capacity of 3,000 lb/hr chlorine combined.

all controlled by seven (7) scrubbers, identified as TP-2061 (constructed before 1976), TP-2062 (constructed before 1976), TP-2063 (constructed before 1976), TP-2064 (constructed before 1976), TP-2065 (constructed in 1977), TP-2066 (constructed in 1977), and TP-2067 (constructed in 1995), and exhausting at seven (7) stacks, identified as Stacks TP-2061 to 2067.

(c) The system consisting of:

(1) Three (3) muriatic acid tanks, identified as TS-1090 (constructed in 1979), TS-1091(constructed in 1980), and TS-1093 (constructed in 2000), with a maximum capacity of 16,000, 14,900 and 16,000 gallons, respectively;

(2) Two (2) hypochlorite reduction tanks, identified as TP-3494, and TP-3495

(constructed in 1993), with a maximum capacity of 6,250 gallons each;

(3) One (1) muriatic acid tank truck loading station, constructed in 1979, with a maximum capacity of 1 truck;

controlled by one (1) caustic scrubber identified as TP-1099 constructed in 1980 exhausting at one (1) stack, identified as Stack TP-1099.

(d) The system consisting of:

(1) One (1) chlorinated product tank, identified as TS-2041, constructed before 1976, with a maximum capacity of 4,000 gallons;

(2) Two (2) chlorinated product tanks, identified as TS-2043, and TS-2044, constructed before 1976, with a maximum capacity of 4,100 gallons each; and

(3) One (1) chlorinated product-drumming tank, identified as TS-2012, constructed in 1978, with a maximum capacity of 1,500 gallons.

Hi-Tem System - with a maximum rated capacity of 4,200 pounds per hour of Hi-Temp products consisting of the following equipment:

(f) The system consisting of:

(1) One (1) reactor, identified as TR-2620, constructed in 1989, with a maximum capacity of 4,000 gallons;

(2) Two (2) recovered methanol tanks, identified as TS-2602 and TS-2603, constructed in 1989, with maximum capacity of 2,500, and 4,000 gallons, respectively;

(3) One (1) sludge tank, identified as TP-2604, constructed in 1989, with a maximum capacity of 750 gallons, equipped with a sludge drumming operation followed by an activated carbon filter for odor management;

(4) One (1) scrubber liquor tank, identified as TS-2610, constructed in 2001, with a maximum capacity of 10,000 gallons; and

(5) One (1) intermediate holding tank, identified as TP-2601, constructed in 1989, with a maximum capacity of 4,550 gallons;

all controlled by two (2) caustic scrubbers identified as TP-2624 and TP-2626, constructed in 1989; and one flare, identified as GB-2627, constructed in 1990, in series, and exhausting at one (1) stack, identified as Stack GB-2627.

(g) One (1) scrubber liquor truck loading station, constructed in 1989, controlled by a carbon drum, identified as TF-2610 constructed in 2001.

(h) The system consisting of:

(7) One (1) reactor, identified as TP-2553, constructed in 1993, with a maximum capacity of 2,100 gallons.

(8) One (1) reactor, identified as TR-2541, constructed in 2005, with a maximum

capacity of 3,500 gallons.

(9) Three (3) wash water tanks, identified as TP-2556, TP-2557, and TP-2558, constructed in 1996, each with a maximum capacity of 700 gallons.

All controlled by one (1) caustic scrubber, identified as TP-2589, exhausting at Stack-2589.

(i) One (1) filter feed tank, constructed in 1993, identified as TP-2554, with a maximum capacity of 2,100 gallons.

(j) One (1) PIB heat up tank, identified as TP-2542, constructed in 2010, with a maximum capacity of 5,000 gallons.

(k) One (1) overflow tank, identified as TP-2537, permitted in 2010, with a maximum capacity of 2,000 gallons.

(l) One (1) reactor, constructed in 1990, identified as TR-2630, with a maximum capacity of 4,000 gallons, equipped with an integral multi-stage steam educator and condenser system followed by a carbon drum and one (1) emergency overflow tank, identified as TP-2760, permitted in 2010, with a maximum capacity of 1,300 gallons, and one (1) reactor, identified as TR-2016, constructed in 1990, with a maximum capacity of 4,000 gallons, with emissions controlled by a scrubber, TP-2072.

(m) The system consisting of:

(11) One (1) filter feed tank, identified as TP-2720, constructed in 1995, with maximum capacity of 5,000 gallons.

(12) One (1) filter, identified at GF-2724, constructed in 1995, with a maximum capacity of 69 cubic feet per filter cake.

(13) One (1) filter, identified as GF-2734, constructed in 2005, with a maximum capacity of 41 cubic feet per filter cake.

(14) One (1) pre-coat tank, identified as TP-2722, constructed in 1995, with a maximum capacity of 1,300 gallons.

(15) One (1) flush tank, identified as TP-2726, constructed in 2010, with a maximum capacity of 1,300 gallons.

All controlled by a carbon drum, identified as TF-2728, exhausting to Stack TF-2728.

(n) Two (2) filtrate tanks, identified as TP-2730 and TP-2732, constructed in 1995 and 2010, respectively, with a maximum capacity of 5,000 gallons each.

(o) Two (2) neutralization storage tanks, identified as TP-2538 and TP-2539, permitted in 2010, with a maximum capacity of 12,500 gallons, each.

(p) One (1) amine storage tank, identified as TS-2391, permitted in 2010, with a maximum capacity of 7,950 gallons.

(q) Three (3) reactors, identified as TR-2006 (constructed before 1976), TR-2014 (constructed in 1990), with a maximum capacity of 2,000 gallons each, and TR-2015 (constructed in 1990), with a maximum capacity of 4,000 gallons.

all controlled by seven (7) scrubbers, identified as TP-2061 (constructed before 1976), TP-2062 (constructed before 1976), TP-2063 (constructed before 1976), TP-2064 (constructed before 1976), TP-2065 (constructed in 1977), TP-2066 (constructed in 1977), and TP-2067 (constructed in 1995), and exhausting at seven (7) stacks, identified as Stacks TP-2061 to 2067 all controlled by a scrubber identified as TP-2072 (constructed in 1985), and exhausting at a stack identified as Stack TP-2072.

Fuel Additive System - with a maximum rated capacity of 12,000 pounds per hour of fuel additives (prior to blending) consisting of the following equipment:

(r) Three (3) fuel additive blending tanks, identified as TP-1030, TP-1031, and TP-1032, all constructed in 1985, with maximum capacities of 11,740, 15,220, and 11,740 gallons, respectively.

Miscellaneous System - with a maximum rated capacity of 3,000 pounds per hour consisting of the following equipment:

(s) Four (4) reactors, identified as TR-2224 (constructed in 1980), TR-2226 (constructed before 1976), TR-2227 (constructed before 1976), and TR-2322 (constructed in 1984), maximum capacity of 5,500, 7,000, 400, 2000 gallons respectively; controlled by two (2) wet scrubbers, identified as PE-2228, and TP-2332, and exhausting at stacks identified as Stack PE-2228, and Stack TP-2332.

(t) One (1) reactor, identified as TR-2329 (constructed in 1986), maximum capacity of 1,500 gallons.

(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)]

E.1.1 HAPs Minor Limits [40 CFR 63]

(a) The total HAP emissions from all temporary operation and experimental trials, implemented pursuant to 326 IAC 2-1.1-3(h)(3), shall be limited to six (6) tons per twelve consecutive month period, with compliance determined at the end of each month.

(b) Total HCl emissions from all temporary operation and experimental trials, implemented pursuant to 326 IAC 2-1.1-3(h)(3), shall be limited to one (1) ton per twelve consecutive month period, with compliance determined at the end of each month.

(c) Total Cl_2 emissions from all temporary operation and experimental trials, implemented pursuant to 326 IAC 2-1.1-3(h)(3), shall be limited to three (3) tons per twelve consecutive month period, with compliance determined at the end of each month.

Compliance with these limits, along with HAP emissions from the chlorination process and source wide fugitive HAP emissions from storage tanks, will limit the source-wide potential to emit of single HAP and combined HAP emissions to less than 10 and 25 tons per 12 consecutive month period, respectively, and make the requirements of 40 CFR Part 63, Subpart NNNNN and Subpart A not applicable.

Compliance Determination Requirements

E.1.2 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

The Permittee shall perform HAP testing for any temporary operation and experimental trial implemented pursuant to 326 IAC 2-1.1-3(h)(3), during the thirty (30) day trial period, to establish a HAP emission rate for that trial. Tests shall be conducted utilizing methods as approved by the Commissioner, and in accordance with Section C- Performance Testing.

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

E.1.3 Record Keeping Requirement

(a) The Permittee shall maintain records sufficient to document compliance with Condition E.1.1. These records shall include the following:

(1) Total production during each experimental trial period.

(2) Total raw material input during each experimental trial period.

(3) Total HAP input during each experimental trial period.

(4) Test data and results for the testing required pursuant to E.1.2.

(5) Total emissions from each experimental trial conducted at the source.

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

E.1.4 Reporting Requirement

A quarterly summary of the information to document the compliance status with Condition E.1.1 shall be submitted not later than thirty (30) days following the end of each calendar quarter. 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 C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Storage tanks emitting less than one (1) ton per year collectively of a combination of HAPs and less than fifteen (15) pounds per day of VOC. [326 IAC 12, and 40 CFR 60.112b(a)]

(1) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1001, constructed in 1997.

(2) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1002, constructed in 1997.

(3) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1003, constructed in 1993.

(15) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1015, constructed in 1987.

(19) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1019, constructed in 1996.

(20) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1020, constructed in 1997.

(21) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1021, constructed in 1997.

(22) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1022, constructed in 1996.

(23) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1023, constructed in 1996.

(24) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1024, constructed in 1997.

(41) One (1) storage tank, maximum capacity of 23,310 gallons, identified as TS-2178, constructed in 1998.

(55) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2315, constructed in 1990.

(56) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2362, constructed in 1990.

(57) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2364, constructed in 1990.

(58) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2365, constructed in 1990.

(59) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2367, constructed in 1990.

(60) One (1) storage tank, maximum capacity of 10,570 gallons, identified as TS-2606, constructed in 1989.

(61) One (1) storage tank, permitted in 2010, identified as TS-2607, with a maximum capacity of 30,000 gallons.

(64) One (1) storage tank, maximum capacity of 30,080 gallons, identified as TS-2613, constructed in 1990.

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

New Source Performance Standards (NSPS) Requirements [40 CFR 60]

E.2.1 General Provisions Relating to New Source Performance Standards **(**NSPS), Subpart Kb [326 IAC 12-1] [40 CFR Part 60, Subpart 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 12-1-1 for the nineteen (19) storage tanks.

E.2.2 New Source Performance Standards (NSPS), Subpart Kb, Requirements [40 CFR Part 60, Subpart Kb]

Pursuant to 40 CFR Part 60, Subpart Kb, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart Kb as specified as follows:

(1) 40 CFR 60.116b

E.2.3 Volatile Organic Liquid Storage Vessels [326 IAC 12][40 CFR 60, Part Kb]

Pursuant to 40 CFR 60.116b, the Permittee shall keep readily accessible records showing the dimensions of the storage tanks and an analysis showing the capacities of the following storage tanks.

(1) TS-1001
(2) TS-1002
(3) TS-1003
(4) TS-1015
(5) TS-1019
(6) TS-1020
(7) TS-1021
(8) TS-1022
(9) TS-1023
(10) TS-1024
(11) TS-2178
(12) TS-2315
(13) TS-2362
(14) TS-2364
(15) TS-2365
(16) TS-2367
(17) TS-2606
(18) TS-2607
(19) TS-2613

SECTION E.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(e) One (1) diesel emergency generator, identified as EG-1, constructed in 2002, with a rated capacity of 130 kilowatts (174.3 hp).

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

National Emissions Standard for Hazardous Air Pollutants [326 IAC 20] [40 CFR 63, Subpart ZZZZ]

E.3.1 General Provisions Relating to National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [326 IAC 20-1][40 CFR Part 63, Subpart A]

Pursuant to 40 CFR 63.6590, the Permittee shall comply with the applicable provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1 for the affected source, as specified in Appendix A of 40 CFR Part 63, Subpart ZZZZ, in accordance with the schedule in 40 CFR 63 Subpart ZZZZ.

E.3.2 National Emissions Standard for Hazardous Air Pollutants for stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ][326 IAC 20-82-1]

Pursuant to CFR Part 63, Subpart ZZZZ, the Permittee shall comply with the provisions of 40 CFR Part 63.6590, for the affected source, as specified as follows:

1. 40 CFR 63.6603 Table 2d
2. 40 CFR 63.6625 (e), (f), (h) and (i)
3. 40 CFR 63.6605
4. 40 CFR 63.6640
5. 40 CFR 63.6655, except 63.6655(c)
6. Footnote 2 of Table 2d
7. Subpart A except Pursuant 40 CFR 63.6645(a)(5), the following do not apply 63.7(b) and (c), 63.8e, (f)(4) and (f)(6) and 63.9 (b)-(e), (g), (h)

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

Source Name: Dover Chemical Corporation - Hammond Works
Source Address: 3000 Sheffield Ave, Hammond, Indiana 46327
Part 70 Permit No.: T089-32932-00227

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: Dover Chemical Corporation - Hammond Works
Source Address: 3000 Sheffield Ave, Hammond, Indiana 46327
Part 70 Permit No.: T089-32932-00227

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: Dover Chemical Corporation - Hammond Works
Source Address: 3000 Sheffield Ave, Hammond, Indiana 46327
Part 70 Permit No.: T089-32932-00227
Facility: Sulfurization process
Parameter: H_2S Emissions
Limit: Less than 10 tons of H_2S emissions 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 Quarterly Report

Source Name: Dover Chemical Corporation - Hammond Works
Source Address: 3000 Sheffield Ave, Hammond, Indiana 46327
Part 70 Permit No.: T089-32932-00227
Facility: Sulfurization process
Parameter: VOC Emissions
Limit: Less than 25 tons of VOC emissions 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 Quarterly Report

Source Name: Dover Chemical Corporation - Hammond Works
Source Address: 3000 Sheffield Ave, Hammond, Indiana 46327
Part 70 Permit No.: T089-32932-00227
Facility: Temporary operation and experimental trials, implemented pursuant to 326 IAC 2-1.1-3(h)(3) (Facilities Identified in Section E.1)
Parameter: HCl
Limit: 1 Ton total HCl emissions per 12 consecutive month period with compliance determined at the end of each month.

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 Quarterly Report

Source Name: Dover Chemical Corporation - Hammond Works
Source Address: 3000 Sheffield Ave, Hammond, Indiana 46327
Part 70 Permit No.: T089-32932-00227
Facility: Temporary operation and experimental trials, implemented pursuant to 326 IAC 2-1.1-3(h)(3) (Facilities Identified in Section E.1)
Parameter: Cl_2
Limit: 3 Tons total Cl_2 emissions per 12 consecutive month period with compliance determined at the end of each month.

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 Quarterly Report

Source Name: Dover Chemical Corporation - Hammond Works
Source Address: 3000 Sheffield Ave, Hammond, Indiana 46327
Part 70 Permit No.: T089-32932-00227
Facility: Temporary operation and experimental trials, implemented pursuant to 326 IAC 2-1.1-3(h)(3) (Facilities Identified in Section E.1)
Parameter: Total HAPs
Limit: 6 Tons total HAP emissions per 12 consecutive month period with compliance determined at the end of each month.

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: Dover Chemical Corporation - Hammond Works
Source Address: 3000 Sheffield Ave, Hammond, Indiana 46327
Part 70 Permit No.: T089-32932-00227

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. 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 – 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 [40 CFR Part 60, Subpart Kb] [326 IAC 12]

Source Description and Location	
Source Name:	**Dover Chemical – Hammond Works**
Source Location:	**3000 Sheffield Ave., Hammond, IN 46327**
County:	**Lake**
SIC Code:	**2899**
Permit Renewal No.:	**T089-32932-00227**
Permit Reviewer:	**Josiah Balogun**

NSPS [40 CFR Part 60, Subpart Kb]

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 the FEDERAL REGISTER a 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]

Attachment B to a Part 70 Operating Permit Renewal

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

Source Name:	**Dover Chemical – Hammond Works**
Source Location:	**3000 Sheffield Ave., Hammond, IN 46327**
County:	**Lake**
SIC Code:	**2899**
Permit Renewal No.:	**T089-32932-00227**
Permit Reviewer:	**Josiah Balogun**

Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

SOURCE: 69 FR 33506, June 15, 2004, unless otherwise noted.

What This Subpart Covers

§ 63.6580 What is the purpose of subpart ZZZZ?

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

[73 FR 3603, Jan. 18, 2008]

§ 63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart.

Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in § 63.6675, which includes operating according to the provisions specified in § 63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in § 63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in § 63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in § 63.6640(f)(4)(ii).

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008; 78 FR 6700, Jan. 30, 2013]

§ 63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) *New stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) *Reconstructed stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in § 63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in § 63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in § 63.2 and reconstruction is commenced on or after June 12, 2006.

(b) *Stationary RICE subject to limited requirements.* (1) An affected source which meets either of the criteria in paragraphs (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of § 63.6645(f).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii).

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of § 63.6645(f) and the requirements of §§ 63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii).

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;

(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010; 78 FR 6700, Jan. 30, 2013]

§ 63.6595 When do I have to comply with this subpart?

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in § 63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 78 FR 6701, Jan. 30, 2013]

Emission and Operating Limitations

§ 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

§ 63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

§ 63.6602 What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations and other requirements in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

[78 FR 6701, Jan. 30, 2013]

§ 63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either paragraph (b)(1) or (2) of this section, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meet either paragraph (b)(1) or (2) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets paragraphs (b)(2)(i), (ii), and (iii) of this section.

(i) The only connection to the FAHS is through the Alaska Marine Highway System (AMHS), or the stationary RICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in 40 CFR 55.2, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

(1) Change oil every 1,000 hours of operation or annually, whichever comes first. Sources have the option to utilize an oil analysis program as described in § 63.6625(i) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(4) Inspect all flexible hoses every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in § 63.6625(g). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in § 63.6625(g) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112, you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart IIII instead of the emission limitations and other requirements that would otherwise apply under this part for existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions.

(f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in § 63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in § 63.6675 of this subpart as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in § 63.6675 of this subpart, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6701, Jan. 30, 2013]

§ 63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?

(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in § 63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) Beginning January 1, 2015, if you own or operate a new emergency CI stationary RICE with a site rating of more than 500 brake HP and a displacement of less than 30 liters per cylinder located at a major source of HAP that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either § 63.6603(b)(1) or § 63.6603(b)(2), or are on offshore vessels that meet § 63.6603(c) are exempt from the requirements of this section.

[78 FR 6702, Jan. 30, 2013]

General Compliance Requirements

§ 63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[75 FR 9675, Mar. 3, 2010, as amended at 78 FR 6702, Jan. 30, 2013]

Testing and Initial Compliance Requirements

§ 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions in § 63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

§ 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at

a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

§ 63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions in § 63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

§ 63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

§ 63.6620 What performance tests and other procedures must I use?

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.

(1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

(3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in § 63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in this subpart.

(e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (Eq.\ 1)$$

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Where:

C_i = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

C_o = concentration of CO, THC, or formaldehyde at the control device outlet, and

R = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO_2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO_2 concentration is measured in lieu of oxygen concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209\ F_d}{F_c} \quad (Eq.\ 2)$$

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Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu)

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2 , as follows:

$$X_{CO2} = \frac{5.9}{F_o} \quad (Eq. 3)$$

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Where:

X_{CO2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2 —15 percent O_2 , the defined O_2 correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO2}}{\%CO_2} \quad (Eq. 4)$$

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Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O_2.

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO2} = CO_2 correction factor, percent.

$\%CO_2$ = Measured CO_2 concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.,* operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.,* wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010; 78 FR 6702, Jan. 30, 2013]

§ 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O_2 or CO_2 according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in § 63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in § 63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in § 63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2 concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in § 63.8(d). As specified in § 63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (*e.g.,* thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in § 63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in § 63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also § 63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;

(4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;

(5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.

(7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either § 63.6603(b)(1) or § 63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet § 63.6603(c) do not have to meet the requirements of this paragraph (g).

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this

subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6703, Jan. 30, 2013]

§ 63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.6645.

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

(e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least three test runs.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

[69 FR 33506, June 15, 2004, as amended at 78 FR 6704, Jan. 30, 2013]

Continuous Compliance Requirements

§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in § 63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not

remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see § 63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6704, Jan. 30, 2013]

Notifications, Reports, and Records

§ 63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(b) As specified in § 63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in § 63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with § 63.6590(b), your notification should include the information in § 63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in § 63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to § 63.10(d)(2).

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in § 63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in § 63.6603(d) and identifying the state or local regulation that the engine is subject to.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6705, Jan. 30, 2013]

§ 63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of 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 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.6595 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 source in § 63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered 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 § 63.6595.

(3) For semiannual Compliance reports, 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) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 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 (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in § 63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) 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) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an

affected source to minimize emissions in accordance with § 63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, 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.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in § 63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) 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 stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 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 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in § 63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

(ii) Date of the report and beginning and ending dates of the reporting period.

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in § 63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in § 63.6640(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in § 63.6640(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purpose specified in § 63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in § 63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in § 63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in § 63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in § 63.13.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010; 78 FR 6705, Jan. 30, 2013]

§ 63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in § 63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in § 63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in § 63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in § 63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in § 63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) through (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in § 63.6640(f)(2)(ii) or (iii) or § 63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 78 FR 6706, Jan. 30, 2013]

§ 63.6660 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 review according to § 63.10(b)(1).

(b) As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

Other Requirements and Information

§ 63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

§ 63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the 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 (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether 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 paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in § 63.6600 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.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in § 63.6610(b).

§ 63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

Backup power for renewable energy means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see § 63.14).

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.,* as amended by Public Law 101-549, 104 Stat. 2399).

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

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 limitation or operating limitation;

(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 or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by § 63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (*e.g.* biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO_2 .

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in § 63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in § 63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

(1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.

(2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in § 63.6640(f).

(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in § 63.6640(f)(2)(ii) or (iii) and § 63.6640(f)(4)(i) or (ii).

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and

absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes “rich” glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The “lean” glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

Institutional emergency stationary RICE means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO_2 .

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in § 63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in § 63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in § 63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_x) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_x , CO, and volatile organic compounds (VOC) into CO_2 , nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (*i.e.,* remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in § 63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to § 63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to § 63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure $C_3 H_8$.

Remote stationary RICE means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this paragraph (2), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_x (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

Spark ignition means relating to either: A gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011; 78 FR 6706, Jan. 30, 2013]

Table 1 a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE > 500 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	**You must meet the following emission limitation, except during periods of startup . . .**	**During periods of startup you must . . .**
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

Table 1 b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

TABLE 1B TO SUBPART ZZZZ OF PART 63—OPERATING LIMITATIONS FOR EXISTING, NEW, AND RECONSTRUCTED SI 4SRB STATIONARY RICE >500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$and using NSCR;	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.[1]
2. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$and not using NSCR.	

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6706, Jan. 30, 2013]

Table 2 a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE

>500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O_2. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O_2until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O_2	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O_2	

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

Table 2 b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP

As stated in §§ 63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; and existing CI stationary RICE >500 HP:

TABLE 2B TO SUBPART ZZZZ OF PART 63—OPERATING LIMITATIONS FOR NEW AND RECONSTRUCTED 2SLB AND CI STATIONARY RICE >500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS, NEW AND

RECONSTRUCTED 4SLB STATIONARY RICE ≥250 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS, EXISTING CI STATIONARY RICE >500 HP

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst.	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and
	b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and	Comply with any operating limitations approved by the Administrator.
New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and	
existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst.	

