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

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: August 4, 2008

RE: APG, Inc./KIK Custom Products / 039-26036-00434

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 13-17-3-4 and 326 IAC 2, this permit modification 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 13-15-7-3 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 Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) days of the mailing of this notice**. 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.

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Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of a Title V operating permit 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
FNTV-PMOD.doc 3/27/08

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Mr. Jason Demeter
APG, Inc. / KIK Custom Products
2730 Middlebury Street, P.O. Box 2988
Elkhart, IN 46515-2988

August 4, 2008

Re: 039-26036-00434
Significant Permit Modification to
Part 70 Renewal No.: T 039-21106-00434

Dear Mr. Demeter:

APG, Inc. / KIK Custom Products was issued a Part 70 Operating Permit Renewal on November 14, 2006, for a stationary liquid and aerosol can filling operation. A letter requesting changes to this permit was received on January 25, 2008. Pursuant to the provisions of 326 IAC 2-7-12, a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

The proposed expansion will consist of adding the following emission units:

(a) Lines 5-8 aerosol can filling lines, permitted in 2008, which consist of:

(A) Four (4) aerosol can filling lines designated as Line 5, 6, 7 and 8 using Through the Valve (TTV) propellant filling technology.

(B) Seventeen (17) compounding tanks including:

(i) Twelve (12) 6,000 gallon batch/run tanks.

(ii) Five (5) pre-mix tanks consisting of:

(a) One (1) 2,000-gallon tank.

(b) Two (2) 1,500 gallon tanks.

(c) One (1) 1,000-gallon tank.

(d) One (1) 500 gallon tank.

(C) Additional supporting operations including:

(i) one (1) spray-out booth.

(ii) five (5) bulk propellant tanks.

(iii) four (4) single-head recharge gassers.

(iv) secondary packaging operations.

(v) labelers using hot melt adhesives.

(vi) can and carton coders.

(b) One (1) natural gas-fired boiler, identified as B-1, permitted in 2008, and with a maximum heat input capacity of 16.70 MMBtu/hr.

As part of this application, KIK is requesting that VOC emission from its existing plant be limited to a maximum of 249 tons per year. This will make the existing plant a minor source under Federal and State Prevention of Significant Deterioration (PSD) rules.

The four new lines will be limited to a total increase of 249 tons per year of VOC emissions. Because the new equipment will not exceed the major source thresholds, the Prevention of Significant Deterioration (PSD) rules under 326 IAC 2-2 will not be applicable. Each of the four lines will have potential VOC emissions in excess of 25 tons per year; therefore, a BACT analysis under 326 IAC 8-1-6 was performed for the new equipment.

All other conditions of the permit shall remain unchanged and in effect. For your convenience, the entire Part 70 Operating Permit as modified will be provided at issuance.

This decision is subject to the Indiana Administrative Orders and Procedures Act – IC 4-21.5-3-5. If you have any questions on this matter, please contact Kimberly Cottrell, OAQ, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Kimberly Cottrell or extension (3-0870), or dial (317) 233-0870.

Sincerely/Original Signed By:

Tripurari P. Sinha, Ph. D., Section Chief
Permits Branch
Office of Air Quality

Attachments:
Updated Permit
Technical Support Document
PTE Calculations
VOC BACT Analysis

klc

cc: File – Elkhart County
Elkhart County Health Department
U.S. EPA, Region V
Northern Regional Office
Air Compliance Inspector
Compliance Data Section
Permits Administration and Development

Mr. Geoffrey J. Ladue
Regional General Manager
APG, Inc. / KIK Custom Products
1919 Superior Street
Elkhart, IN 46514-8224

Mr. David Jordan
ERM
11350 N. Meridian Street, Suite 220
Carmel, IN 46032

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Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

APG, Inc. / KIK Custom Products - Indiana Plant
2730 Middlebury Street
Elkhart, Indiana 46516

(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.: 039-21106-00434	
Issued by: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: November 14, 2006 Expiration Date: November 14, 2011

Interim Significant Source Modification No. T 039-25990I-00434, issued on February 14, 2008
Significant Source Modification No. T 039-25992-00434

Significant Permit Modification No.: 039-26036-00434	
Issued by/Original Signed By: Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	 Issuance Date: August 4, 2008 Expiration Date: November 14, 2011

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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, A.3 and A.4 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

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

The Permittee owns and operates a stationary liquid and aerosol can filling operation.

Source Address:	2700 Middlebury Street, 2730 Middlebury Street, 711 Middleton Run Road, and 2825 Middlebury Street, Elkhart, IN, 46516
Mailing Address:	P.O. Box 2988, Elkhart, Indiana, 46515-2988
General Source Phone Number:	(574) 295-0000
SIC Code:	7389
County Location:	Elkhart
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Major Source, Section 112 of the Clean Air Act

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

This liquid and aerosol can filling operation consists of four (4) plants:

(a) Plant 1 (APG / KIK Custom Products – Indiana Main Plant) is located at 2730 Middlebury Street, Elkhart, IN 46516;

(b) Plant 2 (APG / KIK Custom Products – Indiana North Plant) is located at 711 Middleton Run Road, Elkhart, Indiana 46516; and

(c) Plant 3 (APG / KIK Custom Products – Indiana South Plant) is located at 2825 Middlebury Street, Elkhart, Indiana 46516.