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6707, Jan. 30, 2013]

Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

TABLE 2C TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR EXISTING COMPRESSION IGNITION STATIONARY RICE LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS AND EXISTING SPARK IGNITION STATIONARY RICE ≤500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency stationary CI RICE and black start stationary CI RICE [1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first.[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[3]
2. Non-Emergency, non-black start stationary CI RICE <100 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first.[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O_2.	
4. Non-Emergency, non-black start	a. Limit concentration of	

CI stationary RICE 300>HP≤500." is corrected to read "4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500.	CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
5. Non-Emergency, non-black start stationary CI RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
6. Emergency stationary SI RICE and black start stationary SI RICE.[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually,	

	whichever comes first, and replace as necessary.[3]	
9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O_2.	
10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O_2.	
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O_2.	
12. Non-emergency, non-black start stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O_2.	

[1] If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[2] Sources have the option to utilize an oil analysis program as described in § 63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2c of this subpart.

[3] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[78 FR 6708, Jan. 30, 2013, as amended at 78 FR 14457, Mar. 6, 2013]

Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§ 63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

TABLE 2D TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR EXISTING STATIONARY RICE LOCATED AT AREA SOURCES OF HAP EMISSIONS

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI stationary RICE ≤300 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[1] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
2. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	

5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]; b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually,	

	whichever comes first;[1]	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
9. Non-emergency, non-black start 4SLB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install an oxidation catalyst to reduce HAP emissions from the stationary RICE.	
10. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
11. Non-emergency, non-black start 4SRB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	

12. Non-emergency, non-black start 4SRB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install NSCR to reduce HAP emissions from the stationary RICE.	
13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1] b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

[1] Sources have the option to utilize an oil analysis program as described in § 63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

[2] If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[78 FR 6709, Jan. 30, 2013]

Subsequent Performance Tests

As stated in §§ 63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

TABLE 3 TO SUBPART ZZZZ OF PART 63—SUBSEQUENT PERFORMANCE TESTS

For each . . .	Complying with the requirement to . . .	You must . . .
1. New or reconstructed 2SLB stationary RICE >500 HP located at major sources; new or reconstructed 4SLB stationary RICE ≥250 HP located at major sources; and new or reconstructed CI stationary RICE >500 HP located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually.[1]

2. 4SRB stationary RICE ≥5,000 HP located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually.[1]
3. Stationary RICE >500 HP located at major sources and new or reconstructed 4SLB stationary RICE 250≤HP≤500 located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually.[1]
4. Existing non-emergency, non-black start CI stationary RICE >500 HP that are not limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE >500 HP that are limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 5 years, whichever comes first.

[1] After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[78 FR 6711, Jan. 30, 2013]

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

As stated in §§ 63.6610, 63.6611, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

TABLE 4 TO SUBPART ZZZZ OF PART 63. REQUIREMENTS FOR PERFORMANCE TESTS

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. reduce CO emissions	i. Measure the O_2at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005).[a c]	(a) Measurements to determine O_2must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device	(1) ASTM D6522-00 (Reapproved 2005) [a b c]or Method 10 of 40 CFR part 60, appendix A	(a) The CO concentration must be at 15 percent O_2, dry basis.
2. 4SRB stationary RICE	a. reduce formaldehyde emissions	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i)	(a) sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2at the	(1) Method 3 or 3A or 3B of	(a) measurements to

		inlet and outlet of the control device; and	40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005).[a]	determine O_2concentration must be made at the same time as the measurements for formaldehyde or THC concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03.[a]	(a) measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration.
		iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formaldehyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03,[a]provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device	(1) Method 25A, reported as propane, of 40 CFR part 60, appendix A	(a) THC concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
3. Stationary RICE	a. limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i)	(a) if using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005).[a]	(a) measurements to determine O_2concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location;	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03.[a]	(a) measurements to determine moisture content must be made at the same time and location as the

		and		measurements for formaldehyde or CO concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03,[a]provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. measure CO at the exhaust of the stationary RICE.	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00 (2005),[a] [c]Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03.[a]	(a) CO concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

[a] Incorporated by reference, see 40 CFR 63.14. You may also obtain copies from University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[b] You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03.

[c] ASTM-D6522-00 (2005) may be used to test both CI and SI stationary RICE.

[78 FR 6711, Jan. 30, 2013]

Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations, Operating Limitations, and Other Requirements

As stated in §§ 63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

TABLE 5 TO SUBPART ZZZZ OF PART 63—INITIAL COMPLIANCE WITH EMISSION LIMITATIONS, OPERATING LIMITATIONS, AND OTHER REQUIREMENTS

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and iii. You have recorded the catalyst

located at an area source of HAP		pressure drop and catalyst inlet temperature during the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2or CO_2at both the inlet and outlet of the oxidation catalyst according to the requirements in § 63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and

		iii. The average reduction of CO calculated using § 63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2or CO_2at the outlet of the oxidation catalyst according to the requirements in § 63.6625(a); and
		ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average concentration of CO calculated using § 63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and

		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
9. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
11. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Reduce CO emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.
12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.
13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated	a. Install an oxidation catalyst	i. You have conducted an initial compliance demonstration as specified in § 63.6630(e) to show that the average reduction of emissions of CO is

more than 24 hours per calendar year		93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O_2;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F.
14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. You have conducted an initial compliance demonstration as specified in § 63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O_2, or the average reduction of emissions of THC is 30 percent or more;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F.

[78 FR 6712, Jan. 30, 2013]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements

As stated in § 63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

TABLE 6 TO SUBPART ZZZZ OF PART 63—CONTINUOUS COMPLIANCE WITH EMISSION LIMITATIONS, AND OTHER REQUIREMENTS

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved [a]; and ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and iii. Reducing these data to 4-hour rolling

major source of HAP		averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved [a]; and ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS	i. Collecting the monitoring data according to § 63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to § 63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and
		iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling

		averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved, or to demonstrate that the average reduction of emissions of THC determined from the performance test is equal to or greater than 30 percent.[a]
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit [a]; and ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or	a. Limit the concentration of formaldehyde in the	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below

reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	stationary RICE exhaust and not using oxidation catalyst or NSCR	the formaldehyde concentration limit [a]; and ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency stationary SI RICE located at an area source of HAP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year, and existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are remote stationary RICE	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and

		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
12. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across

		the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
13. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. Conducting annual compliance demonstrations as specified in § 63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O_2; and either ii. Collecting the catalyst inlet temperature data according to § 63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F.
15. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. Conducting annual compliance demonstrations as specified in § 63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O_2, or the average reduction of emissions of THC is 30 percent or more; and either

		ii. Collecting the catalyst inlet temperature data according to § 63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F.

[a] After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[78 FR 6715, Jan. 30, 2013]

Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

As stated in § 63.6650, you must comply with the following requirements for reports:

TABLE 7 TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR REPORTS

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Existing non-emergency, non-black start stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or	i. Semiannually according to the requirements in § 63.6650(b)(1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in § 63.6650(b)(6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations.
		b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in	i. Semiannually according to the requirements in § 63.6650(b).

		§ 63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), the information in § 63.6650(e); or	
		c. If you had a malfunction during the reporting period, the information in § 63.6650(c)(4).	i. Semiannually according to the requirements in § 63.6650(b).
2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	i. Annually, according to the requirements in § 63.6650.
		b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 2.a.i.
		c. Any problems or errors suspected with the meters.	i. See item 2.a.i.
3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Compliance report	a. The results of the annual compliance demonstration, if conducted during the reporting period.	i. Semiannually according to the requirements in § 63.6650(b)(1)-(5).
4. Emergency stationary RICE that operate or are contractually obligated to be available for more than 15 hours per year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) or that operate for the purposes specified in § 63.6640(f)(4)(ii)	Report	a. The information in § 63.6650(h)(1)	i. annually according to the requirements in § 63.6650(h)(2)-(3).

[78 FR 6719, Jan. 30, 2013]

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.

As stated in § 63.6665, you must comply with the following applicable general provisions.

General	Subject of citation	Applies to	Explanation

provisions citation		subpart	
§ 63.1	General applicability of the General Provisions	Yes.	
§ 63.2	Definitions	Yes	Additional terms defined in § 63.6675.
§ 63.3	Units and abbreviations	Yes.	
§ 63.4	Prohibited activities and circumvention	Yes.	
§ 63.5	Construction and 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 sources	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 sources	Yes.	
§ 63.6(d)	[Reserved]		
§ 63.6(e)	Operation and maintenance	No.	
§ 63.6(f)(1)	Applicability of standards	No.	
§ 63.6(f)(2)	Methods for determining compliance	Yes.	
§ 63.6(f)(3)	Finding of compliance	Yes.	
§ 63.6(g)(1)-(3)	Use of alternate standard	Yes.	
§ 63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§ 63.6(i)	Compliance extension procedures and criteria	Yes.	
§ 63.6(j)	Presidential compliance exemption	Yes.	
§ 63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at

			§§ 63.6610, 63.6611, and 63.6612.
§ 63.7(a)(3)	CAA section 114 authority	Yes.	
§ 63.7(b)(1)	Notification of performance test	Yes	Except that § 63.7(b)(1) only applies as specified in § 63.6645.
§ 63.7(b)(2)	Notification of rescheduling	Yes	Except that § 63.7(b)(2) only applies as specified in § 63.6645.
§ 63.7(c)	Quality assurance/test plan	Yes	Except that § 63.7(c) only applies as specified in § 63.6645.
§ 63.7(d)	Testing facilities	Yes.	
§ 63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at § 63.6620.
§ 63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at § 63.6620.
§ 63.7(e)(3)	Test run duration	Yes.	
§ 63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§ 63.7(f)	Alternative test method provisions	Yes.	
§ 63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§ 63.7(h)	Waiver of tests	Yes.	
§ 63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at § 63.6625.
§ 63.8(a)(2)	Performance specifications	Yes.	
§ 63.8(a)(3)	[Reserved]		
§ 63.8(a)(4)	Monitoring for control devices	No.	
§ 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	No	
§ 63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§ 63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No	

§ 63.8(c)(2)-(3)	Monitoring system installation	Yes.	
§ 63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§ 63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§ 63.8(c)(6)-(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§ 63.8(d)	CMS quality control	Yes.	
§ 63.8(e)	CMS performance evaluation	Yes	Except for § 63.8(e)(5)(ii), which applies to COMS.
		Except that § 63.8(e) only applies as specified in § 63.6645.	
§ 63.8(f)(1)-(5)	Alternative monitoring method	Yes	Except that § 63.8(f)(4) only applies as specified in § 63.6645.
§ 63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that § 63.8(f)(6) only applies as specified in § 63.6645.
§ 63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§ 63.6635 and 63.6640.
§ 63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§ 63.9(b)(1)-(5)	Initial notifications	Yes	Except that § 63.9(b)(3) is reserved.
		Except that § 63.9(b) only applies as specified in § 63.6645.	
§ 63.9(c)	Request for compliance extension	Yes	Except that § 63.9(c) only applies as specified in § 63.6645.
§ 63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that § 63.9(d) only applies as specified in § 63.6645.
§ 63.9(e)	Notification of performance test	Yes	Except that § 63.9(e) only applies as specified in § 63.6645.
§ 63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.

§ 63.9(g)(1)	Notification of performance evaluation	Yes	Except that § 63.9(g) only applies as specified in § 63.6645.
§ 63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that § 63.9(g) only applies as specified in § 63.6645.	
§ 63.9(h)(1)-(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. § 63.9(h)(4) is reserved.
			Except that § 63.9(h) only applies as specified in § 63.6645.
§ 63.9(i)	Adjustment of submittal deadlines	Yes.	
§ 63.9(j)	Change in previous information	Yes.	
§ 63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§ 63.10(b)(1)	Record retention	Yes	Except that the most recent 2 years of data do not have to be retained on site.
§ 63.10(b)(2)(i)-(v)	Records related to SSM	No.	
§ 63.10(b)(2)(vi)-(xi)	Records	Yes.	
§ 63.10(b)(2)(xii)	Record when under waiver	Yes.	
§ 63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§ 63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§ 63.10(b)(3)	Records of applicability determination	Yes.	
§ 63.10(c)	Additional records for sources using CEMS	Yes	Except that § 63.10(c)(2)-(4) and (9) are reserved.
§ 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 ZZZZ does not contain opacity or VE standards.

§ 63.10(d)(4)	Progress reports	Yes.	
§ 63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§ 63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§ 63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§ 63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that § 63.10(e)(3)(i) (C) is reserved.
§ 63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§ 63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§ 63.11	Flares	No.	
§ 63.12	State authority and delegations	Yes.	
§ 63.13	Addresses	Yes.	
§ 63.14	Incorporation by reference	Yes.	
§ 63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010, as amended at 78 FR 6720, Jan. 30, 2013]

Appendix A—Protocol for Using an Electrochemical Analyzer to Determine Oxygen and Carbon Monoxide Concentrations From Certain Engines

1.0 SCOPE AND APPLICATION. WHAT IS THIS PROTOCOL?

This protocol is a procedure for using portable electrochemical (EC) cells for measuring carbon monoxide (CO) and oxygen (O_2) concentrations in controlled and uncontrolled emissions from existing stationary 4-stroke lean burn and 4-stroke rich burn reciprocating internal combustion engines as specified in the applicable rule.

1.1 Analytes. What does this protocol determine?

This protocol measures the engine exhaust gas concentrations of carbon monoxide (CO) and oxygen (O_2).

Analyte	CAS No.	Sensitivity
Carbon monoxide (CO)	630-08-0	Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.
Oxygen (O_2)	*7782-44-7*	

1.2 Applicability. When is this protocol acceptable?

This protocol is applicable to 40 CFR part 63, subpart ZZZZ. Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

1.3 Data Quality Objectives. How good must my collected data be?

Refer to Section 13 to verify and document acceptable analyzer performance.

1.4 Range. What is the targeted analytical range for this protocol?

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and O_2 , or no more than twice the permitted CO level.

1.5 Sensitivity. What minimum detectable limit will this protocol yield for a particular gas component?

The minimum detectable limit depends on the nominal range and resolution of the specific EC cell used, and the signal to noise ratio of the measurement system. The minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.

2.0 SUMMARY OF PROTOCOL

In this protocol, a gas sample is extracted from an engine exhaust system and then conveyed to a portable EC analyzer for measurement of CO and O_2 gas concentrations. This method provides measurement system performance specifications and sampling protocols to ensure reliable data. You may use additions to, or modifications of vendor supplied measurement systems (e.g., heated or unheated sample lines, thermocouples, flow meters, selective gas scrubbers, etc.) to meet the design specifications of this protocol. Do not make changes to the measurement system from the as-verified configuration (Section 3.12).

3.0 DEFINITIONS

3.1 Measurement System. The total equipment required for the measurement of CO and O_2 concentrations. The measurement system consists of the following major subsystems:

3.1.1 Data Recorder. A strip chart recorder, computer or digital recorder for logging measurement data from the analyzer output. You may record measurement data from the digital data display manually or electronically.

3.1.2 Electrochemical (EC) Cell. A device, similar to a fuel cell, used to sense the presence of a specific analyte and generate an electrical current output proportional to the analyte concentration.

3.1.3 Interference Gas Scrubber. A device used to remove or neutralize chemical compounds that may interfere with the selective operation of an EC cell.

3.1.4 Moisture Removal System. Any device used to reduce the concentration of moisture in the sample stream so as to protect the EC cells from the damaging effects of condensation and to minimize errors in measurements caused by the scrubbing of soluble gases.

3.1.5 Sample Interface. The portion of the system used for one or more of the following: sample acquisition; sample transport; sample conditioning or protection of the EC cell from any degrading effects of the engine exhaust effluent; removal of particulate matter and condensed moisture.

3.2 Nominal Range. The range of analyte concentrations over which each EC cell is operated (normally 25 percent to 150 percent of up-scale calibration gas value). Several nominal ranges can be used for any given cell so long as the calibration and repeatability checks for that range remain within specifications.

3.3 Calibration Gas. A vendor certified concentration of a specific analyte in an appropriate balance gas.

3.4 Zero Calibration Error. The analyte concentration output exhibited by the EC cell in response to zero-level calibration gas.

3.5 Up-Scale Calibration Error. The mean of the difference between the analyte concentration exhibited by the EC cell and the certified concentration of the up-scale calibration gas.

3.6 Interference Check. A procedure for quantifying analytical interference from components in the engine exhaust gas other than the targeted analytes.

3.7 Repeatability Check. A protocol for demonstrating that an EC cell operated over a given nominal analyte concentration range provides a stable and consistent response and is not significantly affected by repeated exposure to that gas.

3.8 Sample Flow Rate. The flow rate of the gas sample as it passes through the EC cell. In some situations, EC cells can experience drift with changes in flow rate. The flow rate must be monitored and documented during all phases of a sampling run.

3.9 Sampling Run. A timed three-phase event whereby an EC cell's response rises and plateaus in a sample conditioning phase, remains relatively constant during a measurement data phase, then declines during a refresh phase. The sample conditioning phase exposes the EC cell to the gas sample for a length of time sufficient to reach a constant response. The measurement data phase is the time interval during which gas sample measurements can be made that meet the acceptance criteria of this protocol. The refresh phase then purges the EC cells with CO-free air. The refresh phase replenishes requisite O_2 and moisture in the electrolyte reserve and provides a mechanism to de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre- sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

3.10 Sampling Day. A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check. The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

3.12 Performance-Established Configuration. The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

4.0 INTERFERENCES.

When present in sufficient concentrations, NO and NO_2 are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol

user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

5.0 SAFETY. [RESERVED]

6.0 EQUIPMENT AND SUPPLIES.

6.1 What equipment do I need for the measurement system?

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

6.2 Measurement System Components.

6.2.1 Sample Probe. A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

6.2.2 Sample Line. Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

6.2.3 Calibration Assembly (optional). A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

6.2.4 Particulate Filter (optional). Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

6.2.5 Sample Pump. A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.8 Sample Flow Rate Monitoring. An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

6.2.9 Sample Gas Manifold (optional). A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.10 EC cell. A device containing one or more EC cells to determine the CO and O_2 concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

6.2.11 Data Recorder. A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for O_2 ; and one degree (either °C or °F) for temperature. Alternatively, you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.

6.2.12 Interference Gas Filter or Scrubber. A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

7.0 REAGENTS AND STANDARDS. WHAT CALIBRATION GASES ARE NEEDED?

7.1 Calibration Gases. CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and O_2. Use CO calibration gases with labeled concentration values certified by the manufacturer to be within ± 5 percent of the label value. Dry ambient air (20.9 percent O_2) is acceptable for calibration of the O_2 cell. If needed, any lower percentage O_2 calibration gas must be a mixture of O_2 in nitrogen.

7.1.1 Up-Scale CO Calibration Gas Concentration. Choose one or more up-scale gas concentrations such that the average of the stack gas measurements for each stack gas sampling run are between 25 and 150 percent of those concentrations. Alternatively, choose an up-scale gas that does not exceed twice the concentration of the applicable outlet standard. If a measured gas value exceeds 150 percent of the up-scale CO calibration gas value at any time during the stack gas sampling run, the run must be discarded and repeated.

7.1.2 Up-Scale O_2 Calibration Gas Concentration.

Select an O_2 gas concentration such that the difference between the gas concentration and the average stack gas measurement or reading for each sample run is less than 15 percent O_2 . When the average exhaust gas O_2 readings are above 6 percent, you may use dry ambient air (20.9 percent O_2) for the up-scale O_2 calibration gas.

7.1.3 Zero Gas. Use an inert gas that contains less than 0.25 percent of the up-scale CO calibration gas concentration. You may use dry air that is free from ambient CO and other combustion gas products (e.g., CO_2).

8.0 SAMPLE COLLECTION AND ANALYSIS

8.1 Selection of Sampling Sites.

8.1.1 Control Device Inlet. Select a sampling site sufficiently downstream of the engine so that the combustion gases should be well mixed. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.1.2 Exhaust Gas Outlet. Select a sampling site located at least two stack diameters downstream of any disturbance (e.g., turbocharger exhaust, crossover junction or recirculation take-off) and at least one-half stack diameter upstream of the gas discharge to the atmosphere. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.2 Stack Gas Collection and Analysis. Prior to the first stack gas sampling run, conduct that the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the “sample conditioning phase” once per minute until constant readings are obtained. Then begin the “measurement data phase” and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the “refresh phase” by introducing dry air, free from CO and other

combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the “measurement data phase” readings to calculate the average stack gas CO and O_2 concentrations.

8.3 EC Cell Rate. Maintain the EC cell sample flow rate so that it does not vary by more than ± 10 percent throughout the pre-sampling calibration, stack gas sampling and post-sampling calibration check. Alternatively, the EC cell sample flow rate can be maintained within a tolerance range that does not affect the gas concentration readings by more than ± 3 percent, as instructed by the EC cell manufacturer.

9.0 QUALITY CONTROL (RESERVED)

10.0 CALIBRATION AND STANDARDIZATION

10.1 Pre-Sampling Calibration. Conduct the following protocol once for each nominal range to be used on each EC cell before performing a stack gas sampling run on each field sampling day. Repeat the calibration if you replace an EC cell before completing all of the sampling runs. There is no prescribed order for calibration of the EC cells; however, each cell must complete the measurement data phase during calibration. Assemble the measurement system by following the manufacturer's recommended protocols including for preparing and preconditioning the EC cell. Assure the measurement system has no leaks and verify the gas scrubbing agent is not depleted. Use Figure 1 to record all data.

10.1.1 Zero Calibration. For both the O_2 and CO cells, introduce zero gas to the measurement system (e.g., at the calibration assembly) and record the concentration reading every minute until readings are constant for at least two consecutive minutes. Include the time and sample flow rate. Repeat the steps in this section at least once to verify the zero calibration for each component gas.

10.1.2 Zero Calibration Tolerance. For each zero gas introduction, the zero level output must be less than or equal to ± 3 percent of the up-scale gas value or ± 1 ppm, whichever is less restrictive, for the CO channel and less than or equal to ± 0.3 percent O_2 for the O_2 channel.

10.1.3 Up-Scale Calibration. Individually introduce each calibration gas to the measurement system (e.g., at the calibration assembly) and record the start time. Record all EC cell output responses and the flow rate during this “sample conditioning phase” once per minute until readings are constant for at least two minutes. Then begin the “measurement data phase” and record readings every 15 seconds for a total of two minutes, or as otherwise required. Finally, perform the “refresh phase” by introducing dry air, free from CO and other combustion gases, until readings are constant for at least two consecutive minutes. Then repeat the steps in this section at least once to verify the calibration for each component gas. Introduce all gases to flow through the entire sample handling system (i.e., at the exit end of the sampling probe or the calibration assembly).

10.1.4 Up-Scale Calibration Error. The mean of the difference of the “measurement data phase” readings from the reported standard gas value must be less than or equal to ± 5 percent or ± 1 ppm for CO or ± 0.5 percent O_2 , whichever is less restrictive, respectively. The maximum allowable deviation from the mean measured value of any single “measurement data phase” reading must be less than or equal to ± 2 percent or ± 1 ppm for CO or ± 0.5 percent O_2 , whichever is less restrictive, respectively.

10.2 Post-Sampling Calibration Check. Conduct a stack gas post-sampling calibration check after the stack gas sampling run or set of runs and within 12 hours of the initial calibration. Conduct up-scale and zero calibration checks using the protocol in Section 10.1. Make no changes to the sampling system or EC cell calibration until all post-sampling calibration checks have been recorded. If either the zero or up-scale calibration error exceeds the respective specification in Sections 10.1.2 and 10.1.4 then all measurement data collected since the previous successful calibrations are invalid and re-calibration and re-sampling are required. If the sampling system is disassembled or the EC cell calibration is adjusted, repeat the calibration check before conducting the next analyzer sampling run.

11.0 ANALYTICAL PROCEDURE

The analytical procedure is fully discussed in Section 8.

12.0 CALCULATIONS AND DATA ANALYSIS

Determine the CO and O_2 concentrations for each stack gas sampling run by calculating the mean gas concentrations of the data recorded during the "measurement data phase".

13.0 PROTOCOL PERFORMANCE

Use the following protocols to verify consistent analyzer performance during each field sampling day.

13.1 Measurement Data Phase Performance Check. Calculate the mean of the readings from the "measurement data phase". The maximum allowable deviation from the mean for each of the individual readings is ± 2 percent, or ± 1 ppm, whichever is less restrictive. Record the mean value and maximum deviation for each gas monitored. Data must conform to Section 10.1.4. The EC cell flow rate must conform to the specification in Section 8.3.

Example: A measurement data phase is invalid if the maximum deviation of any single reading comprising that mean is greater than ± 2 percent *or ± 1 ppm (the default criteria). For example, if the mean = 30 ppm, single readings of below 29 ppm and above 31 ppm are disallowed*).

13.2 Interference Check. Before the initial use of the EC cell and interference gas scrubber in the field, and semi-annually thereafter, challenge the interference gas scrubber with NO and NO_2 gas standards that are generally recognized as representative of diesel-fueled engine NO and NO_2 emission values. Record the responses displayed by the CO EC cell and other pertinent data on Figure 1 or a similar form.

13.2.1 Interference Response. The combined NO and NO_2 interference response should be less than or equal to ± 5 percent of the up-scale CO calibration gas concentration.

13.3 Repeatability Check. Conduct the following check once for each nominal range that is to be used on the CO EC cell within 5 days prior to each field sampling program. If a field sampling program lasts longer than 5 days, repeat this check every 5 days. Immediately repeat the check if the EC cell is replaced or if the EC cell is exposed to gas concentrations greater than 150 percent of the highest up-scale gas concentration.

13.3.1 Repeatability Check Procedure. Perform a complete EC cell sampling run (all three phases) by introducing the CO calibration gas to the measurement system and record the response. Follow Section 10.1.3. Use Figure 1 to record all data. Repeat the run three times for a total of four complete runs. During the four repeatability check runs, do not adjust the system except where necessary to achieve the correct calibration gas flow rate at the analyzer.

13.3.2 Repeatability Check Calculations. Determine the highest and lowest average "measurement data phase" CO concentrations from the four repeatability check runs and record the results on Figure 1 or a similar form. The absolute value of the difference between the maximum and minimum average values recorded must not vary more than ± 3 percent or ± 1 ppm of the up-scale gas value, whichever is less restrictive.

14.0 POLLUTION PREVENTION (RESERVED)

15.0 WASTE MANAGEMENT (RESERVED)

16.0 ALTERNATIVE PROCEDURES (RESERVED)

17.0 REFERENCES

(1) "Development of an Electrochemical Cell Emission Analyzer Test Protocol", Topical Report, Phil Juneau, Emission Monitoring, Inc., July 1997.

(2) "Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers, and Process Heaters Using Portable Analyzers", EMC Conditional Test Protocol 30 (CTM-30), Gas Research Institute Protocol GRI-96/0008, Revision 7, October 13, 1997.

(3) "ICAC Test Protocol for Periodic Monitoring", EMC Conditional Test Protocol 34 (CTM-034), The Institute of Clean Air Companies, September 8, 1999.

(4) "Code of Federal Regulations", Protection of Environment, 40 CFR, Part 60, Appendix A, Methods 1-4; 10.

TABLE 1: APPENDIX A—SAMPLING RUN DATA.

Facility_____ Engine I.D._____ Date_____				
Run Type:	(_)	(_)	(_)	(_)
(X)	Pre-Sample Calibration	Stack Gas Sample	Post-Sample Cal. Check	Repeatability Check

.

Run #	1	1	2	2	3	3	4	4	Time	Scrub. OK	Flow- Rate
Gas	O_2	CO	O_2	CO	O_2	CO	O_2	CO			
Sample Cond. Phase											
″											
″											
″											
″											
Measurement Data Phase											
″											
″											
″											

″											
″											
″											
″											
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″											
″											
Mean											
Refresh Phase											
″											
″											
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″											

[78 FR 6721, Jan. 30, 2013]

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	**Dover Chemical – Hammond Works**
Source Location:	**3000 Sheffield Ave., Hammond, IN 46327**
County:	**Lake**
SIC Code:	**2899**
Permit Renewal No.:	**T089-32932-00227**
Permit Reviewer:	**Josiah Balogun**

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Dover Chemical – Hammond Works relating to the operation of a stationary chlorinated paraffin manufacturing plant. On March 8, 2013, Dover Chemical – Hammond Works submitted an application to the OAQ requesting to renew its operating permit. Dover Chemical – Hammond Works was issued its first Part 70 Operating Permit T089-26668-00227 on December 10, 2008

Permitted Emission Units and Pollution Control Equipment

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

SECTION D.1

(a) Group of Boilers

(1) One (1) Cleaver-Brooks natural gas fired boiler, Model CB-300HP, identified as B-4, constructed in 1974, rated at 12.55 MMBtu per hour, and exhausting at one (1) stack, identified as GB-3401.

(2) One (1) Cleaver-Brooks natural gas fired boiler, Model CB-200-500, identified as B-5, constructed in 1980, rated at 20.92 MMBtu per hour, and exhausting at one (1) stack, identified as GB-3402.

(3) One (1) Superior–Mohawk natural gas fired boiler, identified as B-6, constructed in 1988, rated at 20 MMBtu per hour, and exhausting at one (1) stack, identified as GB-3403.

SECTION D.2 Chlorination system

with a nominal capacity of 3,000 pounds per hour of chlorine feed to produce short to long chain chlorination paraffins, olefins, waxes, polybutene, and 4,821 pounds per hour of muriatic acid. The chlorination system consists of the following systems:

(b) The system consisting of:

(1) Seven (7) reactors, identified as TR-2001 (constructed before 1976), TR-2003 (constructed before 1976), TR-2004 (constructed before 1976), TR-2005 (constructed before 1976), TR-2007(constructed in 1977), TR-2008 (constructed in 1977) and TR-2010 (constructed in 1983), with a maximum capacity of 2,000 gallons each;

(2) Three (3) reactors, identified as TR-2002 (constructed in 1988), TR-2009 (constructed in 1982), and TR-2017 (constructed in 1993), with a maximum capacity of 4,000 gallons each;

(3) One (1) sulfur monochloride tank, identified as TS-1058, constructed in 1981, with a maximum capacity of 5,470 gallons;

(4) One (1) acid tower condensate neutralization tank, identified as TP-2030, constructed before 1976, with a maximum capacity of 500 gallons;

(5) Two (2) chlorine railcar track spots, identified as RC-0101 and RC-0201, constructed before 1976, with a maximum capacity of 1 railcar (containing at most 180,600 pounds) each;

(6) One (1) acid tower, identified as CB-2060, constructed before 1976, with a maximum capacity of 4,821 lb/hr muriatic acid;

(7) One (1) tower product acid tank, identified as TP-2033, constructed before 1976, with a maximum capacity of 560-gallons;

(8) One (1) tower water feed tank, identified as TP-2060 (constructed in 1996), with a maximum capacity of 560-gallons; and

(9) Two (2) chlorine vaporizers, identified as XV-2050 and XV-2051, constructed before 1976, and with a maximum feed capacity of 3,000 lb/hr chlorine combined.

all controlled by seven (7) scrubbers, identified as TP-2061 (constructed before 1976), TP-2062 (constructed before 1976), TP-2063 (constructed before 1976), TP-2064 (constructed before 1976), TP-2065 (constructed in 1977), TP-2066 (constructed in 1977), and TP-2067 (constructed in 1995), and exhausting at seven (7) stacks, identified as Stacks TP-2061 to 2067.

(c) The system consisting of:

(1) Three (3) muriatic acid tanks, identified as TS-1090 (constructed in 1979), TS-1091(constructed in 1980), and TS-1093 (constructed in 2000), with a maximum capacity of 16,000, 14,900 and 16,000 gallons, respectively;

(2) Two (2) hypochlorite reduction tanks, identified as TP-3494, and TP-3495 (constructed in 1993), with a maximum capacity of 6,250 gallons each;

(3) One (1) muriatic acid tank truck loading station, constructed in 1979, with a maximum capacity of 1 truck;

controlled by one (1) caustic scrubber identified as TP-1099 constructed in 1980 exhausting at one (1) stack, identified as Stack TP-1099.

(d) The system consisting of:

(1) One (1) chlorinated product tank, identified as TS-2041, constructed before 1976, with a maximum capacity of 4,000 gallons;

(2) Two (2) chlorinated product tanks, identified as TS-2043, and TS-2044, constructed before 1976, with a maximum capacity of 4,100 gallons each; and

(3) One (1) chlorinated product-drumming tank, identified as TS-2012, constructed in 1978, with a maximum capacity of 1,500 gallons.

SECTION D.3 Sulfurization system

with a nominal capacity of 7000 pounds per hour of sulfurized products consisting of the following equipment:

(e) The system consisting of:

(1) Two (2) sulfurization reactors, identified as TR-2120, and TR-2123, constructed before 1976, with maximum capacity of 3,700, and 7,500 gallons, respectively, and one (1) sulfurization reactor identified as TR-2128, constructed in 2012, with a maximum capacity of 7,500 gallons controlled by two (2) caustic scrubbers operating in series, identified as TP-2162 and TP-2163, followed by an activated carbon system for odor management and exhausting at Stack TP-2163. Three (3) integral reflux condensers associated with sulfurization reactors TR-2120, and TR-2128. Two (2) quench tanks, identified as TP-2121A and TP-2121B, constructed in 1993 and 2010, with maximum capacities of 850 gallons and 1,200 gallons, respectively, which contain olefins and heavy oil, and which function as an emergency quench for reactor malfunctions.

(2) Five (5) blowing tanks, identified as TP-2150 (constructed in 1977), TP-2151 (constructed in 1977), TP-2152 (constructed in 1977), TP-2153 (constructed in 1977), and TP-2154 (constructed in 1997), with maximum capacity of 11,000, 9,650, 11,500, 4,000, and 7,600 gallons, respectively, venting to a blowing tank knockout tank identified as TP-2159 (constructed prior to 1976), controlled by two (2) caustic scrubbers, identified as TP-2162 and TP-2163 and exhausting at Stack TP-2163.

(3) One (1) knockout storage tank, identified as TS-2164, constructed in 1976, with a maximum capacity of 1,500 gallons, exhausted to a containment scrubber, identified as TP-2167, constructed in 1995, and exhausting at Stack TP-2167.

(4) One (1) scrubber liquor storage tank, identified as TS-1028, constructed in 1980, with a maximum capacity of 11,075 gallons.

(5) Two (2) molten sulfur storage tanks, identified as TS-2190 and TP-2190, constructed in 1976.

(6) One (1) filter feed tank, maximum capacity of 3,000 gallons, identified as TP-2207, constructed prior to 1976.

SECTION D.4 Hi-Temp System

with a maximum rated capacity of 4,200 pounds per hour of Hi-Temp products consisting of the following equipment:

(f) The system consisting of:

(1) One (1) reactor, identified as TR-2620, constructed in 1989, with a maximum capacity of 4,000 gallons;

(2) Two (2) recovered methanol tanks, identified as TS-2602 and TS-2603, constructed in 1989, with maximum capacity of 2,500, and 4,000 gallons, respectively;

(3) One (1) sludge tank, identified as TP-2604, constructed in 1989, with a maximum capacity of 750 gallons, equipped with a sludge drumming operation followed by an activated carbon filter for odor management;

(4) One (1) scrubber liquor tank, identified as TS-2610, constructed in 2001, with a maximum capacity of 10,000 gallons; and

(5) One (1) intermediate holding tank, identified as TP-2601, constructed in 1989, with a maximum capacity of 4,550 gallons;

all controlled by two (2) caustic scrubbers identified as TP-2624 and TP-2626, constructed in 1989; and one flare, identified as GB-2627, constructed in 1990, in series, and exhausting at one (1) stack, identified as Stack GB-2627.

(g) One (1) scrubber liquor truck loading station, constructed in 1989, controlled by a carbon drum, identified as TF-2610 constructed in 2001.

(h) The system consisting of:

(1) One (1) reactor, identified as TP-2553, constructed in 1993, with a maximum capacity of 2,100 gallons.

(2) One (1) reactor, identified as TR-2541, constructed in 2005, with a maximum capacity of 3,500 gallons.

(3) Three (3) wash water tanks, identified as TP-2556, TP-2557, and TP-2558, constructed in 1996, each with a maximum capacity of 700 gallons.

All controlled by one (1) caustic scrubber, identified as TP-2589, exhausting at Stack-2589.

(i) One (1) filter feed tank, constructed in 1993, identified as TP-2554, with a maximum capacity of 2,100 gallons.

(j) One (1) PIB heat up tank, identified as TP-2542, constructed in 2010, with a maximum capacity of 5,000 gallons.

(k) One (1) overflow tank, identified as TP-2537, permitted in 2010, with a maximum capacity of 2,000 gallons.

(l) One (1) reactor, constructed in 1990, identified as TR-2630, with a maximum capacity of 4,000 gallons, equipped with an integral multi-stage steam educator and condenser system followed by a carbon drum and one (1) emergency overflow tank, identified as TP-2760, permitted in 2010, with a maximum capacity of 1,300 gallons, and one (1) reactor, identified as TR-2016, constructed in 1990, with a maximum capacity of 4,000 gallons, with emissions controlled by a scrubber, TP-2072.

(m) The system consisting of:

(1) One (1) filter feed tank, identified as TP-2720, constructed in 1995, with maximum capacity of 5,000 gallons.

(2) One (1) filter, identified at GF-2724, constructed in 1995, with a maximum capacity of 69 cubic feet per filter cake.

(3) One (1) filter, identified as GF-2734, constructed in 2005, with a maximum capacity of 41 cubic feet per filter cake.

(4) One (1) pre-coat tank, identified as TP-2722, constructed in 1995, with a maximum capacity of 1,300 gallons.

(5) One (1) flush tank, identified as TP-2726, constructed in 2010, with a maximum capacity of 1,300 gallons.

All controlled by a carbon drum, identified as TF-2728, exhausting to Stack TF-2728.

(n) Two (2) filtrate tanks, identified as TP-2730 and TP-2732, constructed in 1995 and 2010, respectively, with a maximum capacity of 5,000 gallons each.

(o) Two (2) neutralization storage tanks, identified as TP-2538 and TP-2539, permitted in 2010, with a maximum capacity of 12,500 gallons, each.

(p) One (1) amine storage tank, identified as TS-2391, permitted in 2010, with a maximum capacity of 7,950 gallons.

(q) Three (3) reactors, identified as TR-2006 (constructed before 1976), TR-2014 (constructed in 1990), with a maximum capacity of 2,000 gallons each, and TR-2015 (constructed in 1990), with a maximum capacity of 4,000 gallons.

all controlled by seven (7) scrubbers, identified as TP-2061 (constructed before 1976), TP-2062 (constructed before 1976), TP-2063 (constructed before 1976), TP-2064 (constructed before 1976), TP-2065 (constructed in 1977), TP-2066 (constructed in 1977), and TP-2067 (constructed in 1995), and exhausting at seven (7) stacks, identified as Stacks TP-2061 to 2067 all controlled by a scrubber identified as TP-2072 (constructed in 1985), and exhausting at a stack identified as Stack TP-2072.

SECTION D.5 Fuel Additive system

with a maximum rated capacity of 12,000 pounds per hour of fuel additives (prior to blending) consisting of the following equipment:

(r) Three (3) fuel additive blending tanks, identified as TP-1030, TP-1031, and TP-1032, all constructed in 1985, with maximum capacities of 11,740, 15,220, and 11,740 gallons, respectively.

SECTION D.6 Miscellaneous system

with a maximum rated capacity of 3,000 pounds per hour consisting of the following equipment:

(s) Four (4) reactors, identified as TR-2224 (constructed in 1980), TR-2226 (constructed before 1976), TR-2227 (constructed before 1976), and TR-2322 (constructed in 1984), maximum capacity of 5,500, 7,000, 400, 2000 gallons respectively; controlled by two (2) wet scrubbers, identified as PE-2228, and TP-2332, and exhausting at stacks identified as Stack PE-2228, and Stack TP-2332.

(t) One (1) reactor, identified as TR-2329 (constructed in 1986), maximum capacity of 1,500 gallons.

Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit

There are no unpermitted emission units at the source being added through this permitting action.

Emission Units and Pollution Control Equipment Removed From the Source

No emission units have been removed from this facility through this permitting action.

Insignificant Activities

The source also consists of the following insignificant activities:

SECTION D.7 VOC STORAGE TANKS

(a) Storage tanks emitting less than one (1) ton per year collectively of a combination of HAPs and less than fifteen (15) pounds per day of VOC. [326 IAC 12, and 40 CFR 60.112b(a)]

(1) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1001, constructed in 1997.

(2) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1002, constructed in 1997.

(3) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1003, constructed in 1993.

(4) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1004, constructed in 1978.

(5) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1005, constructed in 1978.

(6) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1006, constructed in 1978.

(7) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1007, constructed in 1978.

(8) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1008, constructed in 1978.

(9) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1009, constructed in 1978.

(10) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1010, constructed in 1978.

(11) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1011, constructed in 1978.

(12) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1012, constructed in 1978.

(13) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1013, constructed in 1978.

(14) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1014, constructed in 1978.

(15) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1015, constructed in 1987.

(16) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1016, constructed in 1978.

(17) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1017, constructed in 1978.

(18) One (1) storage tank, maximum capacity of 21,050 gallons, identified as TS-1018, constructed in 1978.

(19) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1019, constructed in 1996.

(20) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1020, constructed in 1997.

(21) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1021, constructed in 1997.

(22) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1022, constructed in 1996.

(23) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1023, constructed in 1996.

(24) One (1) storage tank, maximum capacity of 27,950 gallons, identified as TS-1024, constructed in 1997.

(25) One (1) storage tank, maximum capacity of 28,760 gallons, identified as TS-1026, constructed in 1980.

(26) One (1) storage tank, identified as TS-1027, constructed in 1985, maximum capacity of 14,930 gallons, controlled by a carbon adsorption drum identified as TF-1027, and exhausting at stack identified as Stack TF-1027.

(27) One (1) storage tank, maximum capacity of 15,220 gallons, identified as TS-1033, constructed in 1986.

(28) One (1) storage tank, maximum capacity of 15,380 gallons, identified as TS-1039, constructed in 1987.

(29) One (1) storage tank, maximum capacity of 15,380 gallons, identified as TS-1040, constructed in 1987.

(30) One (1) storage tank, maximum capacity of 15,540 gallons, identified as TS-1042, constructed in 1989.

(31) One (1) storage or blend tank, maximum capacity of 14,900 gallons, identified as TS-1043, constructed in 1990.

(32) One (1) wax storage tank, maximum capacity of 20,390 gallons, identified as TS-1056, constructed in 1978.

(33) One (1) storage tank, maximum capacity of 20,390 gallons, identified as TS-1057, constructed in 1978.

(34) One (1) storage tank, maximum capacity of 4,010 gallons, identified as TS-1081, constructed in 1989.

(35) One (1) storage tank, maximum capacity of 15,220 gallons, identified as TS-1082, constructed in 1989.

(36) One (1) storage tank, maximum capacity of 10,360 gallons, identified as TS-2160, constructed before 1976.

(37) One (1) storage tank, maximum capacity of 10,360 gallons, identified as TS-2163, constructed before 1976.

(38) One (1) storage tank, maximum capacity of 15,270 gallons, identified as TS-2168, constructed before 1976.

(39) One (1) storage tank, maximum capacity of 15,270 gallons, identified as TS-2169, constructed before 1976.

(40) One (1) storage tank, maximum capacity of 15,270 gallons, identified as TS-2170, constructed before 1976.

(41) One (1) storage tank, maximum capacity of 23,310 gallons, identified as TS-2178, constructed in 1998.

(42) One (1) storage tank, maximum capacity of 2,600 gallons, identified as TS-2209, constructed before 1979.

(43) One (1) storage tank, maximum capacity of 10,800 gallons, identified as TS-2218, constructed before 1979.

(44) One (1) storage tank, maximum capacity of 10,690 gallons, identified as TS-2252, constructed prior to 1976.

(45) One (1) storage tank, maximum capacity of 6,760 gallons, identified as TS-2253, constructed before 1976.

(46) One (1) storage tank, maximum capacity of 23,310 gallons, identified as TS-2255, constructed before 1976.

(47) One (1) storage tank, maximum capacity of 10,360 gallons, identified as TS-2264, constructed before 1979.

(48) One (1) storage tank, maximum capacity of 31,070 gallons, identified as TS-2265, constructed before 1979.

(49) One (1) storage tank, maximum capacity of 3,920 gallons, identified as TS-2271, constructed in 2005.

(50) One (1) storage tank, maximum capacity of 3,920 gallons, identified as TS-2272, constructed in 2005.

(51) One (1) storage tank, maximum capacity of 23,310 gallons, identified as TS-2275, constructed before 1979.

(52) One (1) storage tank, maximum capacity of 23,310 gallons, identified as TS-2276, constructed before 1979.

(53) One (1) storage tank, maximum capacity of 23,310 gallons, identified as TS-2277, constructed before 1976.

(54) One (1) storage tank, maximum capacity of 10,570 gallons, identified as TS-2605, constructed in 1990.

(55) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2315, constructed in 1990.

(56) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2362, constructed in 1990.

(57) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2364, constructed in 1990.

(58) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2365, constructed in 1990.

(59) One (1) storage tank, maximum capacity of 30,400 gallons, identified as TS-2367, constructed in 1990.

(60) One (1) storage tank, maximum capacity of 10,570 gallons, identified as TS-2606, constructed in 1989.

(61) One (1) storage tank, permitted in 2010, identified as TS-2607, with a maximum capacity of 30,000 gallons.

(62) One (1) storage tank, maximum capacity of 4,760 gallons, identified as TS-2611, constructed in 1990.

(63) One (1) storage tank, maximum capacity of 4,760 gallons, identified as TS-2612, constructed in 1990.

(64) One (1) storage tank, maximum capacity of 30,080 gallons, identified as TS-2613, constructed in 1990.

(65) One (1) storage tank, maximum capacity of 10,570 gallons, identified as TS-2618, constructed in 1990.

(66) One (1) storage tank, maximum capacity of 16,920 gallons, identified as TS-2619, constructed in 1990.

(67) One (1) storage tank, maximum capacity of 2,750 gallons, identified as TP-2550, constructed in 1996, and modified in 2007 to vent to scrubber TP-2636 which exhausts to stack TP-2636.

(68) One (1) storage tank, maximum capacity of 2,750 gallons, identified as TP-2551, constructed in 1996, and modified in 2007 to vent to scrubber TP-2636 which exhausts to stack TP-2636.

(69) One (1) storage tank, maximum capacity of 2,970 gallons, identified as TP-2617, constructed in 1990.

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(b) One (1) natural gas fired boiler, identified as boiler no. B-3, constructed in 1974, rated at 5.7 MMBtu per hour, exhausting at one (1) stack, identified as GB-3404.

(c) Wastewater treatment plant air strippers.

(d) Two (2) parts washers, identified as PW-1M and PW-2L, constructed in 2005, with a rated capacity of 40 gallons.

(e) One (1) diesel emergency generator, identified as EG-1, constructed in 2002, with a rated capacity of 130 kilowatts (174.3 hp).

"Integral Part of the Process" Determination

The applicant submitted the following information to justify why the reflux condensers should be considered an integral part of the sulfurization reactors in Significant Source Modification No. 089-29495-00227, issued on December 7, 2010:

(a) The condensers are necessary to produce a sellable product.

The raw materials are charged in the sulfurization reactors at ratios required to result in a final product that meets the quality specifications of the buyer. Deviations from these ratios would result in an unsellable product and the entire batch must be discarded. Once the raw materials are added to the reactors, the reactors are then sealed. During the reaction, some materials are boiled off and the condensers function to return this material to the reactors. The condensers are necessary to maintain the balance of raw materials within the reactors in order to produce a sellable final product. Without the condensers it would not be possible to make a product that meets the quality specifications necessary.