(d) Plant 4 (APG / KIK Custom Products – Indiana Distribution Center) is located at 2700 Middlebury Street, Elkhart, Indiana 46516.

Since all the four (4) plants are located on contiguous or adjacent properties, belong to the same industrial grouping, and under common control of the same entity, they will be considered one (1) major source as determined in the Part 70 permit, T 039-21106-00434, issued on November 14, 2006, and Significant Source Modification T 039-26036-00434.

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

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

(a) Scrap Can Processing Operations including automatic and manual devices used to recover contents and allow recycling of scrap metal from aerosol cans from the production operations that are unusable, constructed in 1994 and 1995 unless otherwise indicated below. The manual devices utilize add-on canisters of activated carbon for VOC emission control.

(b) One (1) natural gas-fired boiler, identified as B-1, permitted in 2008, and with a maximum heat input capacity of 16.70 MMBtu/hr. Boiler B-1 is an affected source under the Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [326 IAC 12 and 40 CFR Part 60, Subpart Dc].

(c) VOC-containing Propellant Handling Operations including bulk and smaller container unloading, storage, transfer and filling into aerosol product containers, constructed in 1994 and 1995 and 2008 unless otherwise indicated below. The source has eleven (11) aerosol product production lines.

(d) VOC-containing Liquid Handling Operations including bulk and smaller container unloading, storage, transfer, mixing, and filling into liquid and aerosol product containers. The source has nine (9) liquid product filling lines in addition to the eleven (11) aerosol product filling lines and all twenty (20) lines involve VOC-containing liquid handling.

The following lines are used in the VOC-containing propellant handling, VOC-containing liquid handling and scrap can processing operations described above:

(1) Lines 1 and 2 aerosol can filling lines, constructed in 1976, which consist of:

(A) Open and closed mixing tanks.

(B) Product and propellant fillers.

(2) Line 3 aerosol can filling line, constructed in 1989, which consists of:

(A) Two (2) closed bowl liquid product filler.

(B) Two (2) non-VOC propellant filler.

(3) Line 4 aerosol can filling line, constructed in 1989, which consists of:

(A) Five (5) closed top mix / run tanks.

(B) One (1) closed bowl liquid product fillers.

(C) Two (2) portable liquid product fillers.

(D) Two (2) UTC VOC propellant fillers.

(E) Two (2) VOC propellant pressure fillers.

(F) Two (2) non-VOC propellant fillers.

(4) Lines 5-8 aerosol can filling lines, permitted in 2008, which consist of:

(A) Four (4) aerosol can filling lines using Through the Valve (TTV) propellant filling technology.

(B) Seventeen (17) compounding tanks including:

(i) Twelve (12) 6,000 gallon batch/run tanks.

(ii) Five (5) pre-mix tanks consisting of:

(a) One (1) 2,000-gallon tank.

(b) Two (2) 1,500 gallon tanks.

(c) One (1) 1,000-gallon tank.

(d) One (1) 500 gallon tank.

(5) Line 50 aerosol can filling line, constructed in 1994, an aerosol can filling line which is located at the Indiana South Plant.

(6) Lines 51 through 58 liquid can filling lines, constructed in 1994, which consists of:

(A) Eight (8) container filling and packaging operations.

(B) Seven (7) mixing/batch tanks.

(C) Ten (10) liquid closed bowl fillers.

(D) One (1) liquid open bowl filler.

(E) Two (2) tube fillers.

These lines are only used in the VOC-containing liquid handling operations.

(7) Line 61 aerosol can filling line, constructed in 1993, which consists of:

(A) Four (4) closed top mixing tanks.

(B) Two (2) closed liquid product fillers.

(C) One (1) UTC propellant filler.

(D) One (1) pressure propellant filler.

This line is only used in the VOC-containing propellant handling and VOC-containing liquid handling operations.

(8) Line 62 liquid can filling lines, constructed in 1993, which consists of:

(A) Two (2) closed top mixing tanks.

(B) One (1) closed bowl liquid product filler.

This line is only used in the VOC-containing liquid handling operations only.

(9) Lines 63 aerosol can filling line, constructed in 1997, which consists of:

(A) Open and closed mixing tanks.

(B) Product and propellant fillers.

(e) APG, Inc. / KIK Custom Products – Indiana Main and North Plant facilities miscellaneous equipment, constructed in 1994 and 1995 and 2008, include:

(1) Thirty-six (36) bulk VOC and non-VOC liquid storage tanks.