(b) The condensers remove excess heat from the reaction talking place within the reactors.

The reactions occurring in the sulfurization reactors are exothermic. Temperatures must be carefully controlled to prevent a safety hazard. During the reaction, the temperature in the reactors reaches a point where some of the raw products are boiled off. The condensers cool this product and return it to the reactor, thus lowering the temperature in the reactor and eliminating a potential safety hazard.

IDEM, OAQ has evaluated the information submitted and agrees that the reflux condensers should be considered an integral part of the sulfurization reactors. Therefore, the permitting level will be determined using the potential to emit after the reflux condensers. Operating conditions in the proposed permit will specify that these reflux condensers shall operate at all times when the sulfurization reactors are in operation.

Existing Approvals

The source was issued Part 70 Operating Permit No. 089-26668-00227 on December 10, 2008. The source has since received the following approvals:

(a) Administrative Amendment No. 089-28490-00227, issued on September 25, 2009;

(b) Administrative Amendment No. 089-29282-00227, issued on July 9, 2010;

(c) Interim No. 089-29495i, issued on September 30, 2010;

(d) Significant Source Modification No. 089-29495-00227, issued on December 7, 2010;

(e) Significant Permit Modification No. 089-29496-00227, issued on December 27, 2010;

(f) Administrative Amendment No. 089-30010-00227, issued on January 5, 2011;

(g) Administrative Amendment No. 089-30584-00227, issued on July 22, 2011;

(h) Significant Permit Modification No. 089-31105-00227, issued on February 27, 2012; and

(i) Administrative Amendment No. 089-32930-00227, issued on March 26, 2013.

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.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A 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	On June 11, 2012, the U.S. EPA designated Lake County nonattainment, for the 8-hour ozone standard.
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.
Unclassifiable or attainment effective February 6, 2012, for PM2.5.	

(a) Ozone Standards
U.S. EPA, in the Federal Register Notice 77 FR 112 dated June 11, 2012, has designated Lake County as nonattainment for ozone. On August 1, 2012 the air pollution control board issued an emergency rule adopting the U.S. EPA's designation. This rule became effective, August 9, 2012. IDEM, does not agree with U.S. EPA's designation of nonattainment. IDEM filed a suit against US EPA in the US Court of Appeals for the DC Circuit on July 19, 2012. 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 designation. Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Therefore, VOC and NOx emissions were evaluated pursuant to the requirements of Emission Offset, 326 IAC 2-3. See the State Rule Applicability – Entire Source section.

(b) $PM_{2.5}$
Lake County has been classified as attainment for $PM_{2.5}$. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct $PM_{2.5}$, NOx and SO_2 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.

(c) Other Criteria Pollutants
Lake County has been classified as attainment or unclassifiable in Indiana for all other criteria polluatnts. 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 processing 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

This table reflects the unrestricted potential emissions of the source.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	0.5
PM_{10}	1.8
$PM_{2.5}$	1.8
SO_2	0.19
VOC	> 100
CO	20
NO_x	24.4

Unrestricted Potential Emissions	
Pollutant	Tons/year
GHGs as CO_2e	33054
Single HAP	< 10
Total HAP	< 25

(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 and will be issued a Part 70 Operating Permit Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of GHGs is less than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year.

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less 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 less than twenty-five (25) tons per year.

Actual Emissions

The following table shows the actual emissions as reported by the source. This information reflects the 2011 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	--
PM_{10}	1
$PM_{2.5}$	1
SO_2	0
VOC	9
CO	6
NO_x	8
Ammonia	0
lead	0

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any new control equipment is considered federally enforceable only after issuance of this Part 70 permit renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)									
Process/ Emission Unit	PM	PM_{10}*	$PM_{2.5}$**	SO_2	VOC	CO	NOx	GHGs	H_2S	Total/ Single HAPs
HiTEC 735 REACTION BATCH	0	0	0	0	4.9	0	0	284.5	0	0
Doverlube PE 80	0	0	0	0		0	0	0	0	0
Product FL 296	0	0	0	0		0	0	0	0	0
PIBSA Process-Oil Emissions	0	0	0	0	1.28	0	0	0	0	0
Solids loading To Reactor 16 (TR-2016)	1.7E-3	7.8E-4	1.2E-4	0	0	0	0	0	0	0
Doverlube NCEP	0	0	0	0	0.025	0	0	0	0	0
Milidin GX-3/ Doverlube B902	0	0	0	0	10.8	0	0	0	0	0.001
Chlorination System	0	0	0	0	0	0	0	0	0	0.58
TS - 2391	0	0	0	0	0.04	0	0	0	0	0
TP - 2607	0	0	0	0	0.02	0	0	0	0	0
TP - 2537	0	0	0	0	0.004	0	0	0	0	0
Sulfurization Reactor	0	0	0	0	< 25	0	0	0	< 10	0
PIBSA Process	0	0	0	0	11.21	0	0	0	0	0.09
TP - 2542	0	0	0	0		0	0	0	0	0
TP - 2726	0	0	0	0		0	0	0	0	0
Emergency Generator	0.1	0.1	0.1	0.09	0.11	0.29	1.35	5033	0	0.0012
Natural Gas Boilers	0.4	1.7	1.7	0.1	1.3	19.3	23	27,736	0	0.43
Air Stripper	0	0	0	0	1.32	0	0	0	0	0
Product SJF 041	0	0	0	0	0.41	0	0	0	0	0
Product SJF 042	0	0	0	0		0	0	0	0	0

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	VOC	CO	NOx	GHGs	H_2S	Total/ Single HAPs
TS - 1027	0	0	0	0	4.6E-4	0	0	0	0	0
Other VOC emitting Sources	0	0	0	0	> 100	0	0	0	0	0
Total PTE of Entire Source	**0.5**	**1.8**	**1.8**	**0.19**	**> 100**	**19.6**	**24.4**	**33054**	**< 10**	**< 10/ < 25**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO_2e	10	10/25
Emission Offset Major Source Thresholds	100	100	100	100	100	100	100	NA	NA	NA

negl. = negligible
*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.

(a) This existing stationary source is not major for PSD because the emissions of each regulated pollutant are less than one hundred (<100) tons per year, emissions of GHGs are less than one hundred thousand (<100,000) tons of CO_2 equivalent emissions (CO_2e) per year, and it is in one of the twenty-eight (28) listed source categories.

(b) This existing stationary source is major for Emission Offset because the emissions of the nonattainment pollutant, VOC, is greater than one hundred (>100) tons per year.

Federal Rule Applicability

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing pollutant-specific emission unit that meets 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 existing emission unit and specified pollutant subject to CAM:

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Sulfurization Reactor - H2S	Scrubber	Y	1480	< 10	10	Y	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to Sulfurization Reactor for H2S upon issuance of the Title V Renewal. A CAM plan has been incorporated into this Part 70 permit renewal.

(b) **New Source Performance Standards (NSPS)**
326 IAC 12 and 40 CFR Part 60, Subpart Dc (Standards of Performance for Industrial Commercial-Institutional Steam generating Units)

(i) The boiler, identified as boiler nos. B-3 is not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60 Subpart Dc), because this boiler has a heat input capacity from fuels combusted in the steam generating drum of less than 10 million Btu/hour.

(ii) The boilers, identified as boiler nos. B-4, B-5, and B-6 are not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60 Subpart Dc), because each boiler has a heat input capacity from fuels combusted in the steam generating drum of greater than 10 million Btu/hour and was existing and in operation before June 9, 1989.

(c) **326 IAC 12 and 40 CFR Part 60.110b, Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels)**

(i) These storage tanks, identified as TS-2391, TP-2542, TP-2726, TP-2537, TP-2538, TP-2539, and TP-2760 are not subject to 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 60.11b, Subpart Kb), because the capacity of each is less than the applicability threshold of 75 cubic meters.

(ii) The following VOC storage tanks are subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.110b, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels), because the construction on these tanks commenced after July 23, 1984 and each storage tank has a capacity greater than 75 m^3. These storage tanks are exempt from the General Provisions (part 60, subpart A). Pursuant to 40 CFR 60.116b (b), the owner or operator of each storage tank shall keep readily accessible record showing the dimension of the storage tank and analysis showing the capacity of the storage tank for the life of the tank.

(1) TS-1001
(2) TS-1002
(3) TS-1003
(4) TS-1015
(5) TS-1019
(6) TS-1020
(7) TS-1021
(8) TS-1022
(9) TS-1023
(10) TS-1024
(11) TS-2178
(12) TS-2315
(13) TS-2362
(14) TS-2364
(15) TS-2365
(16) TS-2367
(17) TS-2606
(18) TS-2606
(19) TS-2613

The tanks are subject to the following Sections of 40 CFR Part 60, Subpart Kb.

1. 40 CFR 60.116b

(d) **326 IAC 12 and 40 CFR Part 60, Subpart VV (Standards of Performance for Equipment Leaks of VOC in Synthetic Organic Chemical Manufacturing Industry (SOCMI))**
This source does not produce specified organic chemicals as an intermediate or final product or byproduct. Therefore it is exempt from the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.480), Subpart VV - Standards of Performance for Equipment Leaks of VOC In Synthetic Organic Chemical Manufacturing Industry (SOCMI).

(e) **326 IAC 12 and 40 CFR Part 60, Subpart III (Standards of Performance for Volatile Organic Compounds (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI)) Air Oxidation Unit Processes)**
This source does not produce specified organic chemicals as an intermediate or final product or byproduct. Therefore, it is exempt from the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.610, Subpart III - Standards of Performance for Volatile Organic Compounds (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes.

(f) **326 IAC 12 and 40 CFR Part 60, Subpart NNN (Standards of Performance for Volatile Organic Compounds (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations)**
This source does not produce specified organic chemicals as an intermediate or final product or byproduct. Therefore it is exempt from the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.660, Subpart NNN - Standards of Performance for Volatile Organic Compounds (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI)) Distillation Operations.

(g) **326 IAC 12 and 40 CFR Part 60, Subpart RRR (Standards of Performance for Volatile Organic Compounds (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes)**
This source does not produce specified organic chemicals as an intermediate or final product or byproduct. Therefore it is exempt from the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.700, Subpart RRR - Standards of Performance for Volatile Organic Compounds (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI)) Reactor Processes.

(h) **National Emission Standards for Hazardous Air Pollutants (NESHAPs)**
326 IAC 14 and 40 CFR 61 (National Emission Standards For Hazardous Air Pollutants)
The Standards for Hazardous Air Pollutants (NESHAPs) 326 IAC 14, (40 CFR 61) are not applicable to this source, because none of the pollutants covered by this rule is emitted from any of its processes.

(i) **National Emission Standards for Hazardous Air Pollutants (NESHAPs)(MACT)**
326 IAC 20 and 40 CFR 63, Parts F and G (National Emission Standards for Hazardous Air Pollutants)
The Chlorination process does not produce as a primary product a SOCMI chemical listed in table 1 of subpart F; and does not use as a reactant or manufacture as a product one or more of the organic HAPs listed in table 2 of subpart F. Therefore, Chlorination process is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 326 IAC 20, (40 CFR 63, Parts F and G).

(j) **326 IAC 20 and 40 CFR 63, Part H (National Emission Standards for Hazardous Air Pollutants)**
The National Emission Standards for Hazardous Air Pollutants (NESHAPs), 326 IAC 20, and 40 CFR 63 Subpart H, standard for equipment leaks, is not applicable to this source, because this source is not a major source of HAPs and is not subject to any of the major source MACT standards under 40 CFR Part 63.

(k) **326 IAC 20 and 40 CFR 63 Subpart NNNNN—National Emission Standards for Hazardous Air Pollutants: Hydrochloric Acid Production**
The requirements of National Emission Standards for Hazardous Air Pollutants: Hydrochloric Acid Production, 40 CFR 63, Subpart NNNNN are not applicable to any of the emission units at source because the source did not produce a liquid HCl product at a concentration of 30 weight percent or greater during its normal operations and the source is not located at, or is part of, a major source of HAP.

(l) The requirements of National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engine 40 CFR 63, Subpart ZZZZ applies to stationary RICE at Area or Major Sources of HAPs and therefore, the diesel emergency generator will be subject to this subpart because the emergency generator was constructed before April 1, 2006. The specific facilities subject to this rule includes the following.

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(1) One (1) diesel emergency generator, identified as EG-1, constructed in 2002, with a rated capacity of 130 kilowatts (174.3 hp).

The diesel emergency generator engine is subject to the following Sections of 40 CFR Part 63, Subpart ZZZZ.

1. 40 CFR 63.6603 Table 2d
2. 40 CFR 63.6625 (e), (f), (h) and (i)
3. 40 CFR 63.6605
4. 40 CFR 63.6640
5. 40 CFR 63.6655, except 63.6655(c)
6. Footnote 2 of Table 2d
7. Subpart A except Pursuant 40 CFR 63.6645(a)(5), the following do not apply 63.7(b) and (c), 63.8e, (f)(4) and (f)(6) and 63.9 (b)-(e), (g), (h)

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 ZZZZ.

State Rule Applicability - Entire Source

326 IAC 1-6-3 (Preventive Maintenance Plan)
The source is subject to 326 IAC 1-6-3.

326 IAC 1-5-2 (Emergency Reduction Plans)
The source is subject to 326 IAC 1-5-2.

326 IAC 2-2 (Prevention of Significant Deterioration-PSD)
The source was constructed before 1977, the applicability date for this rule and is one of the twenty-eight (28) listed source categories under 326 IAC 2-2 (Prevention of Significant Deterioration). This source was major for PSD in 2012 when the sulfurization reactor was constructed and the source has the potential to emit of H_2S in excess of 10 tons per year, however, the source agreed to limit the PTE of H_2S to less than 10 tons per year. In 2012 the source was redesignated to nonattainment for Ozone. The source is now major for emission offset and minor under 326 IAC 2-2 (PSD).

326 IAC 2-3 (Emission Offset)
The county was redesignated to nonattainment for Ozone in 2012 and the potential to emit VOC is greater than 100 tons per year. Therefore the source was a major source for Emission Offset and it is one of the twenty-eight (28) listed sources.

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 is 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, 2013 and every year thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1)

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 6-4-2(4) is not federally enforceable.

326 IAC 6.8-10-1 (Lake County: Fugitive Particulate Matter)
The source is located in Lake County and this source does not have the potential to emit of fugitive particulate emissions of 5 tons per year or more. Therefore, this source is not subject to rule 326 IAC 6.8-10-1.

326 IAC 8-7 (Specific VOC Reduction Requirements for Lake County)
The source has the potential to emit volatile organic compounds (VOCs) at levels equal to or greater than twenty five tons per year (tpy) in Lake County and it belongs to source Category (H) Batch Processors. Therefore, the rule 326 IAC 8-7-2 does not apply to this source.

State Rule Applicability – Individual Facilities

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
This boiler B-6 is not subject to 326 IAC 6.8-1-2(b)(3), because the source or the boiler does not have the potential to emit one hundred (100) tons or more and actual emissions of ten (10) tons or more of particulate matter per year. Therefore, since 326 IAC 6.8 is not applicable to boiler no. 6, the boiler shall be subject to the requirements of 326 IAC 6-2.

Boiler no. B-6 was constructed after September 1983. Therefore, the boiler, identified as boiler no. B-6 is subject to rule 326 IAC 6-2-4.

The limit below is established by the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where: Pt = Pounds of particulate matter emitted per million Btu heat input (lb/MMBtu).
Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu/hr).

Summary of 326 IAC 6-2 Evaluation				
Boilers	**Installation Date**	**Rating** (MMBtu/hr)	**Q** (MMBtu/hr)	**Pt** (lb/MMBtu)
B-6	1988	20.00	59.17	0.38

326 IAC 6.8-2 (Lake County PM_{10} Emission Requirements)
The source is located in Lake County where Particulate Rules for Nonattainment Area Limitations rule 326 IAC 6.8-2-1 apply. The boilers, identified as boiler nos. B-3, B-4, B-5, Chlorination

process, and Sulfurization process have source specific emission PM_{10} requirements as specified below.

Pursuant to 326 IAC 6.8-2-19 (Dover Chemical Corporation-Hammond) PM_{10} emissions shall be limited as follows:

Dover Chemical Corporation-Hammond in Lake County, shall meet the following emission limits:		
Source	**Units**	**lbs/hr**
Cleaver Brooks boiler B-4	0.007 lbs/MMBtu	0.09
Cleaver Brooks boiler B-5	0.007 lbs/MMBtu	0.14
VA power B-3 boiler	0.007 lbs/MMBtu	0.04
Chlorinated wax process	0.001 lbs/ton	0.003
Sulfurized fat process	0.157 lbs/ton	0.230

326 IAC 6.8 (Particulate Matter Limitations for Lake County)

(a) Pursuant to 326 IAC 6.8-1-1(2)(A) and (B), the potential to emit particulate matter (PM) emissions from the source is less than one hundred (100) tons and the actual PM emissions are less than ten (10) tons, therefore, the Hi-Temp Process emission units, identified as TR-2620, TR-2630 and filtration are exempt from the requirements of this rule.

(b) Pursuant to 326 IAC 6.8-1-1(2)(A) and (B), the potential to emit particulate matter (PM) emissions from the source is less than one hundred (100) tons and the actual PM emissions are less than ten (10) tons, therefore, the Miscellaneous Process emission units, identified as TR-2224, TR-2225, TR-2226, TR-2227, TR-2329 and TR-2322 are exempt from the requirements of this rule.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

(a) Pursuant to 326 IAC 6-3-2, the particulate emissions from the from the Hi-Temp Process emission units, identified as TR-2620, TR-2630 and filtration shall be limited by the following equation:

(a) Pursuant to 326 IAC 6-3-2, the particulate emissions from the from the Miscellaneous Process emission units, identified as TR-2224, TR-2226, TR-2227, TR-2329 and TR-2322 shall be limited by the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$

Where:

E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations

There are no emission unit at this source that are subject to 326 IAC 326 IAC 7-1.1 because all the emission units have SO_2 PTE (or limited SO_2 PTE) less than 25 tons per year or 10 pounds per hour, each.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

The following VOC storage tanks listed below, have a capacity of less than 39,000 gallons each. Therefore pursuant to 326 IAC 8-9-6(a) and (b), the source shall be subject to the requirements of this rule

(1) TS-1004
(2) TS-1005
(3) TS-1006
(4) TS-1007
(5) TS-1008
(6) TS-1009
(7) TS-1010
(8) TS-1011
(9) TS-1012
(10) TS-1013
(11) TS-1014
(12) TS-1016
(13) TS-1017
(14) TS-1018
(15) TS-1026
(16) TS-1027
(17) TP-1033
(18) TS-1039
(19) TS-1040
(20) TS-1042
(21) TS-1043
(22) TS-1056
(23) TS-1057
(24) TS-1081
(25) TS-1082
(26) TS-2160
(27) TS-2163
(28) TS-2168
(29) TS-2169
(30) TS-2170
(31) TS-2209
(32) TS-2218
(33) TS-2252
(34) TS-2253
(35) TS-2255
(36) TS-2264
(37) TS-2265
(38) TS-2271
(39) TS-2272
(40) TS-2275
(41) TS-2276
(42) TS-2277
(43) TS-2605
(44) TS-2611
(45) TS-2612
(46) TS-2618
(47) TS-2619
(48) TP-2550
(49) TP-2551
(50) TP-2617

326 IAC 8-3-2 (Cold Cleaner Operations)
The cold cleaner degreasing operations are subject to the provisions of 326 IAC 8-3-2 because the degreaser were constructed in Lake County prior to January 1, 1980 at a source that has potential VOC emissions greater than 100 tons per year.

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 monitoring requirements applicable to this source are as follows:

Emission Unit	Control Device	Parameter	Frequency of Testing
Sulfurization	Scrubber	caustic concentration, temperature, flow rate	once every 5 years

The compliance monitoring requirements applicable to this source are as follows:

Emission Unit/Control	Parameter	Frequency	Excursions and Exceedances	Limit or Requirement
Chlorination Process7 (Scrubbers exhausting to Stacks TP-2061 to TP-2067)	Caustic concentration	Daily	Response Steps	HAPs minor limits
Sulfurization (2 Scrubbers exhausting to Stack TP-2163)	Caustic concentration of 1st stage and 2nd stage, temperature, flow rate	caustic concentration: daily temperature: continuously Flow rate in 2nd stage: hourly	Response Steps	326 IAC 2-2 and 40 CFR 64

Recommendation

The staff recommends to the Commissioner that the Part 70 Operating Permit Renewal be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on March 11.

Conclusion

The operation of this stationary chlorinated paraffin manufacturing plant shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No. 089-32932-00227.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Josiah Balogun 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) 234-5257 or toll free at 1-800-451-6027 extension 4-5257.

(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
Emission Summary
Source Name: Dover Chemical Corp.
Source Location: 3000 Sheffield Ave., Hammond, IN 46327
Permit Number: 089-32930-00227
Permit Reviewer: Josiah Balogun
Date: 22-Mar-2013

Uncontrolled Potential to Emit

	PM (tons/yr)	PM_{10} (tons/yr)	$PM_{2.5}$ (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	GHGs as CO2e (tons/yr)	H2S (tons/yr)	HAPs (tons/yr)
Emission Unit										
HiTEC 7135 REACTION BATCH	0	0	0	0	4.86	0	0	284.5	0	0
Doverlube PE80	0	0	0	0		0	0	0	0	0
Product FL 296	0	0	0	0		0	0	0	0	0
PIBSA Process - Oil Emissions	0	0	0	0	1.28	0	0	0	0	0
Solids Loading To Reactor 16 (TR-2016)	0.0017	0.00078	0.000119	0	0	0	0	0	0	0
Doverlube NCEP	0	0	0	0	0.025	0	0	0	0	0
Milidin GX-3 / Doverlube B902 *	0	0	0	0	10.814	0	0	0	0	0.001
Chlorination System	0	0	0	0	0	0	0	0	0	0.58
Tanks									0	
TS-2391 **	0	0	0	0	0.04	0	0	0	0	0
TP-2607 **	0	0	0	0	0.02	0	0	0	0	0
TP-2537 **	0	0	0	0	0.004	0	0	0	0	0
Sulfurization Reactor	0	0	0	0	> 25	0	0	0	1480.44	0
PIBSA Process	0	0	0	0	> 100	0	0	0	0	0.09
TP-2542 ***	0	0	0	0		0	0	0	0	0
TP-2726 ***	0	0	0	0		0	0	0	0	0
Emergency Generator	0.1	0.1	0.1	0.09	0.11	0.29	1.35	5033	0	0.0012
Natural gas Boilers	0.4	1.7	1.7	0.1	1.3	19.3	23	27,736	0	0.433
Air Stripper	0	0	0	0	1.32	0	0	0	0	0
Product SJF 041	0	0	0	0	0.41	0	0	0	0	0
Product SJF 042	0	0	0	0		0	0	0	0	0
Tank TS-1027	0	0	0	0	0.00046	0	0	0	0	0
Other VOC emitting Sources	0	0	0	0	> 100	0	0	0	0	0
Total Emissions	0.50	1.80	1.80	0.19	> 100	19.59	24.35	33053.50	1480.44	1.11

* Milidin GX-3 and Doverlube B902 are made in the same reactor, therefore, the worst-case VOC emission was selected
** Tank emissions are calculated by the source using TANKS 4.0
*** VOC and HAP emissions are included in the PIBSA modification calculations
**** The tank will not store liquids containing VOCs or HAPs
Emission Calculations from Permit no. 089-30284-00227
Emission Units HiTEC 735, Doverlube PE80 and Product FL 296 are all in the same Reactor, therefore, the worst case VOC emission was selected

Appendix A: Emissions Calculations
Emission Summary
Source Name: Dover Chemical Corp.
Source Location: 3000 Sheffield Ave., Hammond, IN 46327
Permit Number: 089-32930-00227
Permit Reviewer: Josiah Balogun
Date: 22-Mar-2013

Limited Potential to Emit

	PM (tons/yr)	PM_{10} (tons/yr)	$PM_{2.5}$ (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	GHGs as CO2e (tons/yr)	H2S (tons/yr)	HAPs (tons/yr)
Emission Unit										
HiTEC 7135 REACTION BATCH	0	0	0	0	4.86	0	0	284.5	0	0
Doverlube PE80	0	0	0	0		0	0	0	0	0
Product FL 296	0	0	0	0		0	0	0	0	0
PIBSA Process - Oil Emissions	0	0	0	0	1.28	0	0	0	0	0
Solids Loading To Reactor 16 (TR-2016)	0.0017	0.00078	0.000119	0	0	0	0	0	0	0
Doverlube NCEP	0	0	0	0	0.025	0	0	0	0	0
Milidin GX-3 / Doverlube B902 *	0	0	0	0	10.814	0	0	0	0	0.001
Chlorination System	0	0	0	0	0	0	0	0	0	0.58
TS-2391 **	0	0	0	0	0.04	0	0	0	0	0
TP-2607 **	0	0	0	0	0.02	0	0	0	0	0
TP-2537 **	0	0	0	0	0.004	0	0	0	0	0
Sulfurization Reactor	0	0	0	0	< 25	0	0	0	< 10	0
PIBSA Process	0	0	0	0	11.21	0	0	0	0	0.09
TP-2542 ***	0	0	0	0		0	0	0	0	0
TP-2726 ***	0	0	0	0		0	0	0	0	0
Emergency Generator	0.1	0.1	0.1	0.09	0.11	0.29	1.35	5033	0	0.0012
Natural gas Boilers	0.4	1.7	1.7	0.1	1.3	19.3	23	27,736	0	0.433
Air Stripper	0	0	0	0	1.32	0	0	0	0	0
Product SJF 041	0	0	0	0	0.41	0	0	0	0	0
Product SJF 042	0	0	0	0		0	0	0	0	0
Tank TS-1027	0	0	0	0	0.00046	0	0	0	0	0
Other VOC emitting Sources	0	0	0	0	> 100	0	0	0	0	0
Total Emissions	0.50	1.80	1.80	0.19	> 100	19.59	24.35	33053.50	< 10	1.11

Note: Product SJF 041 and 042 are being mixed together so the worst case is SJF 042 with 0.41 tons per year of VOC emissions.

2012 Dover Chemical self Monitoring Report Manhole 105

Manhole 105 - Volatile Organic Compounds

Sample Date		Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec	AVERAGE	MAXIMUM	Total lbs
Flow	mgd	0.104	0.091	0.079	0.073	0.064	0.066	0.079	0.070	0.069	0.076	0.081	0.087	0.078	0.104	
Chloromethane (Methyl Chloride)	ug/L	10	10	10	10	10	10	10	10	10	10	10	10	10.00	10.00	
	lbs/day	0.0087	0.0076	0.0066	0.0061	0.0054	0.0055	0.0066	0.0058	0.0057	0.0064	0.0068	0.0072	0.01	0.01	2.38
Vinyl Chloride	ug/L	10	10	10	10	10	10	10	10	10	10	10	10	10.00	10.00	
	lbs/day	0.0087	0.0076	0.0066	0.0061	0.0054	0.0055	0.0066	0.0058	0.0057	0.0064	0.0068	0.0072	0.01	0.01	2.38
Chloroethane	ug/L	10	10	10	10	10	10	10	10	10	10	10	10	10.00	10.00	
	lbs/day	0.0087	0.0076	0.0066	0.0061	0.0054	0.0055	0.0066	0.0058	0.0057	0.0064	0.0068	0.0072	0.01	0.01	2.38
1,1-Dichloroethylene	ug/L	10	10	10	10	10	10	10	11.67	10	10	10	10	10.14	11.67	
	lbs/day	0.0087	0.0076	0.0066	0.0061	0.0054	0.0055	0.0066	0.0067	0.0057	0.0064	0.0068	0.0072	0.01	0.01	2.41
Methylene Chloride	ug/L	674	27	34.5	13.5	15	10.5	10	10	9.65	13	215	95	93.93	674.00	
	lbs/day	0.5038	0.0206	0.0211	0.0083	0.0081	0.0058	0.0066	0.0058	0.0055	0.0084	0.1412	0.0592	0.07	0.50	24.17
1,2-Trans Dichloroethylene	ug/L	10	10	10	10	10	10	10	10	10	10	10	10	10.00	10.00	
	lbs/day	0.0087	0.0076	0.0066	0.0061	0.0054	0.0055	0.0066	0.0058	0.0057	0.0064	0.0068	0.0072	0.01	0.01	2.38
Benzene	ug/L	82.5	42.33	51	10	49.5	10	10	10	10	10	10	10	25.44	82.50	
	lbs/day	0.0693	0.0319	0.0331	0.0061	0.0178	0.0055	0.0066	0.0058	0.0057	0.0064	0.0068	0.0072	0.02	0.07	6.15
Carbon Tetrachloride	ug/L	20	20	20	20	20	20	15	20	20	20	20	20	19.58	20.00	
	lbs/day	0.0174	0.0152	0.0132	0.0121	0.0107	0.0111	0.0088	0.0116	0.0115	0.0127	0.0136	0.0144	0.01	0.02	4.64
Chlorobenzene	ug/L	20	20	20	20	20	20	20	20	20	20	20	20	20.00	20.00	
	lbs/day	0.0174	0.0152	0.0132	0.0121	0.0107	0.0111	0.0131	0.0116	0.0115	0.0127	0.0136	0.0144	0.01	0.02	4.77
Chloroform	ug/L	20	20	20	20	20	20	20	20	20	20	20	20	20.00	20.00	
	lbs/day	0.0174	0.0152	0.0132	0.0121	0.0107	0.0111	0.0131	0.0116	0.0115	0.0127	0.0136	0.0144	0.01	0.02	4.77
1,2 Dichlorobenzene	ug/L	10	10	10	10	10	10	15	10	10	10	10	10	10.42	15.00	
	lbs/day	0.0087	0.0076	0.0066	0.0061	0.0054	0.0055	0.0108	0.0058	0.0057	0.0064	0.0068	0.0072	0.01	0.01	2.51
1,3-Dichlorobenzene	ug/L	10	10	10	10	10	10	10	10	10	10	10	10	10.00	10.00	
	lbs/day	0.0087	0.0076	0.0066	0.0061	0.0054	0.0055	0.0066	0.0058	0.0057	0.0064	0.0068	0.0072	0.01	0.01	2.38
1,4-Dichlorobenzene	ug/L	10	10	10	10	10	10	10	10	10	10	10	10	10.00	10.00	
	lbs/day	0.0087	0.0076	0.0066	0.0061	0.0054	0.0055	0.0066	0.0058	0.0057	0.0064	0.0068	0.0072	0.01	0.01	2.38
1,1-Dichloroethane	ug/L	10	10	10	10	10	10	10	10	10	10	10	10	10.00	10.00	
	lbs/day	0.0087	0.0076	0.0066	0.0061	0.0054	0.0055	0.0066	0.0058	0.0057	0.0064	0.0068	0.0072	0.01	0.01	2.38
1,2 Dichloroethane	ug/L	86.5	11.33	479	99	60	14	10	31.33	64.75	40	10	59	80.41	479.00	
	lbs/day	0.0637	0.0088	0.3514	0.0632	0.0216	0.0075	0.0066	0.0166	0.0388	0.0244	0.0068	0.0472	0.05	0.35	*19.97*
1,2-Dichloropropane	ug/L	10	10	10	10	10	10	10	10	10	10	10	10	10.00	10.00	
	lbs/day	0.0087	0.0076	0.0066	0.0061	0.0054	0.0055	0.0066	0.0058	0.0057	0.0064	0.0068	0.0072	0.01	0.01	2.38
Ethylbenzene	ug/L	10	10	10	10	10	10	10	10	10	10	10	10	10.00	10.00	
	lbs/day	0.0087	0.0076	0.0066	0.0061	0.0054	0.0055	0.0066	0.0058	0.0057	0.0064	0.0068	0.0072	0.01	0.01	*2.38*
Tetrachloroethylene	ug/L	10	10	10	10.5	10	10	10	10	10	10	10	10	10.04	10.50	
	lbs/day	0.0087	0.0076	0.0066	0.0064	0.0054	0.0055	0.0066	0.0058	0.0057	0.0064	0.0068	0.0072	0.01	0.01	2.39
Toluene	ug/L	21	10	10	10	10	10	10	10	10	10	10	10	10.92	21.00	
	lbs/day	0.0169	0.0076	0.0066	0.0061	0.0054	0.0055	0.0066	0.0058	0.0057	0.0064	0.0068	0.0072	0.01	0.02	2.63
1,1,1-Trichloroethane	ug/L	21.25	20	20	23.5	20	22.5	20	20	20	20	20	20	20.60	23.50	
	lbs/day	0.0183	0.0152	0.0132	0.0144	0.0107	0.0126	0.0131	0.0116	0.0115	0.0127	0.0136	0.0144	0.01	0.02	4.91
1,1,2-Trichloroethane	ug/L	12.5	10	25	25	37.5	25	37.5	41.67	25	25	25	25	26.18	41.67	
	lbs/day	0.0106	0.0076	0.0165	0.0151	0.0200	0.0139	0.0221	0.0240	0.0143	0.0159	0.0170	0.0181	0.02	0.02	5.93
Trichloroethylene	ug/L	36	10	10	10.5	10	10	10	10	10	10	10	10	12.21	36.00	
	lbs/day	0.0280	0.0076	0.0066	0.0064	0.0054	0.0055	0.0066	0.0058	0.0057	0.0064	0.0068	0.0072	0.01	0.03	2.98
Total Xylenes	ug/L	20	16.67	20	20	20	20	20	20	20	20	20	20	19.72	20.00	
	lbs/day	0.0174	0.0122	0.0132	0.0121	0.0109	0.0111	0.0131	0.0116	0.0115	0.0127	0.0136	0.0144	0.01	0.02	*4.68*
1,3-Dichloropropylene	ug/L	10	10	10	10	10	10	10	10	10	10	10	10	10.00	10.00	
	lbs/day	0.0087	0.0076	0.0066	0.0061	0.0054	0.0055	0.0066	0.0058	0.0057	0.0064	0.0068	0.0072	0.01	0.01	2.38
Isopropylbenzene	ug/L	10	10	10	10	10	10	10	10	10	10	10	10	10.00	10.00	
	lbs/day	0.0087	0.0076	0.0066	0.0061	0.0054	0.0055	0.0066	0.0058	0.0057	0.0064	0.0068	0.0072	0.01	0.01	2.38
1,2,4-Trimethylbenzene	ug/L	10	10	10	10	10	10	10	10	10	10	10	10	10.00	10.00	
	lbs/day	0.0087	0.0076	0.0066	0.0061	0.0054	0.0055	0.0066	0.0058	0.0057	0.0064	0.0068	0.0072	0.01	0.01	*2.38*
o-Xylene	ug/L	10	10	10	10	10	10	10	10	10	10	10	10	10.00	10.00	
	lbs/day	0.0087	0.0076	0.0066	0.0061	0.0054	0.0055	0.0066	0.0058	0.0057	0.0064	0.0068	0.0072	0.01	0.01	2.38
m&p-Xylene	ug/L	57.5	30	30	34	30	31.5	30	30	30	30	30	30	32.75	57.50	
	lbs/day	0.0466	0.0229	0.0198	0.0207	0.0161	0.0176	0.0197	0.0175	0.0172	0.0191	0.0203	0.0217	0.02	0.05	7.88
															Grand Total	131.76

Material Balance _ Loss From Methanol Productio		lbs												**AVERAGE**	**MAXIMUM**	Total lbs
METHANOL lbs/Month	0.0000	0.0002	0.0000	0.0002	0.0001	0.0000	0.0000	0.0002	0.0000	0.0001	0.0000	0.0000	0.0000	0.0001	0.0002	0.0225

Avg Total VOC Year in effluent to sewer 131.78 lbs./yr

Note that many of these have been reported as below the dection limits and that the emissions were calculated at the detection limit instead of as zero. Therefore, these emissions calculations are very conservative.

0.07 Tons/year

air strippers are approx 95% efficient			
Avg Total Lbs/year to Air	**Avg Daily Air Lbs/Day to air**	**Tons/year**	
2635.22	**7.22**	**1.32**	

2012 Calender

Month	Days
Jan	31
Feb	29
Mar	31
Apr	30
May	31
Jun	30
Jul	31
Aug	31
Sep	30
Oct	31
Nov	30
Dec	31

Total lbs figured using 365 days/yr * avg annual lbs

HiTEC 7135 REACTION BATCH

Emissions Calculations are all Uncontrolled.

Sizing of HiTEC 7135 Reaction Batch in (TR-2620)

At cook temp, batch contains polyisobutlyene succinic anhydride (PIBSA) charge, aminoguanidine bicarbonate(AGBC) charge, and 60% of process oil charge

Component	Specific Gravity "SG"	Density lb/gal	Formula lb	@ Cook Temp lb		
PIBSA	0.8429	7.03	5,736	5,736		
AGBC	0.8429	7.03	1,134	1,134		
Oil	0.8098	6.75	4,500	2,700		
Total			11,370	9,570	1,379	gal

Due to foaming, batch will be sized for a maximum of 55% of reactor volume [Gal = lb / D]
Lab runs indicate that the foaming is at its maximum @ T = 140°C (248°F). [D = SG x 8.34 lb/gal]

Reactor Volume = 4,000 gal
Batch Size = 2,200 gal

ratio of batch formula to the reactor volume: 2.90
ratio of batch formula to the batch size: 1.59

Assume as worst case, bulk SPG is 2:1 mixture of PIBSA and oil.

Bulk SPG = 0.8319
Bulk Density = 6.94 lb/gal

Approximate Weight:
27,751 lb @ 4,000 gal (reactor volume)
15,263 lb @ 2,200 gal (batch size)

The batch formula for the **Reactor Volume** is:

PIBSA:	16,633	lb	
AGBC:	3,288	lb	
Oil:	7,829	lb	
Total:	27,751	lb	4,000 gal

The batch formula for the **Batch Size** is:

PIBSA:	9,148	lb	
AGBC:	1,809	lb	
Oil:	4,306	lb	
Total:	15,263	lb	2,200 gal

Dover adds Dilution Oil to complete the batch:

Dilution Oil:	0.8098	sp. gr.
	6.75	lb/gal (density)
	410	gal/batch
	2,769	lb

Given above TR-2620 charges, total batch charges (including all dilution oil) will be:

PIBSA:	9,148	lb	
AGBC:	1,809	lb	
Oil:	7,075	lb	
Total:	18,032	lb	2,599 gal

Yield Factor: 92.7% therefore: HiTEC 7135 = 16,716 lb

CO_2 generation is theoretically 1 mole CO_2 per mole AGBC. If all carbonate is converted:

$$X \text{ lb } CO_2 = 1{,}809 \text{ lb AGBC} \times \frac{44 \text{ lb } CO_2/\text{mol}}{136 \text{ lb AGBC/mol}} = 585 \text{ lb } CO_2$$

Based on above 92.7% yield: 0.0350 lb CO2/ lb HiTEC 7135

MAXIMUM: **Reduced AGBC reactor cycle time (increase throughput) with 2 parallel reactors**

If cycle was 18 hrs/batch, and TR-2630 PIBSA batch was split between TR-2620 and TR-2016, TR-2620 and TR-2016 would run in parallel to react with AGBC, and TR-2620 and TR-2016 batches are then combined for filtration, then TR-2630, TR-2620, and TR-2016 could be turned over every 18 hours.

For 2 reactors, Annual Throughput = 16,270,021 lb HiTEC 7135/yr

VOC PTE:
VOCs will be potentially emitted from two parts of the process:

1. AGBC reaction – oil vapors will be vented from the reactor to the overhead reflux condenser. The non-condensable gases present in this stream (CO_2) will carry a portion of these oil vapors thru the reflux condenser to the control equipment (scrubber).

2. Filtration – similarly to other dilute succinimide filtration displacement from transfers as well as filter blow-downs will carry oil vapors out.

AGBC Reaction
The CO_2 gas vented from the reactor will pass thru the reflux condenser and will be saturated with oil at the outlet temperature of the reflux condenser.
Estimate of maximum condenser outlet temp - 200°F

CO_2 vented = 7.95E-04 lb-mole CO2/ lb HiTEC 7135

Oil Properties

Molecular Weight = 400 lb/lb-mol
Vapor Pressure = 0.002 mmHg @ 200°F

Composition of condenser outlet vapor: Assuming ideal VLE

$$Y_{oil} = \frac{P_{v\,oil}}{P_t}$$

$$= \frac{0.002 \text{ mm Hg}}{760 \text{ mm Hg}} = 2.63E\text{-}06$$

Oil Vented: $$M_{oil} = M_{CO2} + M_{NH3} \times \frac{Y_{oil}}{(1- Y_{oil})}$$ lb mole oil /lb HiTEC 7135

= 2.59E-09 lb mole oil /lb HiTEC 7135 x 400 lb/lb-mol

= 1.04E-06 lb oil /lb HiTEC 7135

	Capacity lb/yr	CO_2 ton/yr	VOC ton/yr
Uncontrolled PTE (not using reflux condenser or carbon drum filter)	**16,270,021**	**284.5**	**8.44E-03**

Filtration: Filtration is discussed on the following page of these calculations.

PIBSA PROCESS - POTENTIAL VOC EMISSIONS FROM OIL

Emissions Calculations are all Uncontrolled.

Oil = 150 Solvent Neutral Oil = SNO			
Approximate Oil Molecular Weight:	400.0	lb/lbmole	
Actual South Schenk Filter Volume:	3.6	cubic meters	
	127.133	CF	
Standard Pressure:	14.696	psia	
	760.000	mm Hg	P
Standard Temperature:	60.0	°F	
	519.670	°R	T
Gas Constant, R:	554.980	CF·mmHg/lbmole·°R	R
Actual Filter Pressure for Bursting and Blowing:	60.0	psig	
Actual Gas Volume at Filter Temperature:	646.185	CF	
Actual Gas Volume Vented at Filter Temperature:	519.052	CF	V
Amount of Gas Vented at Filter Temperature:	1.368	lbmol oil	[n = P V / R T]
Amount of Gas Vented at Filter Temperature:	547.116	lb	
HiTEC 7135 Filtration - Precoat Blow			
Oil at Precoat Temperature:	100.0	°F	
	559.670	°R	
Estimated Oil Vapor Pressure at Precoat Temperature:	4.00E-05	mmHg	
Oil Concentration at Standard Temperature:	5.55E-08	lb/SCF	
Standard Gas Volume Vented:	481.955	SCF/cleanout	
Oil Vented per Cleanout:	2.67E-05	lb/cleanout	
HiTEC 7135 Filtration - Filter Blow & Burst			
Oil at Filtration Temperature:	365.0	°F	
	824.67	°R	
Estimated Oil Vapor Pressure at Filtration Temperature:	0.80	mmHg	
Oil Concentration at Standard Temperature:	1.11E-03	lb/SCF	
Standard Gas Volume Vented:	327.084	SCF/blow	
Oil Vented per Blow or Burst:	3.63E-01	lb/blow	
Blows or Bursts per Cleanout:	8	blows/cleanout	
Oil Vented per Cleanout:	2.90	lb/cleanout	
HiTEC 7135 Filtration - Final Filter Blow			
Nitrogen Flow Rate:	200.0	SCFM	
Blow Time:	30.0	min/blow	
	6,000.0	SCF/blow	
Oil Concentration at Standard Temperature:	1.11E-03	lb/SCF	
Blows or Bursts per Cleanout:	1	blows/cleanout	
Oil Vented per Cleanout:	6.66	lb/cleanout	
Reactor Hours per HiTEC 7135 Batch:	18.0	hours/batch	
HiTEC 7135 Batches per Year:	486.7	batches/year	
Batches per Cleanout:	3.0	batches/cleanout	
Filter Cleanouts per Year:	162.2	cleanouts/year	
HiTEC 7135 Filtration - Potential to Emit	1,550.9	lb/year	
	0.8	tons/year	
TP-2720 & TP-2730 - Tank Breathing			
Estimated Nitrogen Blanket Flowrate (two tanks):	30.0	SCF/hour	
Process Temperature:	365.0	°F	
Estimated Oil Vapor Pressure at Process Temperature:	0.80	mmHg	
Oil Concentration at Standard Temperature:	1.11E-03	lb/SCF	
	8,760	hours/year	
	291.6	lb/year	

Oil Storage Tanks - Displacement (Two Tanks)		
Oil Charge for HiTEC 7135 Batch in 4,000 gal Reactor:	14,150.5	lb/batch
Storage Temperature:	100.0	°F
Estimated Oil Vapor Pressure at Storage Temperature:	4.00E-05	mmHg
Oil Concentration at Standard Temperature:	5.55E-08	lb/SCF
Oil Concentration at Storage Temperature:	5.15E-08	lb/ACF
Estimated Oil Specific Gravity at Storage Temperature:	0.850	(water = 1)
Oil Density at Storage Temperature:	7.094	lb/gal
Actual Volume Displaced per Charge:	270.128	ACF/charge
Displacements per Batch:	3	charges/batch
Actual Volume Displaced per Batch:	810.383	ACF/batch
	4.17E-05	lb/batch
	0.020	lb/year
TP-2720 & TP-2730 Transfers - Displacement (Two Tanks)		
Batch Transfer from TP-2720 to TP-2730 to Storage:	33,431.5	lb/batch
Transfer Temperature:	365.0	°F
Estimated Oil Vapor Pressure at Transfer Temperature:	0.80	mmHg
Oil Concentration at Standard Temperature:	1.11E-03	lb/SCF
Oil Concentration at Transfer Temperature:	6.99E-04	lb/ACF
Estimated Batch Specific Gravity at Transfer Temperature:	0.790	(water = 1)
Batch Density at Transfer Temperature:	6.593	lb/gal
Actual Volume Displaced per Charge:	680.764	ACF/charge
Displacements per Batch:	2	charges/batch
Actual Volume Displaced per Batch:	1,361.529	ACF/batch
	9.52E-01	lb/batch
	463.288	lb/year
Filter Precoat & Cake Flush - Displacement		
Actual South Schenk Filter Volume:	127.133	CF
Process Temperature:	365.0	°F
Estimated Oil Vapor Pressure at Process Temperature:	0.80	mmHg
Oil Concentration at Standard Temperature:	1.11E-03	lb/SCF
Oil Concentration at Process Temperature:	6.99E-04	lb/ACF
VOC Displaced per Oil Charge:	8.89E-02	lb/charge
Displacements per Batch:	6	charges/batch
	0.53	lb/batch
	259.557	lb/year
HiTEC 7135 Process - Potential to Emit	2,565.40	lb/year
PTE Before Control	1.28	tons/year

Appendix A: Emissions Calculations
New Products

Company Name: Dover Chemical - Hammond Works
Address City IN Zip: 3000 Sheffield Ave. Hammond, IN 46327
Permit Number: T089-32932-00227
Reviewer: Josiah Balogun
Date: March 22, 2013

New Products to be Manufactured in Existing Equipment

Doverlube PE80
Manufactured in Hi-Temp. (TR-2620) and controlled by scrubbers (TP-2624 &TP-2626) and flare (GB-2627)

Step	Time per batch (hours) [1]	VOC Emission factor (lb/hr)	VOC Emissions (lb/batch)	HAP	HAP Emission Factor (lb/hr)	HAP Emissions (lb/batch)	Total time per batch (hours)	Potential batches per Year	PTE uncontrolled VOC (TPY)	PTE uncontrolled HAP (TPY)
Charging		0.01	0.00		0.00	0.00	48.00	183	**0.43**	**0.00**
Reaction	12.00	0.21	2.47							
Mix & Cool	24.00	0.09	2.24							
Total			4.71							

Doverlube NCEP
Manufactured in Chlorination reactor due to need for Caustic scrubber but is a fuel additive product (TR-2010) and controlled by scrubbers (TP-2061, TP-2062, TP-2063 and TP_2064)

Step	Time per batch (hours) [1]	VOC Emission factor (lb/hr)	VOC Emissions (lb/batch)	HAP	HAP Emission Factor (lb/hr)	HAP Emissions (lb/batch)	Total time per batch (hours)	Potential Batches per Year	PTE uncontrolled VOC (TPY)	PTE uncontrolled HAP (TPY)
Charging	1.00	0.00	0.00		0.00	0.00	48.00	183	**0.02**	**0.00**
Reaction	14.00	0.01	0.10							
Mix & Cool	24.00	0.01	0.17							
			0.00							
Total			0.27							

Milidin GX-3
Manufactured in Misc. (TR-2224 & TR-2322) and controlled by scrubbers (PE-2228 &TP-2332)

Step	Time per batch (hours) [1]	VOC Emission factor (lb/hr)	VOC Emissions (lb/batch)	HAP	HAP Emission Factor (lb/hr) Controlled	HAP Emissions (lb/batch) Controlled	Total time per batch (hours)	Potential Batches per Year	PTE uncontrolled VOC (TPY)	PTE uncontrolled HAP (TPY)	
Charging		0.69	0.00				96.00	91	**9.56**		
Reaction	48.00	2.91	139.66	Formaldehyde	0.00	0.02				**0.00**	Uncontrolleed emissions are conservatively assumed at the worst case which is back calculated from the controlled emissions represented a scrubber with the highest control efficiency
Mix & Cool	24.00	2.91	69.83								
			0.00								
Total			209.49								

Doverlube B902
Manufactured in Misc (TR-2224 & TR-2322) and controlled by scrubbers (PE-2228 &TP-2332)

Step	Time per batch (hours) [1]	VOC Emission factor (lb/hr)	VOC Emissions (lb/batch)	HAP	HAP Emission Factor (lb/hr)	HAP Emissions (lb/batch)	Total time per batch (hours)	Potential Batches per Year	PTE uncontrolled VOC (TPY)	PTE uncontrolled HAP (TPY)
Charging		0.00	0.00		0.00	0.00	72.00	122	**10.81**	**0.00**
Reaction	3.00	46.92	140.77							
Mix & Cool	24.00	1.54	36.99							
total per batch			177.76							

Total PTE of new products 11.27 0.00 TPY HAP uncontrolled

Note that the Milidin GX-3 and the Doverlube B902 utilize the same reactors. Therefore the PTE for these products is not additive.