(2) Twenty (20) bulk VOC and non-VOC propellant storage tanks.

(3) Seven (7) pre-mix tanks.

(4) Seven (7) run/storage tanks.

(5) Two (2) surge tanks for compounding areas.

(6) Four (4) spray-out booths.

(7) Nine (9) single-head recharge gassers.

(8) Secondary packaging operations.

(9) Labelers using hot melt adhesives.

(10) Can and carton coders.

(f) APG, Inc. / KIK Custom Products – Indiana South Plant facilities miscellaneous equipment, constructed in 1994, include:

(1) Twenty-eight (28) VOC and non-VOC liquid pre-mix, run and storage tanks.

(2) Two (2) VOC propellant storage tanks.

(3) Can and carton coders.

(g) Volatile Organic Liquid (VOL) Storage Tanks:

(1) Five (5) VOL storage tanks, constructed after July 23, 1984, identified as A1, A6, A7, A12 and A13, with a storage capacity of 15,000 gallons, each;

(2) One (1) VOL storage tank, constructed after July 23, 1984, identified as P21, with a storage capacity of 12,000 gallons;

(3) Two (2) VOL storage tanks, constructed after July 23, 1984, identified as P18 and P20, with a storage capacity of 18,000 gallons, each;

(4) Two (2) VOL storage tanks, constructed after May 19, 1978 and before July 23, 1984, identified as P16 and P17, with a storage capacity of 30,000 gallons, each;

(5) One (1) VOL storage tank, constructed after July 23, 1984, identified as P19, with a storage capacity of 30,000 gallons; and

(6) One (1) VOL storage tank, constructed after July 23, 1984, identified as P22, with a storage capacity of 100,000 pounds.

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

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

(a) One (1) portable powder filling operation, identified as PPF1, which is used on any one of the fourteen (14) lines on an as-needed basis with a process weight rate up to sixty thousand (60,000) pounds per hour. [326 IAC 6-3]

(b) Single-head recharge gassers used to add propellant to lightweight cans.

(c) Soil and groundwater remediation systems consisting of soil vapor extraction and air sparging equipment installed for temporary operation under a Remediation Work Plan approved by the IDEM Voluntary Remediation Program. The main systems are idle and have not been operated since prior to November 12, 2004; however, a separate insignificant source SVE system continues to operate in the waste pad area.

(d) Storage equipment and activities including pressurized storage tanks and associated piping for liquid petroleum gas (LPG); liquid natural gas (LNG) (propane);

(e) Twenty-two (22) pressurized tanks,

(f) Ink jet printers for small product code and box code printing;

(g) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour [326 IAC 6-2]:

(1) Two (2) natural gas-fired boilers, identified as M-1 and N-1, and installed in 1976 and 1993, respectively, each with a maximum heat input capacity of 8.37 MMBtu/hr;

(2) One (1) natural gas-fired boiler, identified as M-2, installed on 1976**,** and with a maximum heat input capacity of 6.28 MMBtu/hr;

(3) One (1) natural gas-fired boiler, identified as N-2, installed on 1997, and with maximum heat input capacity of 7.00 MMBtu/hr;

(4) One (1) natural gas-fired boiler, identified as S-2, installed on 2001, and with a maximum heat input capacity of 3.19 MMBtu/hr; and

(5) One (1) natural gas-fired boiler, identified as S-1, installed in 1995, and with a maximum heat input capacity of 1.50 MMBtu/hr.

(h) Combustion source flame safety purging on startup;

(i) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons;

(j) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;

(k) Packaging lubricants and greases;

(l) Filling drums, pails or other packaging containers with lubricating oils, waxes and greases

(m) Degreasing operations, existing after January 1, 1980, do not exceed 145 gallons per 12 months, not subject to 326 IAC 20-6. [326 IAC 8-3-2] [326 IAC 8-3-5]

(n) Cleaners and solvents characterized as follows:

(1) Having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100°F) or;

(2) Having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1 psi measured at 20°C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months;

(o) The following equipment related to manufacturing activities not resulting in the emissions of HAPs: brazing equipment, cutting torches, soldering equipment, and welding equipment;

(p) Closed loop heating and cooling systems;

(q) Solvent recycling systems with batch capacity less than or equal to 100 gallons;

(r) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume;

(s) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs;

(t) Water based adhesives that are less than or equal to 5% by volume of VOCs excluding HAPs;

(u) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;

(v) Heat exchanger cleaning and repair;

(w) Process vessels degassing and cleaning to prepare for internal repairs;

(x) Stockpiled soils from soil remediation activities that are covered and waiting transport for disposal;

(y) Paved and unpaved roads and parking lots with public access;

(z) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the sources where air emissions from those activities would not be associated with any production process;

(aa) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks and fluid handling equipment;

(bb) Blowdown for any of the following: sight glass; boiler; compressors; pumps and cooling tower;

(cc) Diesel generators not exceeding 1600 horsepower;

(dd) Stationary fire pumps;

(ee) Purge double block and bleed valves;

(ff) Filter or coalesce media changeout; and

(gg) A laboratory as defined in 326 IAC 2-7-1(21)(D).