Appendix A: Emissions Calculations
Sulfurization Tank

Company Name: Dover Chemical - Hammond Works
Address City IN Zip: 3000 Sheffield Ave. Hammond, IN 46327
Permit Number: T089-32932-00227
Reviewer: Josiah Balogun
Date: March 22, 2013

	Volume (gallons)	Capacity (lb/batch)	Rate (batch/day)	VOC EF (lb/lb)	VOC (tons/yr)	H2S EF (tons/ton)	H2S (tons/yr)
TR-2128	7500	52000	3	0.000368	10.47696	0.052	1480.44

Methodology
Capacity (lb/hr) = Capacity of All Tanks (lb/hr) * Volume of TR-2128 (gallons) / Volume of All Tanks (gallons) (gallons)*1/2000(lb/ton)
Uncontrolled VOC emission factor for the existing tanks, from current permit
VOC (tons/yr) = VOC EF (lb/lb) * Capacity (lb/hr) * 8760 (hr/yr) * 1/2000 (lb/ton)
Uncontrolled H2S emission factor back calculated from existing H2S limit and scrubber percent control
H2S Emissions (tons/yr) = Capacity (lb/hr) * 1/2000 (lb/ton) * H2S EF (tons/ton) * 8760 (hr/yr)
Reflux Condensers are integral to the process

Appendix A: Emissions Calculations
PIBSA- SNO

Company Name: Dover Chemical - Hammond Works
Address City IN Zip: 3000 Sheffield Ave. Hammond, IN 46327
Permit Number: T089-32932-00227
Reviewer: Josiah Balogun
Date: March 22, 2013

	Oil Vented per Cleanout (lbs/cleanout) Pre-Coat Blow Out	Filter Blow and Burst	Final Filter Blow	Cleanouts /year	VOC (tons/yr)
PIBSA Filtration	2.67E-05	1.91E+01	4.83E+01	224.60	**7.56**

Oil vented per cleanout is calculated by source based on oil concentration and gas volume

VOC (tons/yr) = (Pre-Coat Blow out (lbs/cleanout) + Filter Blow and Burst (lbs/cleanout) + Final Filter Blow (lbs/cleanout)) * Cleanouts/year * 1 ton/ 2000 lbs

	Nitrogen Blanket Flow Rate (SCF/hr)	Oil Concentration (lbs/SCF)	VOC (tons/yr)
Tank Breathing	30	0.008044	**1.06**

Oil concentration provided by source, calculated from vapor pressure
VOC (tons/yr) = Nitorgen Blanket Flow Rate (SCF/hr) * Oil Concentration (lbs/SCF) * 8760 (hr/yr) * 1/2000 (tons/lb)

	Batches/yr	Displacement (lbs/batch)	VOC (tons/yr)
Oil Storage Tanks	673.8	0.00001048	**3.531E-06**

Batches/yr is provided by the source and based on hours per batch
Displacement per Batch is provided by the souce
VOC (tons/yr) = Batches/yr * Displacement (lbs/batch) * 1/2000 (lb/ton)

	Batches/yr	Displacement (lbs/batch)	VOC (tons/yr)
T-2720 to T-2730 Transfer	673.8	4.193	**1.4126217**

Batches/yr is provided by the source and based on hours per batch
Displacement per Batch is provided by the souce
VOC (tons/yr) = Batches/yr * Displacement (lbs/batch) * 1/2000 (lb/ton)

	Batches/yr	Displacement (lbs/batch)	VOC (tons/yr)
Filter Pre-Coat and Cake Flush	673.8	3.50538	**1.1809625**

Batches/yr is provided by the source and based on hours per batch
Displacement per Batch is provided by the souce
VOC (tons/yr) = Batches/yr * Displacement (lbs/batch) * 1/2000 (lb/ton)

Emission Point	VOC (tons/yr)
PIBSA Filtration	7.56
Tank Breathing	1.06
Oil Storage Tanks	3.53071E-06
T-2720 to T-2730 Transfer	1.4126217
Filter Pre-coat and Cake Flush	1.180962522
Total PIBSA Process	**11.21**

SOLIDS LOADING TO REACTOR 16 (TR-2016)

Batch time:	18	hr/batch
HiTEC 7135 Batches per Year:	487	batches/year
AGBC input per batch:	1806	lb/batch
Solids input:	100	pounds/hour
	0.05	ton/hr
Solids Throughput:	0.90	ton/batch
	439.46	ton/yr

	k	M	U	Emission Factor	Through put	Uncontrolled Emissions						
		%	mph	lb/ton	tons/hr	lb/batch	lb/hr	lb/yr	tons/yr	lb/day	lb/yr	ton/yr
PM	0.74	0.25	1.3	7.55E-03	0.05	6.82E-03	3.78E-04	3.31	1.65E-03	9.06E-03	3.32	1.66E-03
PM_{10}	0.35	0.25	1.3	3.57E-03	0.05	3.23E-03	1.79E-04	1.56	7.82E-04	4.29E-03	1.57	7.85E-04
$PM_{2.5}$	0.053	0.25	1.3	5.41E-04	0.05	4.89E-04	2.71E-05	0.24	1.18E-04	6.49E-04	0.24	1.19E-04

Moisture content of 0.25% was chosen as the worst case dry condition of the reactants. Higher moisture content would calculate a lower
The reactor is an enclosed vessel with an opening through which the solids are poured. The reactor is also inside a building. The "wind speed"

Particulate emission Factors are from AP-42 Section 13.2.4.

Emission Factor (lb/ton) =

$$k \times 0.0032 \times \frac{(U / 5)^{1.3}}{(M / 2)^{1.4}}$$

k = particle size multiplier (dimensionless)
U = mean wind speed, miles per hour [mph]
M = material moisture content (%)

SOLIDS LOADING TO REACTOR 12 (TR-2620)

The solids loading system for Reactor 12 (TR-2620) is totally enclosed with no particulate emissions.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Dover Chemical Corp.
Address City IN Zip: 3000 Sheffield Ave., Hammond, IN 46327
Permit Number: 089-32930-00227
Reviewer: Josiah Balogun
Date: 22-Mar-2013

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
53.5	1020	459.5

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in	0.4	1.7	1.7	0.1	23.0	1.3	19.3

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 B
MMCF = 1,000,000 Cubic Feet o
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
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in	4.824E-04	2.757E-04	1.723E-02	4.135E-01	7.811E-04	**4.323E-01**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in	1.149E-04	2.527E-04	3.216E-04	8.730E-05	4.824E-04	**1.259E-03**
					Total HAPs	**4.336E-01**
Methodology is the same as abo					**Worst HAP**	**4.135E-01**

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/	120,000	2.3	2.2
Potential Emission in	27,568	0.5	0.5
Summed Potential Emissions in tons/yr		27,569	
CO2e Total in tons/yr		27,736	

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A - Emission Summary

Company Name : Dover Chemical - Hammond Works
Address : 3000 Sheffield Avenue, Hammond, Indiana 46327
Part 70 Operating Permit No. : T089-32932-00227
Reviewer : Josiah Balogun
Date : December 18, 2007

1) Revised Emission Factors for Chlorinated Products Manufacturing (Chlorination Process)

(The data used to calculate potential emissions was taken from an on-site stack test performed on Jun 12-14, 2006)

Maximum Chlorine Feed Rate = 3,000 lb/hr (13,140 ton/yr)
Maximum Chlorinated Metalworking Production = 2,428 lb/hr
Maximum Chlorinated Polybutene Production = 1,390 lb/hr
Maximum Chlorinated Products Production = 2,428 lb/hr + 1,390 lb/hr = 3,818 lb/hr
Ratio of Chlorinated Product to Chlorine Fed = 3,818 lb/hr / 3,000 lb/hr = 1.27
Stack Test HCl emissions = 0.00369 lb HCl/hr and 0.0019 lb HCl/ton chlorinated product
Stack Test Cl_2 emissions = 0.06622 lb Cl_2/hr and 0.0347 lb/ton chlorinated product

Stack Test Emission Factors				
Compound Emitted	Emission Factor (lb/lb Cl_2 fed)	Cl_2 Feed Rate (lb/hr)	Emission (lb/hr)	Estimated Emissions (ton/yr)
Chlorine	2.53E-05	3,000.00	0.076	0.33
Hydrochloric Acid	1.00E-06	3,000.00	0.003	0.01
Total Process Emissions				0.34

Theoretical Emission Factors				
Compound Emitted	Emission Factor (lb/ton Chlorinated Product)	Chlorinated Product Produced (ton/yr)	Emission (lb/hr)	Estimated Emissions (ton/yr)
Chlorine	1.07	12,000.00	1.47	6.42
Hydrochloric Acid	1.45	12,000.00	1.99	8.70
Total Process Emissions				15.12

2) Emissions Related to HiTEC 082 Production (New Emissions Units)

(The data used to calculate potential emissions was taken from an on-site stack test performed on June 29, 2004)

Emission Rates from Stack Test, Prior Controls

1,3 Butadiene = 1.88 lb/hr
SO_2 = 0.00107 lb/hr
Limiting Batch Run Time = 16 hours
Time Process Vented to Scrubber = 2 hrs/batch
Batches/yr = 8,760 hr/yr ÷ 16 hr/batch = 548 batches/yr

Potential Emissions (Prior to Controls)

1,3 Butadiene = (1.88 lb 1,3 butadiene/hr) x (2 hr/batch) x (548 batches/yr) ÷ (2,000 lb/ton) = 1.03 ton 1,3 Butadiene/yr
SO2 = (0.00107 lb SO_2/hr) x (2 hr/batch) x (548 batches/yr) ÷ (2,000 lb/ton) = 0.0006 ton/yr

Potential Emissions (After Controls)

Scrubber Control Efficiency = 99%
1,3 Butadiene = (1.03 tons/yr) x (1 - 0.99) = 0.01 ton/yr
SO2 = (0.0006 tons/yr) x (1 - 0.99) = 0.000006 ton/yr

Appendix A - Emission Summary

Company Name : Dover Chemical - Hammond Works
Address : 3000 Sheffield Avenue, Hammond, Indiana 46327
Part 70 Operating Permit No. : T089-32932-00227
Reviewer : Josiah Balogun
Date : December 18, 2007

3) Total Emissions (New Emission Units)

Process	Emissions Prior to Control (TPY)		Emissions After Control (TPY)	
	1,3 Butadiene	SO_2	1,3 Butadiene	SO_2
HiTEC Production	1.03	0.00	0.01	0.00
Storage Tanks (Fugitive)	0.01	0.00	0.01	0.00
HiTEC Loadout (Fugitive)	0.70	0.00	0.70	0.00
Total Emissions	1.74	0.00	0.72	0.00

Notes:

1) Emissions from the storage tanks and HiTEC loadout were estimated by the applicant using Tanks 4.0 from the U.S. EPA. The calculations were reviewed by the Indiana Department of Environmental Management, Office of Air Quality and were found to be accurate.
2) Stack testing for the HiTEC process and the chlorination process were conducted by the applicant/consultants and were monitored by the Indiana Department of Environmental Management and the Hammond Department of Environmental Management.
3) Emissions using the stack test emission factors were calculated as follows:
   Emissions(lb/hr) = (Emission Factor in lb/lb) x (Feed Rate in lb/hr)
   Estimated Emission (ton/yr) = (Emissions in lb/hr) x (8,760 hr/yr) ÷(2,000 lb/ton)
4) Emissions using the currently permitted emission factors were calculated as follows:
   Emissions(lb/hr)=(Emission Factor in lb/ton Chlorinated Product) x (Chlorinated Product Produced in ton/yr) ÷ 8,760 hr/yr
   Emissions(ton/yr) = (Emission in lb/hr) x (8,760 hr/yr) ÷ (2,000 lb/ton)

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
Maximum Input Rate (<=4.2 MMBtu/hr)

Company Name: Dover Chemical Corp.
Address City IN Zip: 3000 Sheffield Ave., Hammond, IN 46327
Permit Number: 089-32930-00227
Reviewer: Josiah Balogun
Date: 22-Mar-2013

B. Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	174.3
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	87,150

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission in tons/yr	0.10	0.10	0.10	0.09	1.35	0.11	0.29

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	2.85E-04	1.25E-04	8.69E-05	1.19E-05	3.60E-04	2.34E-04	2.82E-05	5.12E-05

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)
****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	**1.18E-03**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.15E+00	4.63E-05	9.26E-06
Potential Emission in tons/yr	5.01E+01	2.02E-03	4.03E-04

Summed Potential Emissions in tons/yr	**5.01E+01**
CO2e Total in tons/yr	**5.03E+01**

Methodology
Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2
CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Option B Methodology
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Potential-to-Emit Calculation

SJF 041will be manufactured in TR-2014 (R-14) and TR-2015 (R-15). The Potential-to-Emit calculation will be based on the premise that the product will be manufactured at maximum rate for the entire year.

The formula for the product is shown on the Formula sheet. The product will be manufactured by first making a batch of PIBSA/Amine/Fuel Oil in TR-2014 (called "Reaction"). During this step, the PIBSA reacts with the Amine to form the active compound in the product. This PIBSA/Amine/Fuel Oil Reaction Product is then fed, one third at a time, into three batches of finished product in TR-2015 (called "Blend").

The PTE for the process can then be broken down as follows:

- Reaction
  - - Charging Fuel Oil to TR-2014
  - - Charging MEA/TEA Mixture to TR-2014
  - - Charging PIBSA to TR-2014
  - - Cook
- Blend
  - - Charging Reaction Product to TR-2015
  - - Charging Fuel Oil to TR-2015
  - - Charging Mineral Oil to TR-2015
  - - Charging Lard Oil to TR-2015
  - - Charging Sufactant to TR-2015

Charging Fuel Oil to TR-2014

Charge Temperature	122.00	°F
	581.67	°R
Charge Volume (Vapor Displaced)	753.19	gal/batch
	100.69	CF/batch
Molar Vapor Displacement	0.24	lbmoles/batch

	Liquid Cmp (lbmole/bat)	Liquid Cmp (%m/m)	Vapor Pres (mmHg)	Vapor Cmp (%m/m)	Vapor MW (lb/lbmole)	PTE (lbmoles/ batch)	PTE (lb/batch)
Fuel Oil	38.61	100.00%	2.1106	0.2777%	130.00	0.000658	0.0856

Charging MEA/TEA Mixture to TR-2014

Charge Temperature	122.00	°F
	581.67	°R
Charge Volume (Vapor Displaced)	111.85	gal/batch
	14.95	CF/batch
Molar Vapor Displacement	0.04	lbmoles/batch

	Liquid Cmp (lbmole/bat)	Liquid Cmp (%m/m)	Vapor Pres (mmHg)	Vapor Cmp (%m/m)	Vapor MW (lb/lbmole)	PTE (lbmoles/ batch)	PTE (lb/batch)
Fuel Oil	38.61	80.23%	2.1106	0.2228%	130.00	0.000078	0.0102

MEA	4.75	9.87%	2.5450	0.0331%	61.08	0.000012	0.0007
TEA	4.76	9.90%	0.0001	0.0000%	149.19	0.000000	0.0000
Total	48.12	100.00%				0.000090	0.0109

Charging PIBSA to TR-2014

		Charge Temperature		122.00	°F		
				581.67	°R		
	Charge Volume (Vapor Displaced)			990.92	gal/batch		
				132.47	CF/batch		
		Molar Vapor Displacement		0.31	lbmoles/batch		
						PTE	
	Liquid Cmp (lbmole/bat)	Liquid Cmp (%m/m)	Vapor Pres (mmHg)	Vapor Cmp (%m/m)	Vapor MW (lb/lbmole)	(lbmoles/ batch)	(lb/batch)
Fuel Oil	38.61	70.12%	2.1106	0.1947%	130.00	0.000607	0.0789
MEA	4.75	8.63%	2.5450	0.0289%	61.08	0.000090	0.0055
TEA	4.76	8.65%	0.0001	0.0000%	149.19	0.000000	0.0000
PIBSA	6.94	12.61%	0.0039	0.0001%	1,100.00	0.000000	0.0002
Total	55.06	100.00%				0.000698	0.0847

Cook

The Cook involves an isothermal hold with no gas purge or sparge, and without stoichiometric byproduct. The amines react with the PIBSA by addition and are thus consumed. The Cook step therefore involves no additional PTE.

Reaction PTE

Step	PTE (lb/batch)
- Charging Fuel Oil to TR-2014	0.0856
- Charging MEA/TEA Mixture to TR-2014	0.0109
- Charging PIBSA to TR-2014	0.0847
- Cook	0.0000
Total for one Reaction Batch	**0.1812**

Charging Reaction Product to TR-2015

		Charge Temperature		122.00	°F		
				581.67	°R		
	Charge Volume (Vapor Displaced)			618.65	gal/batch		
				82.70	CF/batch		
		Molar Vapor Displacement		0.19	lbmoles/batch		
						PTE	
	Liquid Cmp (lbmole/bat)	Liquid Cmp (%m/m)	Vapor Pres (mmHg)	Vapor Cmp (%m/m)	Vapor MW (lb/lbmole)	(lbmoles/ batch)	(lb/batch)
Fuel Oil	12.87	84.76%	2.1106	0.2354%	130.00	0.000458	0.0596
Pt 1 Rxn Pr	2.31	15.24%	0.0039	0.0001%	1,244.17	0.000000	0.0002
Total	15.18	100.00%				0.000458	0.0598

Charging Fuel Oil to TR-2015

		Charge Temperature		122.00	°F		
				581.67	°R		
	Charge Volume (Vapor Displaced)			0.00	gal/batch		
				0.00	CF/batch		
		Molar Vapor Displacement		0.00	lbmoles/batch		
						PTE	
	Liquid Cmp (lbmole/bat)	Liquid Cmp (%m/m)	Vapor Pres (mmHg)	Vapor Cmp (%m/m)	Vapor MW (lb/lbmole)	(lbmoles/ batch)	(lb/batch)
Fuel Oil	12.87	84.76%	2.1106	0.2354%	130.00	0.000000	0.0000
Pt 1 Rxn Pr	2.31	15.24%	0.0039	0.0001%	1,244.17	0.000000	0.0000
Total	15.18	100.00%				0.000000	0.0000

Charging Mineral Oil to TR-2015

		Charge Temperature		122.00	°F		
				581.67	°R		
	Charge Volume (Vapor Displaced)			2,747.63	gal/batch		
				367.31	CF/batch		
		Molar Vapor Displacement		0.86	lbmoles/batch		
						PTE	
	Liquid Cmp (lbmole/bat)	Liquid Cmp (%m/m)	Vapor Pres (mmHg)	Vapor Cmp (%m/m)	Vapor MW (lb/lbmole)	(lbmoles/ batch)	(lb/batch)
Fuel Oil	12.87	20.17%	2.1106	0.0560%	130.00	0.000484	0.0630
Pt 1 Rxn Pr	2.31	3.63%	0.0039	0.0000%	1,244.17	0.000000	0.0002
Mineral Oil	48.64	76.21%	0.0001	0.0000%	400.00	0.000000	0.0000
Total	63.82	100.00%				0.000485	0.0632
Charging Lard Oil to TR-2015							
		Charge Temperature		122.00	°F		
				581.67	°R		
	Charge Volume (Vapor Displaced)			259.60	gal/batch		
				34.70	CF/batch		
		Molar Vapor Displacement		0.08	lbmoles/batch		
						PTE	
	Liquid Cmp (lbmole/bat)	Liquid Cmp (%m/m)	Vapor Pres (mmHg)	Vapor Cmp (%m/m)	Vapor MW (lb/lbmole)	(lbmoles/ batch)	(lb/batch)
Fuel Oil	12.87	19.49%	2.1106	0.0541%	130.00	0.000044	0.0058
Pt 1 Rxn Pr	2.31	3.50%	0.0039	0.0000%	1,244.17	0.000000	0.0000
Mineral Oil	48.64	73.67%	0.0001	0.0000%	400.00	0.000000	0.0000
Lard Oil	2.20	3.33%	0.0001	0.0000%	885.00	0.000000	0.0000
Total	66.02	100.00%				0.000044	0.0058
Charging Surfactant to TR-2015							

		Charge Temperature		122.00	°F		
				581.67	°R		
	Charge Volume (Vapor Displaced)			40.78	gal/batch		
				5.45	CF/batch		
	Molar Vapor Displacement			0.01	lbmoles/batch		
						PTE	
	Liquid Cmp (lbmole/bat)	Liquid Cmp (%m/m)	Vapor Pres (mmHg)	Vapor Cmp (%m/m)	Vapor MW (lb/lbmole)	(lbmoles/ batch)	(lb/batch)
Fuel Oil	12.87	19.40%	2.1106	0.0539%	130.00	0.000007	0.0009
Pt 1 Rxn Pr	2.31	3.49%	0.0039	0.0000%	1,244.17	0.000000	0.0000
Mineral Oil	48.64	73.32%	0.0001	0.0000%	400.00	0.000000	0.0000
Lard Oil	2.20	3.32%	0.0001	0.0000%	885.00	0.000000	0.0000
Surfactant	0.31	0.47%	0.0039	0.0000%	1,000.00	0.000000	0.0000
Total	66.33	100.00%				0.000007	0.0009

Blend PTE

Step	PTE (lb/batch)
- Charging Part 1 to TR-2015	0.0598
- Charging Fuel Oil to TR-2015	0.0000
- Charging Mineral Oil to TR-2015	0.0632
- Charging Lard Oil to TR-2015	0.0058
- Charging Sufactant to TR-2015	0.0009
Total for one Blend Batch	**0.1296**

Annual Process PTE

	Batch PTE (lb/batch)	Batches/ Proc Cycle	Batch Time (hr/batch)	Cycle Time (hr/cycle)	Cycles/yr	Batches/yr	PTE (lb/yr)
Reaction	0.1812	1	4.00	4	730	730	132.24
Blend	0.1296	3	4.00	12	730	2190	283.91
						Total	416.15
						tpy	0.21

Tank Calculation: TS-1018 (Existing Tank not part of the PTE)

TS-1018 will be used to store purchased #2 Fuel Oil. #2 Fuel Oil is charged to both TR-2014 and TR-2015 and consumed in the process. #2 Fuel Oil will be stored ambient conditions.

#2 Fuel Oil usage per Reaction batch	753	gal Fuel Oil/batch	
Annual Reaction batches	730	batches/yr	
TS-1018 annual throughput (Reaction)	549,829	gal Fuel Oil/yr	
#2 Fuel Oil usage per Blend batch	0	gal Fuel Oil/batch	
Annual Blend batches	2,190	batches/yr	
TS-1018 annual throughput (Blend)	0	gal Fuel Oil/yr	
TS-1018 annual throughput (Total)	549,829	gal Fuel Oil/yr	
TANKS program annual emission estimate	16.6200	lb Fuel Oil/yr	
	0.00831	**tpy Fuel Oil**	

Tank Calculation: TS-1014 & 1017 (Existing Tank not part of the PTE)

TS-1014 and TS-1017 will both be used to store Mineral Oil. Mineral Oil is charged to TR-2015 and consumed in the process. Mineral Oil will be stored at ambient conditions. The total Mineral Oil throughput for the process will be evenly split between the two tanks, so the PTE from both tanks will be the same.

Mineral Oil usage per Reaction batch	0	gal Mineral Oil/batch
Annual Reaction batches	730	batches/yr
TS-1014 & 17 annual throughput (Reaction)	0	gal Mineral Oil/yr
Mineral Oil usage per Blend batch	2,748	gal Mineral Oil/batch
Annual Blend batches	2,190	batches/yr
TS-1014 & 17 annual throughput (Blend)	6,017,301	gal Mineral Oil/yr
TS-1014 & 17 annual throughput (Total)	6,017,301	gal Mineral Oil/yr
TS-1014 OR 17 annual throughput (Total)	3,008,650	gal Mineral Oil/yr
TANKS program annual emission estimate	0.0007	lb Mineral Oil/yr
	0.0000004	**tpy Mineral Oil**

Potential-to-Emit Calculation

SJF 042 will be manufactured in TR-2014 (R-14) and TR-2015 (R-15). The Potential-to-Emit calculation will be based on the premise that the product will be manufactured at maximum rate for the entire year.

The formula for the product is shown on the Formula sheet. The product will be manufactured by first making a batch of PIBSA/Amine/Fuel Oil in TR-2014 (called "Reaction"). During this step, the PIBSA reacts with the Amine to form the active compound in the product. This PIBSA/Amine/Fuel Oil Reaction Product is then fed, one third at a time, into three batches of finished product in TR-2015 (called "Blend").

The PTE for the process can then be broken down as follows:

- Reaction
  - Charging Fuel Oil to TR-2014
  - Charging MEA/TEA Mixture to TR-2014
  - Charging PIBSA to TR-2014
  - Cook
- Blend
  - Charging Reaction Product to TR-2015
  - Charging Fuel Oil to TR-2015
  - Charging Mineral Oil to TR-2015
  - Charging Lard Oil to TR-2015
  - Charging Sufactant to TR-2015

Charging Fuel Oil to TR-2014

Charge Temperature	122.00	°F
	581.67	°R
Charge Volume (Vapor Displaced)	497.50	gal/batch
	66.51	CF/batch
Molar Vapor Displacement	0.16	lbmoles/batch

	Liquid Cmp (lbmole/bat)	Liquid Cmp (%m/m)	Vapor Pres (mmHg)	Vapor Cmp (%m/m)	Vapor MW (lb/lbmole)	PTE (lbmoles/ batch)	PTE (lb/batch)
Fuel Oil	25.50	100.00%	2.1106	0.2777%	130.00	0.000435	0.0565

Charging MEA/TEA Mixture to TR-2014

		Charge Temperature		122.00	°F	Page 7 of 11 TSD Appx B	
				581.67	°R		
	Charge Volume (Vapor Displaced)			73.94	gal/batch		
				9.88	CF/batch		
	Molar Vapor Displacement			0.02	lbmoles/batch		
						PTE	
	Liquid Cmp (lbmole/bat)	Liquid Cmp (%m/m)	Vapor Pres (mmHg)	Vapor Cmp (%m/m)	Vapor MW (lb/lbmole)	(lbmoles/ batch)	(lb/batch)
Fuel Oil	25.50	80.22%	2.1106	0.2228%	130.00	0.000052	0.0067
						Page 7 of 11 TSD Appx C	
MEA	3.14	9.88%	2.5450	0.0331%	61.08	0.000008	0.0005
TEA	3.15	9.90%	0.0001	0.0000%	149.19	0.000000	0.0000
Total	31.79	100.00%				0.000060	0.0072
Charging PIBSA to TR-2014							
		Charge Temperature		122.00	°F		
				581.67	°R		
	Charge Volume (Vapor Displaced)			652.90	gal/batch		
				87.28	CF/batch		
	Molar Vapor Displacement			0.21	lbmoles/batch		
						PTE	
	Liquid Cmp (lbmole/bat)	Liquid Cmp (%m/m)	Vapor Pres (mmHg)	Vapor Cmp (%m/m)	Vapor MW (lb/lbmole)	(lbmoles/ batch)	(lb/batch)
Fuel Oil	25.50	70.13%	2.1106	0.1948%	130.00	0.000400	0.0520
MEA	3.14	8.64%	2.5450	0.0289%	61.08	0.000059	0.0036
TEA	3.15	8.66%	0.0001	0.0000%	149.19	0.000000	0.0000
PIBSA	4.57	12.58%	0.0039	0.0001%	1,100.00	0.000000	0.0001
Total	36.37	100.00%				0.000460	0.0558
Cook							
The Cook involves an isothermal hold with no gas purge or sparge, and without stoichiometric byproduct. The amines react with the PIBSA by addition and are thus consumed. The Cook step therefore involves no additional PTE.							
Reaction PTE							
	Step				PTE (lb/batch)		
	- Charging Fuel Oil to TR-2014				0.0565		
	- Charging MEA/TEA Mixture to TR-2014				0.0072		
	- Charging PIBSA to TR-2014				0.0558		
	- Cook				0.0000		
	Total for one Reaction Batch				**0.1195**		
Charging Reaction Product to TR-2015							

		Charge Temperature		122.00	°F		
				581.67	°R		
	Charge Volume (Vapor Displaced)			408.11	gal/batch		
				54.56	CF/batch		
	Molar Vapor Displacement			0.13	lbmoles/batch		
						PTE	
	Liquid Cmp (lbmole/bat)	Liquid Cmp (%m/m)	Vapor Pres (mmHg)	Vapor Cmp (%m/m)	Vapor MW (lb/lbmole)	(lbmoles/ batch)	(lb/batch)
Fuel Oil	8.50	84.79%	2.1106	0.2355%	130.00	0.000302	0.0393
Rxtn Prod	1.52	15.21%	0.0039	0.0001%	1,244.17	0.000000	0.0001
Total	10.03	100.00%				0.000303	0.0394
Charging Fuel Oil to TR-2015							
		Charge Temperature		122.00	°F		
				581.67	°R		
	Charge Volume (Vapor Displaced)			1,250.11	gal/batch		
				167.12	CF/batch		
	Molar Vapor Displacement			0.39	lbmoles/batch		
						PTE	
	Liquid Cmp (lbmole/bat)	Liquid Cmp (%m/m)	Vapor Pres (mmHg)	Vapor Cmp (%m/m)	Vapor MW (lb/lbmole)	(lbmoles/ batch)	(lb/batch)
Fuel Oil	72.58	97.94%	2.1106	0.2720%	130.00	0.001070	0.1391
Rxtn Prod	1.52	2.06%	0.0039	0.0000%	1,244.17	0.000000	0.0001
Total	74.11	100.00%				0.001070	0.1392
Charging Mineral Oil to TR-2015							
		Charge Temperature		122.00	°F		
				581.67	°R		
	Charge Volume (Vapor Displaced)			1,810.67	gal/batch		
				242.05	CF/batch		
	Molar Vapor Displacement			0.57	lbmoles/batch		
						PTE	
	Liquid Cmp (lbmole/bat)	Liquid Cmp (%m/m)	Vapor Pres (mmHg)	Vapor Cmp (%m/m)	Vapor MW (lb/lbmole)	(lbmoles/ batch)	(lb/batch)
Fuel Oil	72.58	68.37%	2.1106	0.1899%	130.00	0.001082	0.1407
Rxtn Prod	1.52	1.44%	0.0039	0.0000%	1,244.17	0.000000	0.0001
Mineral Oil	32.05	30.19%	0.0001	0.0000%	400.00	0.000000	0.0000
Total	106.16	100.00%				0.001082	0.1407
Charging Lard Oil to TR-2015							

		Charge Temperature		122.00	°F		
				581.67	°R		
	Charge Volume (Vapor Displaced)			171.01	gal/batch		
				22.86	CF/batch		
	Molar Vapor Displacement			0.05	lbmoles/batch		
						PTE	
	Liquid Cmp (lbmole/bat)	Liquid Cmp (%m/m)	Vapor Pres (mmHg)	Vapor Cmp (%m/m)	Vapor MW (lb/lbmole)	(lbmoles/ batch)	(lb/batch)
Fuel Oil	72.58	67.45%	2.1106	0.1873%	130.00	0.000101	0.0131
Rxtn Prod	1.52	1.42%	0.0039	0.0000%	1,244.17	0.000000	0.0000
Mineral Oil	32.05	29.79%	0.0001	0.0000%	400.00	0.000000	0.0000
Lard Oil	1.45	1.35%	0.0001	0.0000%	885.00	0.000000	0.0000
Total	107.61	100.00%				0.000101	0.0131
Charging Surfactant to TR-2015							
		Charge Temperature		122.00	°F		
				581.67	°R		
	Charge Volume (Vapor Displaced)			26.77	gal/batch		
				3.58	CF/batch		
	Molar Vapor Displacement			0.01	lbmoles/batch		
						PTE	
	Liquid Cmp (lbmole/bat)	Liquid Cmp (%m/m)	Vapor Pres (mmHg)	Vapor Cmp (%m/m)	Vapor MW (lb/lbmole)	(lbmoles/ batch)	(lb/batch)
Fuel Oil	72.58	67.32%	2.1106	0.1870%	130.00	0.000016	0.0020
Rxtn Prod	1.52	1.41%	0.0039	0.0000%	1,244.17	0.000000	0.0000
Mineral Oil	32.05	29.73%	0.0001	0.0000%	400.00	0.000000	0.0000
Lard Oil	1.45	1.34%	0.0001	0.0000%	885.00	0.000000	0.0000
Surfactant	0.21	0.19%	0.0039	0.0000%	1,000.00	0.000000	0.0000
Total	107.81	100.00%				0.000016	0.0020

Blend PTE

Step	PTE (lb/batch)
- Charging reaction Product to TR-2015	0.0394
- Charging Fuel Oil to TR-2015	0.1392
- Charging Mineral Oil to TR-2015	0.1407
- Charging Lard Oil to TR-2015	0.0131
- Charging Sufactant to TR-2015	0.0020
Total for one Blend Batch	**0.3345**

Annual Process PTE

	Batch PTE (lb/batch)	Batches/ Proc Cycle	Batch Time (hr/batch)	Cycle Time (hr/cycle)	Cycles/yr	Batches/yr	PTE (lb/yr)
Reaction	0.1195	1	4.00	4	730	730	87.26
Blend	0.3345	3	4.00	12	730	2190	732.54
						Total	819.80
						tpy	0.41

Tank Calculation: TS-1018			(Existing Tank not part of the PTE)				
TS-1018 will be used to store purchased #2 Fuel Oil. #2 Fuel Oil is charged to both TR-2014 and TR-2015 and consumed in the process. #2 Fuel Oil will be stored ambient conditions.							
	#2 Fuel Oil usage per Reaction batch			498	gal Fuel Oil/batch		
		Annual Reaction batches		730	batches/yr		
	TS-1018 annual throughput (Reaction)			363,178	gal Fuel Oil/yr		
	#2 Fuel Oil usage per Blend batch			1,250	gal Fuel Oil/batch		
		Annual Blend batches		2,190	batches/yr		
	TS-1018 annual throughput (Blend)			2,737,738	gal Fuel Oil/yr		
	TS-1018 annual throughput (Total)			3,100,916	gal Fuel Oil/yr		
TANKS program annual emission estimate				25.2800	lb Fuel Oil/yr		
				0.01264	**tpy Fuel Oil**		
Tank Calculation: TS-1014 & 1017			(Existing Tanks not part of the PTE)				
TS-1014 and TS-1017 will both be used to store Mineral Oil. Mineral Oil is charged to TR-2015 and consumed in the process. Mineral Oil will be stored at ambient conditions. The total Mineral Oil throughput for the process will be evenly split between the two tanks, so the PTE from both tanks will be the same.							
	Mineral Oil usage per Reaction batch			0	gal Mineral Oil/batch		
		Annual Reaction batches		730	batches/yr		
TS-1014 & 17 annual throughput (Reaction)				0	gal Mineral Oil/yr		
	Mineral Oil usage per Blend batch			1,811	gal Mineral Oil/batch		
		Annual Blend batches		2,190	batches/yr		
TS-1014 & 17 annual throughput (Blend)				3,965,366	gal Mineral Oil/yr		
TS-1014 & 17 annual throughput (Total)				3,965,366	gal Mineral Oil/yr		
TS-1014 OR 17 annual throughput (Total)				1,982,683	gal Mineral Oil/yr		
TANKS program annual emission estimate				0.0006	lb Mineral Oil/yr		
				0.0000003	**tpy Mineral Oil**		

Dyno SJF Formulations

		REACTION							BLEND							
			29.00%	71.00%												
		#2 Fuel Oil	MEA	TEA	MEA/TEA	PIBSA	Total Inputs	Rxtn Prod	#2 Fuel Oil	Mineral Oil	Lard Oil	Surfactant	Total		Total	
	Vapor MW	130.00	61.08	149.19		1,100.00		1,244.17	130.00	400.00	885.00	1,000.00				
SJF041	Formula	6.37%	0.37%	0.90%	1.27%	9.69%	17.33%	10.96%	0.00%	74.07%	7.41%	1.19%	82.67%		100.00%	
	SPG	0.800	0.993	1.107	1.074	0.925	0.883	0.940	0.800	0.850	0.900	0.920	0.855		0.860	122 °F Temp
	lb/gal	6.664	8.273	9.222	8.947	7.705	7.358	7.831	6.664	7.081	7.497	7.664	7.124		7.163	
	gal/unit	0.00956	0.00045	0.00098	0.00142	0.01258	0.02355	0.01400	0.00000	0.10461	0.00988	0.00155	0.11605		0.13960	
	Part Composition	36.76%	2.13%	5.20%	7.33%	55.91%	100.00%	63.24%								
SJF042	Formula	4.31%	0.25%	0.61%	0.86%	6.54%	11.71%	7.40%	32.49%	50.00%	5.00%	0.80%	88.29%		100.00%	
	SPG	0.800	0.993	1.107	1.074	0.925	0.883	0.940	0.800	0.850	0.900	0.920	0.834		0.839	122 °F Temp
	lb/gal	6.664	8.273	9.222	8.947	7.705	7.357	7.832	6.664	7.081	7.497	7.664	6.947		6.993	
	gal/unit	0.00647	0.00030	0.00066	0.00096	0.00849	0.01592	0.00945	0.04875	0.07062	0.00667	0.00104	0.12708		0.14300	
	Part Composition	36.81%	2.13%	5.21%	7.34%	55.85%	100.00%	63.19%		74.06%	7.41%	1.19%				
SJF041																
Railcar	Mass (lb)	10,038.52	580.41	1,420.99	2,001.40	15,270.53	27,310.46	17,271.93	0.00	116,727.39	11,677.47	1,875.33	130,280.19		157,590.65	50.76 RC/yr
	Volume (gal)	1,506.38	70.16	154.09	223.70	1,981.83	3,711.92	2,205.54	0.00	16,485.76	1,557.62	244.71	18,288.08		22,000.00	
	lbmoles	77.22	9.50	9.52		13.88	110.13	13.88	0.00	291.82	13.19	1.88	306.89		397.99	
4,000 gal Blend	Mass (lb)	1,673.09	96.73	236.83	333.57	2,545.09	4,551.74	2,878.66	0.00	19,454.57	1,946.24	312.55	21,713.36		26,265.11	6 per Railcar
	Volume (gal)	251.06	11.69	25.68	37.28	330.31	618.65	367.59	0.00	2,747.63	259.60	40.78	3,048.01		3,666.67	
	lbmoles	12.87	1.58	1.59		2.31	18.35	2.31	0.00	48.64	2.20	0.31	51.15		66.33	
2,000 gal Reaction	Mass (lb)	5,019.26	290.20	710.50	1,000.70	7,635.27	13,655.23	8,635.97	0.00	58,363.70	5,838.73	937.66	65,140.09		78,795.32	Makes 3x4,000 gal
	Volume (gal)	753.19	35.08	77.04	111.85	990.92	1,855.96	1,102.77	0.00	8,242.88	778.81	122.35	9,144.04		11,000.00	
	lbmoles	38.61	4.75	4.76		6.94	55.06	6.94	0.00	145.91	6.60	0.94	153.44		199.00	
SJF042																
Railcar	Mass (lb)	6,630.73	383.69	939.38	1,323.07	10,061.48	18,015.29	11,384.55	49,984.34	76,922.66	7,692.27	1,230.76	135,830.03		153,845.32	52.00 RC/yr
	Volume (gal)	995.01	46.38	101.86	147.88	1,305.80	2,448.69	1,453.68	7,500.65	10,864.02	1,026.05	160.60	19,551.31		22,000.00	
	lbmoles	51.01	6.28	6.30		9.15	72.73	9.15	384.49	192.31	8.69	1.23	586.72		646.88	
4,000 gal Blend	Mass (lb)	1,105.12	63.95	156.56	220.51	1,676.91	3,002.55	1,897.43	8,330.72	12,820.44	1,282.04	205.13	22,638.34		25,640.89	6 per Railcar
	Volume (gal)	165.83	7.73	16.98	24.65	217.63	408.11	242.28	1,250.11	1,810.67	171.01	26.77	3,258.55		3,666.67	
	lbmoles	8.50	1.05	1.05		1.52	12.12	1.52	64.08	32.05	1.45	0.21	97.79		107.81	
2,000 gal Reaction	Mass (lb)	3,315.37	191.85	469.69	661.53	5,030.74	9,007.64	5,692.28	24,992.17	38,461.33	3,846.13	615.38	67,915.02		76,922.66	Makes 3x4,000 gal
	Volume (gal)	497.50	23.19	50.93	73.94	652.90	1,224.34	726.84	3,750.33	5,432.01	513.02	80.30	9,775.66		11,000.00	
	lbmoles	25.50	3.14	3.15		4.57	36.37	4.57	192.25	96.15	4.35	0.62	293.36		323.44	
Ideal Gas Constant																
R	554.98	(CF)(mmHg)/(lbmole)(°R)														

Potential-to-Emit Calculation

FL 296 will be manufactured in TR-2620 (R-12). The Potential-to-Emit calculation will be based on the premise that FL 296 will be manufactured at maximum rate for the entire year.

FL 296 Formula - This is the "Raw Formula" - that does not take into account recycle of 2EH. It essentially represents the composition of the reaction mass prior to heatup and cook.

Material	%w/w	Mass (lbs)	(lbs/gal)	Vol (gal)
Oleic Acid	59.796%	13,813	7.42	1,862
2-Ethylhexanol	39.852%	9,206	6.94	1,326
50% Hypophosphorus Acid	0.332%	77	12.50	6
70% Methanesulfonic Acid	0.020%	5	12.40	0
Total RM's	100.00%	23,100		3,195
Excess (recycle) 2-Ethylhexanol	12.29%	2,840	6.94	409
Water	3.99%	921	8.33	111
Finished Product	83.72%	19,340	7.29	2,653
Total Products	100.00%	23,100		

The FL 296 process involves charging the raw materials to the reactor, then cooking at approximately 330°F until the reaction is complete, then stripping excess 2-Ethylhexanol. During the cook, 2-Ethylhexanol and water are distilled overhead and condensed. The water and 2EH separate in the overhead receiver, and 2EH is refluxed back into the reactor. Following the cook, excess 2EH is stripped out of the product, condensed, and drained to the recycle 2EH tank, from which this material is fed back into the next FL 296 batch. The condenser and receiver are vented to the flare during these operations. Nitrogen is purged thru the reactor during this process, so potential emissions are primarily the result of nitrogen carrying 2EH thru the condenser to the flare.

Potential emissions will be generated by the following steps in the process:

- Charging 2EH to the reactor
- Cooking and Stripping of the batch
- Drainage of excess 2EH and water from the overhead receiver to the recycle tank

When 2EH is charged to the reactor, non-condensible gases are displaced and vented thru the condenser and receiver to the flare. These gases will contain small amounts of 2EH that pass thru the condenser. For the purpose of this calculation, we estimate that the outlet gas from the condenser will be less than 150°F. The concentration of 2EH in the vent gases is estimated using process simulation software (ChemCAD).

Condenser outlet temperature	150	°F	
Outlet gas 2EH concentration	0.00241	lb 2EH/CF vent gas	
Volume of vent gas	177.33	CF/batch	
Potential emissions from Charging 2EH	0.43	lb 2EH/batch	

During the cooking and stripping operations, nitrogen is fed into the reactor. As above, we estimate the condenser outlet gas to be less than 150°F.

Condenser outlet temperature	150	°F	

	Outlet gas 2EH concentration			0.00241	lb 2EH/CF vent gas		
		Nitrogen purge rate		10	CFM	Page 2 of 2 TSD Appx C	
		Nitrogen purge duration		18	hr/batch		
		Volume of vent gas		10,800	CF/batch		
Potential emissions from Nitrogen purge				26.03	lb 2EH/batch		

When excess 2EH and water are drained from the overhead receiver to their respective tanks, non-condensible gases are displaced and vented. In the case of the water tank, these gases are vented to the flare. Because the water will be saturated with 2EH, vent gases from the water transfer will also contain 2EH. In the case of the 2EH tank, these gases are vented thru a carbon drum to atmosphere. As both the water and 2EH were condensed at a temperature estimated to be less than 150°F, this is the temperature that will be used for the vent gases during their transfer.

		2EH/Water temperature		150	°F		
	Outlet gas 2EH concentration			0.00241	lb 2EH/CF vent gas		
		Volume of vent gas		69.48	CF/batch		
Potential emissions from 2EH and water drainage				0.17	lb 2EH/batch		

The total potential emissions from one FL 296 batch equal the sum of the PTE's from the above steps, and total annual potential emissions from FL 296 manufacture are based on batch cycle time assuming full-time operation of the reactor.