(hh) Portable hot melt labelers and hot melt glue systems, which can be used on any one of the fourteen (14) lines on an as-needed basis

(ii) Portable shrink wrap and bundler machines which can be used on any one of the fourteen (14) lines on an as-needed basis

A.5 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 it is a major source, as defined in 326 IAC 2-7-1(22).

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) The Operating Permit Renewal, T 039-21106-00434, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

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

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

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

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

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

B.4 Enforceability [326 IAC 2-7-7]

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. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). 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) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by the "responsible official" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) the "Responsible Official" is defined at 326 IAC 2-7-1(34).

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

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

Indiana Department of Environmental Management
Compliance 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

(a) The Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, for the source as described in 326 IAC 1-6-3. At a minimum, the PMPs shall include:

(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.

(b) 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 or potential to emit. The PMPs does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

(c) 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, 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 Section), or
Telephone Number: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865

(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 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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

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

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

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

(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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 Operating Permit Renewal T 039-21106-00434 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

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

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

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

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

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

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. 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.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.16 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

(1) That this permit contains a material mistake.

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

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

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

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

B.17 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, 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 in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.18 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) Any application requesting an amendment or modification of this permit shall be submitted to:

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

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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

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

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

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

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits 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, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

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

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

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

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

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

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

(3) Any change in emissions; and

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

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

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

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

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

B.21 Source Modification Requirement [326 IAC 2-7-10.5] [326 IAC 2-2-2] [326 IAC 2-3-2]

(a) A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.

(b) Any modification at an existing major source is governed by the requirements of 326 IAC 2-2-2 and 326 IAC 2-3-2.

B.22 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.23 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
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

B.24 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.25 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 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 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 forty percent (40%) 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.3 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.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.5 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.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
Asbestos Section, Office of Air Quality
100 North Senate Avenue
MC 61-52, 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 by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

(g) Indiana Accredited 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 Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

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

C.7 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, 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 certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

Compliance Requirements [326 IAC 2-1.1-11]

C.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)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, 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 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

C.10 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

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

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

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

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

C.12 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 prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on September 12, 1996.

(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.13 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.14 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) Upon detecting an excursion or exceedance, the Permittee shall 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 emissions.

(b) 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). Corrective actions may include, but are not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned 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 within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(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;

(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 maintain the following records:

(1) monitoring data;

(2) monitor performance data, if applicable; and

(3) corrective actions taken.

C.15 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 take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

C.16 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), starting in 2007 and every year thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The emission statement 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.17 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. 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, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

(c) If there is a reasonable possibility (as defined in 40 CFR 51.165 (a)(6)(vi)(A), 40 CFR 51.165 (a)(6)(vi)(B), 40 CFR 51.166 (r)(6)(vi)(a), and/or 40 CFR 51.166 (r)(6)(vi)(b)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) 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(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:

(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) 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(rr)(2)(A)(iii) and/or 326 IAC 2-3-1 (mm)(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 40 CFR 51.165 (a)(6)(vi)(A) and/or 40 CFR 51.166 (r)(6)(vi)(a)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) 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(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), 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.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, 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) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) 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.

(f) 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(qq) and/or 326 IAC 2-3-1(ll) at an existing Electric Utility Steam Generating Unit, then for that project the Permittee shall:

(1) Submit to IDEM, OAQ a copy of the information required by (c)(1) in Section C - General Record Keeping Requirements

(2) Submit a report to IDEM, OAQ within sixty (60) days after the end of each year during which records are generated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements. The report shall contain all information and data describing the annual emissions for the emissions units during the calendar year that preceded the submission of report.

Reports required in this part shall be submitted to:

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

(g) 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(qq) and/or 326 IAC 2-3-1(ll)) 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(xx) and/or 326 IAC 2-3-1(qq), 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).

(h) The report for project at an existing emissions unit shall be submitted within 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 deems fit to include in this report,

Reports required in this part shall be submitted to:

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

(i) 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.19 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 the standards for recycling and emissions reduction:

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

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

(a) Scrap Can Processing Operations including automatic and manual devices used to recover contents and allow recycling of scrap metal from aerosol cans from the production operations that are unusable, constructed in 1994 and 1995 unless otherwise indicated below. The manual devices utilize add-on canisters of activated carbon for VOC emission control.

(b) One (1) natural gas-fired boiler, identified as B-1, permitted in 2008, and with a maximum heat input capacity of 16.70 MMBtu/hr. Boiler B-1 is an affected source under the Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [326 IAC 12 and 40 CFR Part 60, Subpart Dc].

(c) VOC-containing Propellant Handling Operations including bulk and smaller container unloading, storage, transfer and filling into aerosol product containers, constructed in 1994 and 1995 and 2008 unless otherwise indicated below. The source has eleven (11) aerosol product production lines.

(d) VOC-containing Liquid Handling Operations including bulk and smaller container unloading, storage, transfer, mixing, and filling into liquid and aerosol product containers. The source has nine (9) liquid product filling lines in addition to the eleven (11) aerosol product filling lines and all twenty (20) lines involve VOC-containing liquid handling.

The following lines are used in the VOC-containing propellant handling, VOC-containing liquid handling and scrap can processing operations described above:

(1) Lines 1 and 2 aerosol can filling lines, constructed in 1976, which consist of:

(A) Open and closed mixing tanks.

(B) Product and propellant fillers.

(2) Line 3 aerosol can filling line, constructed in 1989, which consists of:

(A) Two (2) closed bowl liquid product filler.

(B) Two (2) non-VOC propellant filler.

(3) Line 4 aerosol can filling line, constructed in 1989, which consists of:

(A) Five (5) closed top mix / run tanks.

(B) One (1) closed bowl liquid product fillers.

(C) Two (2) portable liquid product fillers.

(D) Two (2) UTC VOC propellant fillers.

(E) Two (2) VOC propellant pressure fillers.

(F) Two (2) non-VOC propellant fillers.

(4) Lines 5-8 aerosol can filling lines, permitted in 2008, which consist of:

(A) Four (4) aerosol can filling lines using Through the Valve (TTV) propellant filling technology.

(B) Seventeen (17) compounding tanks including:

(i) Twelve (12) 6,000 gallon batch/run tanks.

(ii) Five (5) pre-mix tanks consisting of:

(a) One (1) 2,000-gallon tank.

(b) Two (2) 1,500 gallon tanks.

(c) One (1) 1,000-gallon tank.

(d) One (1) 500 gallon tank.

(5) Line 50 aerosol can filling line, constructed in 1994, an aerosol can filling line which is located at the Indiana South Plant.

(6) Lines 51 through 58 liquid can filling lines, constructed in 1994, which consists of:

(A) Eight (8) container filling and packaging operations.

(B) Seven (7) mixing/batch tanks.

(C) Ten (10) liquid closed bowl fillers.

(D) One (1) liquid open bowl filler.

(E) Two (2) tube fillers.

These lines are only used in the VOC-containing liquid handling operations.

(7) Line 61 aerosol can filling line, constructed in 1993, which consists of:

(A) Four (4) closed top mixing tanks.

(B) Two (2) closed liquid product fillers.

(C) One (1) UTC propellant filler.

(D) One (1) pressure propellant filler.

This line is only used in the VOC-containing propellant handling and VOC-containing liquid handling operations.

(8) Line 62 liquid can filling lines, constructed in 1993, which consists of:

(A) Two (2) closed top mixing tanks.

(B) One (1) closed bowl liquid product filler.

This line is only used in the VOC-containing liquid handling operations only.

(9) Lines 63 aerosol can filling line, constructed in 1997, which consists of:

(A) Open and closed mixing tanks.

(B) Product and propellant fillers.

(e) APG, Inc. / KIK Custom Products – Indiana Main and North Plant facilities miscellaneous equipment, constructed in 1994 and 1995 and 2008, include:

(1) Thirty-six (36) bulk VOC and non-VOC liquid storage tanks.

(2) Twenty (20) bulk VOC and non-VOC propellant storage tanks.

(3) Seven (7) pre-mix tanks.

(4) Seven (7) run/storage tanks.

(5) Two (2) surge tanks for compounding areas.

(6) Four (4) spray-out booths.

(7) Nine (9) single-head recharge gassers.

(8) Secondary packaging operations.

(9) Labelers using hot melt adhesives.

(10) Can and carton coders.

(f) APG, Inc. / KIK Custom Products – Indiana South Plant facilities miscellaneous equipment, constructed in 1994, include:

(1) Twenty-eight (28) VOC and non-VOC liquid pre-mix, run and storage tanks.

(2) Two (2) VOC propellant storage tanks.

(3) Can and carton coders.

(g) Volatile Organic Liquid (VOL) Storage Tanks:

(1) Five (5) VOL storage tanks, constructed after July 23, 1984, identified as A1, A6, A7, A12 and A13, with a storage capacity of 15,000 gallons, each;

(2) One (1) VOL storage tank, constructed after July 23, 1984, identified as P21, with a storage capacity of 12,000 gallons;

(3) Two (2) VOL storage tanks, constructed after July 23, 1984, identified as P18 and P20, with a storage capacity of 18,000 gallons, each;

(4) Two (2) VOL storage tanks, constructed after May 19, 1978 and before July 23, 1984, identified as P16 and P17, with a storage capacity of 30,000 gallons, each;

(5) One (1) VOL storage tank, constructed after July 23, 1984, identified as P19, with a storage capacity of 30,000 gallons; and

(6) One (1) VOL storage tank, constructed after July 23, 1984, identified as P22, with a storage capacity of 100,000 pounds.