Total potential emissions from one FL 296 batch				26.62	lb 2EH/batch		
		Batch cycle time		24	hr/batch		
		Annual batches of FL 296		365	batches/yr		
	Total annual potential emissions			9,717.33	lb 2EH/yr		
				4.86	**tpy 2EH**		

Indiana Department of Environmental Management
Office of Air Quality

Appendix E – Tank Emissions
Technical Support Document (TSD) for a
Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	Dover Chemical Corp. – Hammond Works
Source Location:	3000 Sheffield Avenue, Hammond, IN 46327
County:	Lake
SIC Code:	2899
Operating Permit Renewal No.:	T 089-32932-00227
Operating Permit Reviewer:	Josiah Balogun

Chlorinated Products Manufacturing (Chlorination Process)

(The data used to calculate potential emissions was taken from an on-site stack test performed on Jun 12-14, 2006)
Maximum Chlorine Feed Rate = 5,000 lb/hr (21,900 ton/yr)
Maximum Chlorinated Metalworking Production = 2,428 lb/hr
Maximum Chlorinated Polybutene Production = 1,390 lb/hr
Maximum Chlorinated Products Production = 2,428 lb/hr + 1,390 lb/hr = 3,818 lb/hr
Ratio of Chlorinated Product to Chlorine Fed = 3,818 lb/hr / 3,000 lb/hr = 1.27
Stack Test HCl emissions = 0.00369 lb HCl/hr and 0.0019 lb HCl/ton chlorinated product
Stack Test Cl2 emissions = 0.06622 lb Cl2/hr and 0.0347 lb/ton chlorinated product

Stack Test Emission Factors

Compound Emitted	Emission Factor (lb/lb Cl_2 fed)	Cl_2 Feed Rate (lb/hr)	Emission (lb/hr)	Estimated Emissions (ton/yr)
Chlorine	2.53E-05	5,000	0.127	0.56
Hydrochloric Acid	1.00E-06	5,000	0.005	0.02
Total Process Emissions				0.58

Emission Rates from Stack Test, Prior Controls
1,3 Butadiene = 1.88 lb/hr
SO2 = 0.00107 lb/hr
Limiting Batch Run Time = 16 hours
Time Process Vented to Scrubber = 2 hrs/batch
Batches/yr = 8,760 hr/yr ÷ 16 hr/batch = 548 batches/yr
Potential Emissions (Prior to Controls)
1,3 Butadiene = (1.88 lb 1,3 butadiene/hr) x (2 hr/batch) x (548 batches/yr) ÷ (2,000 lb/ton) = 1.03 ton 1,3 Butadiene/yr
SO2 = (0.00107 lb SO2/hr) x (2 hr/batch) x (548 batches/yr) ÷ (2,000 lb/ton) = 0.0006 ton/yr

Potential Emissions (After Controls)

Scrubber Control Efficiency = 99%

1,3 Butadiene = (1.03 tons/yr) x (1 - 0.99) = 0.01 ton/yr

SO2 = (0.0006 tons/yr) x (1 - 0.99) = 0.000006 ton/yr

Notes:

1) Emissions from the storage tanks and HiTEC loadout were estimated by the applicant using Tanks 4.0 from the U.S. EPA. The calculations were reviewed by the Indiana Department of Environmental Management, Office of Air Quality and were found to be accurate.
2) Stack testing for the HiTEC process and the chlorination process were conducted by the applicant/consultants and were monitored by the Indiana Department of Environmental Management and the Hammond Department of Environmental Management.
3) Emissions using the stack test emission factors were calculated as follows:
   Emissions (lb/hr) = (Emission Factor in lb/lb) x (Feed Rate in lb/hr)
   Estimated Emission (ton/yr) = (Emissions in lb/hr) x (8,760 hr/yr) ÷ (2,000 lb/ton)
4) Emissions using the currently permitted emission factors were calculated as follows:
   Emissions (lb/hr)=(Emission Factor in lb/ton Chlorinated Product) x (Chlorinated Product Produced in ton/yr) ÷ 8,760 hr/yr
   Emissions (ton/yr) = (Emission in lb/hr) x (8,760 hr/yr) ÷ (2,000 lb/ton)

Summary of the Tank Emissions

EPA's TANKS 4.0.9 computer program was used to determine the working and standing losses for the Dover Chemical Polyisobutylene Tank. The emissions summary from this analysis is included in the following table and the reports from the TANKS 4.0.9 are attached.

Tank	Components	Working Losses *lb/yr*	Breathing Losses *lb/yr*	Total VOC Emissions *lb/yr*	Total VOC Emissions *ton/yr*
Dover Chemical Polyisobutylene	Polyisobutylene	380.49	0.00	380.49	0.19
				380.49	0.19

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	TS-1003-Oleic
City:	Hammond
State:	Indiana
Company:	Dover Chemical, Hammond Works
Type of Tank:	Vertical Fixed Roof Tank
Description:	TS-1003 in Oleic Acid service for Doverlube FL 296.

Tank Dimensions

Shell Height (ft):	31.50
Diameter (ft):	10.50
Liquid Height (ft) :	25.20
Avg. Liquid Height (ft):	12.60
Volume (gallons):	16,323.08
Turnovers:	41.63
Net Throughput(gal/yr):	679,474.00
Is Tank Heated (y/n):	Y

Paint Characteristics

Shell Color/Shade:	Aluminum/Specular
Shell Condition	Good
Roof Color/Shade:	Aluminum/Specular
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.00
Slope (ft/ft) (Cone Roof)	0.08

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

TS-1003-Oleic - 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
Oleic Acid	All	100.00	100.00	100.00	100.00	0.0000	0.0000	0.0000	282.4600			282.46	

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

TS-1003-Oleic - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calcaulations

Standing Losses (lb):	0.0000
Vapor Space Volume (cu ft):	1,649.1810
Vapor Density (lb/cu ft):	0.0000
Vapor Space Expansion Factor:	0.0000
Vented Vapor Saturation Factor:	1.0000
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	1,649.1810
Tank Diameter (ft):	10.5000
Vapor Space Outage (ft):	19.0458
Tank Shell Height (ft):	31.5000
Average Liquid Height (ft):	12.6000
Roof Outage (ft):	0.1458
Roof Outage (Cone Roof)	
Roof Outage (ft):	0.1458
Roof Height (ft):	0.0000
Roof Slope (ft/ft):	0.0833
Shell Radius (ft):	5.2500
Vapor Density	
Vapor Density (lb/cu ft):	0.0000
Vapor Molecular Weight (lb/lb-mole):	282.4600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0000
Daily Avg. Liquid Surface Temp. (deg. R):	559.6700
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):	559.6700
Tank Paint Solar Absorptance (Shell):	0.3900
Tank Paint Solar Absorptance (Roof):	0.3900
Daily Total Solar Insulation Factor (Btu/sqft day):	1,225.5876
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0000
Daily Vapor Temperature Range (deg. R):	0.0000
Daily Vapor Pressure Range (psia):	0.0000
Breather Vent Press. Setting Range(psia):	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0000
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0000
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0000
Daily Avg. Liquid Surface Temp. (deg R):	559.6700
Daily Min. Liquid Surface Temp. (deg R):	559.6700
Daily Max. Liquid Surface Temp. (deg R):	559.6700
Daily Ambient Temp. Range (deg. R):	19.1000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	1.0000
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0000

Vapor Space Outage (ft):	19.0458
Working Losses (lb):	0.0003
Vapor Molecular Weight (lb/lb-mole):	282.4600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0000
Annual Net Throughput (gal/yr.):	679,474.0000
Annual Turnovers:	41.6266
Turnover Factor:	0.8874
Maximum Liquid Volume (gal):	16,323.0840
Maximum Liquid Height (ft):	25.2000
Tank Diameter (ft):	10.5000
Working Loss Product Factor:	1.0000
Total Losses (lb):	0.0003

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

TS-1003-Oleic - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Oleic Acid	0.00	0.00	0.00

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	TS-1014-Mineral Oil2
City:	Hammond
State:	Indiana
Company:	Dover Chemical, Hammond Works
Type of Tank:	Vertical Fixed Roof Tank
Description:	TS-1014 in Mineral Oil service for SJF 042

Tank Dimensions

Shell Height (ft):	31.50
Diameter (ft):	10.50
Liquid Height (ft) :	25.20
Avg. Liquid Height (ft):	12.60
Volume (gallons):	16,323.08
Turnovers:	121.46
Net Throughput(gal/yr):	1,982,683.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	Aluminum/Diffuse
Shell Condition	Good
Roof Color/Shade:	Red/Primer
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.00
Slope (ft/ft) (Cone Roof)	0.08

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

TS-1014-Mineral Oil2 - 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
Mineral Oil	All	58.16	48.33	67.99	52.47	0.0000	0.0000	0.0000	400.0000			400.00	Option 1: VP50 = .0000000344 VP60 = .0000000639

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

TS-1014-Mineral Oil2 - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calcaulations

Standing Losses (lb):	0.0002
Vapor Space Volume (cu ft):	1,649.1810
Vapor Density (lb/cu ft):	0.0000
Vapor Space Expansion Factor:	0.0718
Vented Vapor Saturation Factor:	1.0000
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	1,649.1810
Tank Diameter (ft):	10.5000
Vapor Space Outage (ft):	19.0458
Tank Shell Height (ft):	31.5000
Average Liquid Height (ft):	12.6000
Roof Outage (ft):	0.1458
Roof Outage (Cone Roof)	
Roof Outage (ft):	0.1458
Roof Height (ft):	0.0000
Roof Slope (ft/ft):	0.0833
Shell Radius (ft):	5.2500
Vapor Density	
Vapor Density (lb/cu ft):	0.0000
Vapor Molecular Weight (lb/lb-mole):	400.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0000
Daily Avg. Liquid Surface Temp. (deg. R):	517.8264
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):	512.1400
Tank Paint Solar Absorptance (Shell):	0.6000
Tank Paint Solar Absorptance (Roof):	0.8900
Daily Total Solar Insulation Factor (Btu/sqft day):	1,225.5876
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0718
Daily Vapor Temperature Range (deg. R):	39.3178
Daily Vapor Pressure Range (psia):	0.0000
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0000
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0000
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0000
Daily Avg. Liquid Surface Temp. (deg R):	517.8264
Daily Min. Liquid Surface Temp. (deg R):	507.9970
Daily Max. Liquid Surface Temp. (deg R):	527.6558
Daily Ambient Temp. Range (deg. R):	19.1000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	1.0000
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0000

Vapor Space Outage (ft):	19.0458
Working Losses (lb):	0.0005
Vapor Molecular Weight (lb/lb-mole):	400.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0000
Annual Net Throughput (gal/yr.):	1,982,683.0000
Annual Turnovers:	121.4650
Turnover Factor:	0.4137
Maximum Liquid Volume (gal):	16,323.0840
Maximum Liquid Height (ft):	25.2000
Tank Diameter (ft):	10.5000
Working Loss Product Factor:	1.0000
Total Losses (lb):	0.0006

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

TS-1014-Mineral Oil2 - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Mineral Oil	0.00	0.00	0.00

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	TS-1018-FuelOil2
City:	Hammond
State:	Indiana
Company:	Dover Chemical, Hammond Works
Type of Tank:	Vertical Fixed Roof Tank
Description:	TS-1018 in Fuel Oil service for SJF 042

Tank Dimensions

Shell Height (ft):	31.50
Diameter (ft):	10.50
Liquid Height (ft) :	25.20
Avg. Liquid Height (ft):	12.60
Volume (gallons):	16,323.08
Turnovers:	189.97
Net Throughput(gal/yr):	3,100,916.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	Aluminum/Diffuse
Shell Condition	Good
Roof Color/Shade:	Red/Primer
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.00
Slope (ft/ft) (Cone Roof)	0.08

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

TS-1018-FuelOil2 - 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
Distillate fuel oil no. 2	All	58.16	48.33	67.99	52.47	0.0061	0.0043	0.0085	130.0000			188.00	Option 1: VP50 = .0045 VP60 = .0065

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

TS-1018-FuelOil2 - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calcaulations

Standing Losses (lb):	6.1828
Vapor Space Volume (cu ft):	1,649.1810
Vapor Density (lb/cu ft):	0.0001
Vapor Space Expansion Factor:	0.0720
Vented Vapor Saturation Factor:	0.9938
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	1,649.1810
Tank Diameter (ft):	10.5000
Vapor Space Outage (ft):	19.0458
Tank Shell Height (ft):	31.5000
Average Liquid Height (ft):	12.6000
Roof Outage (ft):	0.1458
Roof Outage (Cone Roof)	
Roof Outage (ft):	0.1458
Roof Height (ft):	0.0000
Roof Slope (ft/ft):	0.0833
Shell Radius (ft):	5.2500
Vapor Density	
Vapor Density (lb/cu ft):	0.0001
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0061
Daily Avg. Liquid Surface Temp. (deg. R):	517.8264
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):	512.1400
Tank Paint Solar Absorptance (Shell):	0.6000
Tank Paint Solar Absorptance (Roof):	0.8900
Daily Total Solar Insulation Factor (Btu/sqft day):	1,225.5876
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0720
Daily Vapor Temperature Range (deg. R):	39.3178
Daily Vapor Pressure Range (psia):	0.0042
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0061
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0043
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0085
Daily Avg. Liquid Surface Temp. (deg R):	517.8264
Daily Min. Liquid Surface Temp. (deg R):	507.9970
Daily Max. Liquid Surface Temp. (deg R):	527.6558
Daily Ambient Temp. Range (deg. R):	19.1000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9938
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0061

Vapor Space Outage (ft):	19.0458
Working Losses (lb):	19.1013
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0061
Annual Net Throughput (gal/yr.):	3,100,916.0000
Annual Turnovers:	189.9712
Turnover Factor:	0.3246
Maximum Liquid Volume (gal):	16,323.0840
Maximum Liquid Height (ft):	25.2000
Tank Diameter (ft):	10.5000
Working Loss Product Factor:	1.0000
Total Losses (lb):	25.2841

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

TS-1018-FuelOil2 - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	19.10	6.18	25.28

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	TS-1027-2EH
City:	Hammond
State:	Indiana
Company:	Dover Chemical, Hammond Works
Type of Tank:	Vertical Fixed Roof Tank
Description:	TS-1027 in 2-Ethylhexanol service for Doverlube FL 296.

Tank Dimensions

Shell Height (ft):	21.00
Diameter (ft):	11.00
Liquid Height (ft) :	16.80
Avg. Liquid Height (ft):	8.40
Volume (gallons):	11,943.12
Turnovers:	40.54
Net Throughput(gal/yr):	484,167.00
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:	Cone
Height (ft)	0.46
Slope (ft/ft) (Cone Roof)	0.08

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

TS-1027-2EH - 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
2-Ethylhexanol	All	50.66	45.76	55.55	49.02	0.0005	0.0004	0.0008	130.2300			130.23	Option 1: VP50 = .000506633 VP60 = .000960184

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

TS-1027-2EH - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calcaulations

Standing Losses (lb):	0.1931
Vapor Space Volume (cu ft):	1,211.9359
Vapor Density (lb/cu ft):	0.0000
Vapor Space Expansion Factor:	0.0342
Vented Vapor Saturation Factor:	0.9996
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	1,211.9359
Tank Diameter (ft):	11.0000
Vapor Space Outage (ft):	12.7528
Tank Shell Height (ft):	21.0000
Average Liquid Height (ft):	8.4000
Roof Outage (ft):	0.1528
Roof Outage (Cone Roof)	
Roof Outage (ft):	0.1528
Roof Height (ft):	0.4583
Roof Slope (ft/ft):	0.0800
Shell Radius (ft):	5.5000
Vapor Density	
Vapor Density (lb/cu ft):	0.0000
Vapor Molecular Weight (lb/lb-mole):	130.2300
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0005
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:	0.0342
Daily Vapor Temperature Range (deg. R):	19.5858
Daily Vapor Pressure Range (psia):	0.0004
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0005
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0004
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0008
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:	0.9996
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0005

Vapor Space Outage (ft):	12.7528
Working Losses (lb):	0.7302
Vapor Molecular Weight (lb/lb-mole):	130.2300
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0005
Annual Net Throughput (gal/yr.):	484,167.0000
Annual Turnovers:	40.5394
Turnover Factor:	0.9067
Maximum Liquid Volume (gal):	11,943.1182
Maximum Liquid Height (ft):	16.8000
Tank Diameter (ft):	11.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	0.9233

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

TS-1027-2EH - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
2-Ethylhexanol	0.73	0.19	0.92

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	TS-2362-FL296
City:	Hammond
State:	Indiana
Company:	Dover Chemical, Hammond Works
Type of Tank:	Vertical Fixed Roof Tank
Description:	TS-2362 in FL 296 service for Doverlube FL 296.

Tank Dimensions

Shell Height (ft):	23.00
Diameter (ft):	15.00
Liquid Height (ft) :	18.40
Avg. Liquid Height (ft):	9.20
Volume (gallons):	24,323.35
Turnovers:	39.81
Net Throughput(gal/yr):	968,304.00
Is Tank Heated (y/n):	Y

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	Red/Primer
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.00
Slope (ft/ft) (Cone Roof)	0.08

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

TS-2362-FL296 - 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
2-EH Oleate	All	100.00	100.00	100.00	100.00	0.0000	0.0000	0.0000	394.6820			394.68	

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

TS-2362-FL296 - Vertical Fixed Roof Tank
Hammond, Indiana

Annual Emission Calcaulations

Standing Losses (lb):	0.0000
Vapor Space Volume (cu ft):	2,475.4754
Vapor Density (lb/cu ft):	0.0000
Vapor Space Expansion Factor:	0.0000
Vented Vapor Saturation Factor:	1.0000
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	2,475.4754
Tank Diameter (ft):	15.0000
Vapor Space Outage (ft):	14.0083
Tank Shell Height (ft):	23.0000
Average Liquid Height (ft):	9.2000
Roof Outage (ft):	0.2083
Roof Outage (Cone Roof)	
Roof Outage (ft):	0.2083
Roof Height (ft):	0.0000
Roof Slope (ft/ft):	0.0833
Shell Radius (ft):	7.5000
Vapor Density	
Vapor Density (lb/cu ft):	0.0000
Vapor Molecular Weight (lb/lb-mole):	394.6820
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0000
Daily Avg. Liquid Surface Temp. (deg. R):	559.6700
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):	559.6700
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof):	0.8900
Daily Total Solar Insulation Factor (Btu/sqft day):	1,225.5876
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0000
Daily Vapor Temperature Range (deg. R):	0.0000
Daily Vapor Pressure Range (psia):	0.0000
Breather Vent Press. Setting Range(psia):	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0000
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0000
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0000
Daily Avg. Liquid Surface Temp. (deg R):	559.6700
Daily Min. Liquid Surface Temp. (deg R):	559.6700
Daily Max. Liquid Surface Temp. (deg R):	559.6700
Daily Ambient Temp. Range (deg. R):	19.1000
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	1.0000
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0000

Vapor Space Outage (ft):	14.0083
Working Losses (lb):	0.0001
Vapor Molecular Weight (lb/lb-mole):	394.6820
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0000
Annual Net Throughput (gal/yr.):	968,304.0000
Annual Turnovers:	39.8096
Turnover Factor:	0.9203
Maximum Liquid Volume (gal):	24,323.3517
Maximum Liquid Height (ft):	18.4000
Tank Diameter (ft):	15.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	0.0001

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

TS-2362-FL296 - Vertical Fixed Roof Tank
Hammond, Indiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
2-EH Oleate	0.00	0.00	0.00

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Mark Renick
Dover Chemical Corporation - Hammond Works
3000 Sheffield Ave
Hammond, IN 46327

DATE: July 16, 2013

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

SUBJECT: Final Decision
Title V - Renewal
089 - 32932 - 00227

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:
Mike Prising, Ops Mgr
Christa O. Russell Schreiber Yonley and Assc.
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.

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

July 16, 2013

TO: Hammond Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: **Dover Chemical Corporation - Hammond Works**
Permit Number: **089 - 32932 - 00227**

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 6/13/2013

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

TO: Interested Parties / Applicant

DATE: July 16, 2013

RE: Dover Chemical Corporation - Hammond Works / 089 - 32932 - 00227

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 6/13/2013

Mail Code 61-53

IDEM Staff	LPOGOST 7/16/2013 Dover Chemical - Hammond Works 089 - 32932 - 00227 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		Mark Renick Dover Chemical - Hammond Works 3000 Sheffield Ave Hammond IN 46327 (Source CAATS) Via confirmed delivery									
2		Mike Prising Ops Mgr Dover Chemical - Hammond Works 3000 Sheffield Ave Hammond IN 46327 *(RO CAATS)*									
3		Mr. Terrance Wagner 726 First Street Crete IL 60417 *(Affected Party)*									
4		East Chicago City Council 4525 Indianapolis Blvd East Chicago IN 46312 *(Local Official)*									
5		Gary - Hobart Water Corp 650 Madison St, P.O. Box M486 Gary IN 46401-0486 *(Affected Party)*									
6		Lake County Health Department-Gary 1145 W. 5th Ave Gary IN 46402-1795 *(Health Department)*									
7		WJOB / WZVN Radio 6405 Olcott Ave Hammond IN 46320 *(Affected Party)*									
8		Hammond City Council and Mayors Office 5925 Calumet Avenue Hammond IN 46320 *(Local Official)*									
9		Hammond Public Library 564 State St Hammond IN 46320-1532 *(Library)*									
10		Mr. Peter Engelbert 7542 New Hampshire Avenue Hammond IN 46323 *(Affected Party)*									
11		Dennis Jancosek 234 Oakwood Street Hammond IN 46324 *(Affected Party)*									
12		Mr. Wayne Sandefur 1231 177th Place Hammond IN 46324 *(Affected Party)*									
13		Mr. Bill Simmons 6326 Van Buren Avenue Hammond IN 46324 (Affected Party)									
14		Ms. Dorothy Alabach 647 North 125 West Valparaiso IN 46385 *(Affected Party)*									
15		Shawn Sobocinski 3229 E. Atlanta Court Portage IN 46368 *(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.

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Mail Code 61-53

IDEM Staff	LPOGOST 7/16/2013 Dover Chemical - Hammond Works 32932 (draft/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		Nancy 1947 Wespark Avenue Whiting IN 46394 (Affected Party)									
2		Mr. J. Rogina 2718 White Oak Avenue Whiting IN 46394 *(Affected Party)*									
3		D. Atteberry 2701 Achrage Whiting IN 46394 *(Affected Party)*									
4		Mr. Ed Dybel 2440 Schrage Avenue Whiting IN 46394 *(Affected Party)*									
5		Mr. Steve Zabroski PO Box 524 Whiting IN 46394 *(Affected Party)*									
6		Mr. Robert Binder 7608 West 163 Street Tinley Park IL 60477 *(Affected Party)*									
7		Mark Coleman 107 Diana Road Portage IN 46368 *(Affected Party)*									
8		Mr. Chris Hernandez Pipefitters Association, Local Union 597 8762 Louisiana St., Suite G Merrillville IN 46410 *(Affected Party)*									
9		Craig Hogarth 7901 West Morris Street Indianapolis IN 46231 *(Affected Party)*									
10		Lake County Commissioners 2293 N. Main St, Building A 3rd Floor Crown Point IN 46307 *(Local Official)*									
11		Ms. Christa O. Russell Schreiber Yonley and Assc. 5829 Haverford Avenue Indianapolis IN 46220 *(Consultant)*									
12		Anthony Copeland 2006 E. 140th Street East Chicago IN 46312 *(Affected Party)*									
13		Barbara G. Perez 506 Lilac Street East Chicago IN 46312 (Affected Party)									
14		Mr. Robert Garcia 3733 Parrish Avenue East Chicago IN 46312 *(Affected Party)*									
15		Ms. Karen Kroczek 8212 Madison Ave Munster IN 46321-1627 *(Affected Party)*									

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IDEM Staff	LPOGOST 7/16/2013 Dover Chemical - Hammond Works 32932 (draft/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		Joseph 11723 S Oakridge Drive St. John IN 46373 (Affected Party)									
2		Gary City Council 401 Broadway # 209 Gary IN 46402 *(Local Official)*									
3		Ron Novak Hammond Dept. of Environmental Management 5925 Calumnet Ave. Hammond IN 46320 *(Local Official)*									
4		Mr. Larry Davis 268 South, 600 West Hebron IN 46341 *(Affected Party)*									
5		Ryan Dave 939 Cornwallis Munster IN 46321 *(Affected Party)*									
6		Matt Mikus Post Tribune 1433 E 83rd Avenue Merrillville IN 46410 *(Affected Party)*									
7											
8											
9											
10											
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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