(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 VOC BACT Minor Limit - Scrap Can Processing Operations [326 IAC 8-1-6]

Pursuant to Title V Permit Renewal 039-21106-00434, issued on February 9, 2001, and revised by permit modification 039-26036-00434, the number of cans crushed in the Scrap Can Processing Operations shall be less than 4,500,000 per twelve (12) consecutive month period, with compliance determined at the end of each month. VOC emissions shall be calculated using an emission factor of 0.011 pounds of VOC per can crushed. Therefore, VOC emissions shall be limited to less than 25 tons per year. Compliance with this condition will render the requirements of 326 IAC 8-1-6 (General Reduction Requirements) not applicable to the Scrap Can Processing Operations, constructed in 1994 and 1995.

D.1.2 PSD and VOC BACT Requirements - Lines 3, 4, 50-58 and 61-62 [326 IAC 2-2-3] [326 IAC 8-1-6]

Pursuant to Title V Permit 039-6875-00434, issued on February 9, 2001 and 326 IAC 2-2-3(a)(2), the source shall apply the best available control technology (BACT) for each pollutant subject to the regulation under the provisions of the Clean Air Act for which said source has the potential to emit in significant amounts as defined in 326 IAC 2-2-1. Pursuant to 326 IAC 8-1-6, Lines 3, 4, 50-58 and 61-62 shall use BACT to control volatile organic compound (VOC) emissions and shall be limited by the following:

(a) The gallons of VOC compounded and filled into containers per month; the number of cans filled with VOC propellant per month; and the number of cans filled with VOC that were crushed shall be limited such that the summation of the emissions using the equation below shall not exceed a VOC emissions limit of 440 tons per consecutive twelve-month period, with compliance determined at the end of each month according to the following equation:

VOC Emissions = [(gallons VOC compounded & filled/month) x (Ef, 0.03 lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (Ef, 0.0013 lbs VOC/can) + (# cans with VOC crushed/month) x (Ef, 0.0111 lbs VOC/can)]

(b) Pressure filling or through-the-valve filling method shall be utilized at all times when the product being filled allows for this method.

(c) When pressure filling can not be utilized, Under the Cup fill method with vapor reclaim shall be utilized, or an equivalent means of reduction.

(d) Continue enclosure of open bowl liquid filling reservoirs, wherever possible.

(e) Utilized raw materials having the lowest feasible VOC content and vapor pressure, whenever possible.

(f) Continue movement toward consumer products that contain lower levels of VOCs and lower VOC composite partial vapor pressures.

Compliance with these PSD BACT Requirements shall demonstrate compliance with 326 IAC 8-1-6 (BACT) for Lines 3, 4, 50-58 and 61-62.

D.1.3 PSD Minor Limit - Lines 1-4, 50-58 and 61-63 [326 IAC 2-2]

Pursuant to permit modification 039-26036-00434 and 326 IAC 2-2, for all emission units constructed prior to 2008 (Lines 1-4, 50-58 and 61-63):

The gallons of VOC compounded and filled into containers per month and the number of cans filled with VOC propellant per month shall be limited such that the summation of the emissions using the equation below shall not exceed a VOC emissions limit of 223.10 tons per consecutive twelve-month period, with compliance determined at the end of each month according to the following equation.

VOC Emissions = [(gallons VOC compounded & filled/month) x (Ef, 0.03 lbs VOC/gal VOC) +
(# cans filled with VOC propellant/month) x (Ef, 0.0013 lbs VOC/can) +
(# cans with VOC crushed/month) x (Ef, 0.0111 lbs VOC/can)]

Compliance with this emission limit for Lines 1-4, 50-58, and 61-63, combined with the potential to emit VOC emissions from all other equipment constructed prior to 2008 will limit the potential to emit from this modification to less than two hundred fifty (250) tons of VOC per year and therefore will render the requirements of 326 IAC 2-2 not applicable to the existing source constructed prior to 2008.

D.1.4 PSD Minor Limit - Lines 5-8 [326 IAC 2-2]

Pursuant to source modification 039-25992-00434 and 326 IAC 2-2, for Lines 5-8:

The gallons of VOC compounded and filled into containers per month and the number of cans filled with VOC propellant per month shall be limited such that the summation of the emissions using the equation below shall not exceed a VOC emissions limit of 245.42 tons per consecutive twelve-month period, with compliance determined at the end of each month according to the following equation.

VOC Emissions = [(gallons VOC compounded & filled/month) x (Ef, 0.03 lbs VOC/gal VOC) +
(# cans filled with VOC propellant/month) x (Ef, 0.0013 lbs VOC/can) +
(# cans with VOC crushed/month) x (Ef, 0.0111 lbs VOC/can)]

Compliance with this emission limit for Lines 5-8 combined with the potential to emit VOC emissions from all other equipment associated with this modification will limit the potential to emit from this modification to less than two hundred fifty (250) tons of VOC per year and therefore will render the requirements of 326 IAC 2-2 not applicable to the modification approved under Source Modification No.: 039-25992-00434.

D.1.5 VOC BACT Requirements - Lines 5-8 [326 IAC 8-1-6]

Pursuant to source modification 039-25992-00434, and 326 IAC 8-1-6, Lines 5-8 shall use BACT to control volatile organic compound (VOC) emissions and shall be limited by the following:

(a) The gallons of VOC compounded and filled into containers per month and the number of cans filled with VOC propellant per month shall be limited such that the summation of the emissions using the equation below shall not exceed a VOC emissions limit of 245.42 tons per consecutive twelve-month period, with compliance determined at the end of each month according to the following equation.

VOC Emissions = [(gallons VOC compounded & filled/month) x (Ef, 0.03 lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (Ef, 0.0013 lbs VOC/can) + (# cans with VOC crushed/month) x (Ef, 0.0111 lbs VOC/can)]

(b) Through-the-valve (TTV) pressure filling method shall be utilized at all times.

(c) Open bowl liquid filling reservoirs shall be enclosed wherever possible.

(d) Utilize raw materials having the lowest feasible VOC content and vapor pressure, whenever possible.

(e) Continue movement toward consumer products that contain lower levels of VOCs and lower VOC composite partial vapor pressures.

D.1.6 HAP Minor Limit - Lines 1-8, 50-58 and 61-63 [326 IAC 2-4.1]

Pursuant to source modification 039-25992-00434, Lines 1-8, 50-58 and 61-63 (including miscellaneous equipment and scrap can processing operations) shall be limited to:

(a) less than nine and five tenths (9.5) tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month. This usage limit is required to limit the potential to emit of each HAP to less than ten (10) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) less than twenty-three and seventy-five hundredths (23.75) tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month. This usage limit is required to limit the potential to emit of total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The gallons of HAP compounded and filled into containers per month shall be limited such that the summation of the emissions using the equation below shall not exceed the HAP emission limits in paragraphs (a) and (b) above:

HAP Emissions = (Ef, 0.03 pounds per gallon of HAP containing VOC) x (weight % HAP / weight % VOC)

Compliance with these emission limits for Lines 1-8, 50-58 and 61-63 combined with the potential to emit HAP emissions from all other equipment associated with this modification will limit the potential to emit from this modification to less than ten (10) tons per year of any single HAP and less than twenty-five (25) tons per year of any combination of HAPs. Therefore the requirements of 326 IAC 2-4.1 and the Clean Air Act Section 112 are not applicable to the entire source.

Compliance Determination Requirements

D.1.7 Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 8-1-4]

Compliance with the VOC content limits contained in Conditions D.1.1, D.1.2, D.1.3, D.1.4 and D.1.5 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the VOL manufacturer. However, IDEM, OAQ reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

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

D.1.8 Record Keeping Requirements

(a) To document compliance with condition D.1.1, the permittee shall maintain records of the number/amount of VOC-containing cans crushed in the Scrap Can Processing Operations. Records maintained shall be complete and sufficient to establish compliance with the VOC emission limitations established in Condition D.1.1.

(b) To document compliance with Conditions D.1.2 and D.1.3, the Permittee shall maintain records in accordance with (1) through (5) below for Lines 1-4, 50-58 and 61-63. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Conditions D.1.2 and D.1.3:

(1) The amount and VOC content of the volatile organic liquid (VOL) product filled. Records shall include material safety data sheets (MSDS), product formulation information, VOL compounded/filled and company product records necessary to verify the type and amount used;

(2) The total VOC compounded/filled for each month;

(3) The number/amount of cans filled with VOC propellant;

(4) The number/amount of VOC-containing cans crushed;

(5) The weight of VOC emitted for each month.

(c) To document compliance with Conditions D.1.4 and D.1.5, the Permittee shall maintain records in accordance with (1) through (4) below for Lines 5-8. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Conditions D.1.4 and D.1.5:

(1) The amount and VOC content of the volatile organic liquid (VOL) product filled. Records shall include material safety data sheets (MSDS), product formulation information, VOL compounded/filled and company product records necessary to verify the type and amount used;

(2) The total VOC compounded/filled for each month;

(3) The number/amount of cans filled with VOC propellant;

(4) The weight of VOC emitted for each month.

(d) To document compliance with Conditions D.1.6, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the HAP usage limits and/or the HAP emission limits established in Condition D.1.6.

(1) The amount and HAP content of the volatile organic liquid (VOL) product filled. Records shall include material safety data sheets (MSDS), product formulation information, VOL compounded/filled and company product records necessary to verify the type and amount used;

(2) The total HAP compounded/filled for each month;

(3) The number/amount of cans filled with HAP propellant;

(4) The weight of HAP emitted for each month.

(e) All records shall be maintained in accordance with Section C – General Record Keeping Requirements of this permit.

D.1.9 Reporting Requirements

(a) A quarterly summary of the information to document compliance with Conditions D.1.1, D.1.2(a), D.1.3, D.1.4, D.1.5(a) and D.1.6 (a) and (b) shall be submitted to the address listed in Section C – General Reporting Requirements of this permit using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Quarterly Report required to document compliance with Condition D.1.3 shall also document compliance with Condition D.1.2(a).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

The source has the following natural gas-fired boilers located at one of three plant locations (APG / KIK Custom Products – Indiana Main Plant, APG / KIK Custom Products – Indiana North Plant or APG / KIK Custom Products – Indiana South Plant): [326 IAC 6-2]

(1) Two (2) natural gas-fired boilers, identified as M-1 and N-1, and installed in 1976 and 1993, respectively, each with a maximum heat input capacity of 8.37 MMBtu/hr;

(2) One (1) natural gas-fired boiler, identified as M-2, installed on 1976**,** and with a maximum heat input capacity of 6.28 MMBtu/hr;

(3) One (1) natural gas-fired boiler, identified as N-2, installed on 1997, and with maximum heat input capacity of 7.00 MMBtu/hr;

(4) One (1) natural gas-fired boiler, identified as S-2, installed on 2001, and with a maximum heat input capacity of 3.19 MMBtu/hr; and

(5) One (1) natural gas-fired boiler, identified as S-1, installed in 1995, and with a maximum heat input capacity of 1.50 MMBtu/hr.

(6) One (1) natural gas-fired boiler, identified as B-1, permitted in 2008, and with a maximum heat input capacity of 16.70 MMBtu/hr. Boiler B-1 is an affected source under the Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [326 IAC 12 and 40 CFR Part 60, Subpart Dc].

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

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

D.2.1 Particulate Matter Limitation [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2 (Particulate Emissions Limitations for Sources of Indirect Heating), the boilers shall be limited as follows:

Boiler ID	Capacity (MMBtu/hr)	Date of Construction	Q (MMBtu/hr)	PM Allowable Emissions (lbs/MMBtu)
M-1	8.37	1976	8.37	0.60
M-2	6.28	1976	14.65	0.60
N-1	8.37	1993	23.02	0.48
S-1	1.50	1995	24.52	0.47
N-2	7.00	1997	31.52	0.44
S-2	3.19	2001	34.71	0.43
B-1	16.70	2008	51.41	0.39

These emission limitations are based on the following:

(a) Pursuant to 326 IAC 6-2-3 (e), Boiler M-1 and Boiler M-2 particulate emissions shall not exceed 0.6 lbs/MMBtu heat input.

(b) Pursuant to 326 IAC 6-2-4, Boiler N-1, Boiler S-1, Boiler N-2 and Boiler S-2, and Boiler B-1 shall be limited by the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:
Pt pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input.
Q = total source maximum operating capacity

New Source Performance Standards [326 IAC 12] [40 CFR Part 60, Subparts A and Dc]

D.2.2 General Provisions Relating to the Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [326 IAC 12] [40 CFR Part 60, Subpart A]

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 for Boiler B-1.

D.2.3 Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [326 IAC 12] [40 CFR Part 60, Subpart Dc]

The Permittee shall comply with the following provisions of the Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR Part 60, Subpart Dc; included as Attachment A of this permit) for Boiler B-1 upon startup:

(a) 40 CFR 60.40c,
(b) 40 CFR 60.41c,
(c) 40 CFR 60.42c,
(d) 40 CFR 60.43c,
(e) 40 CFR 60.44c,
(f) 40 CFR 60.45c,
(g) 40 CFR 60.46c,
(h) 40 CFR 60.47c, and
(i) 40 CFR 60.48c.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Degreasing operations, existing after January 1, 1980, do not exceed 145 gallons per 12 months, not subject to 326 IAC 20-6, [326 IAC 8-3-2] [326 IAC 8-3-5]

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

Emission Limitations and Standards [326 IAC 2-7-5(1)] (Cold Cleaning Degreaser Operations)

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

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations, the Permittee shall:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

(c) Close the degreaser cover whenever parts are not being handled in the cleaner;

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs, the Permittee shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):

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

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

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility, shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

One (1) portable powder filler, identified as PPF1, used on an as-needed basis with a process weight rate up to sixty thousand (60,000) pounds per hour. [326 IAC 6-3]

(The information describing the process contained in this facility 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 Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate matter from the portable powder filler, identified as PPF1, used in the liquid and aerosol can filling operation shall be limited to 1.44 lbs/hr based on 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:

$$E = 4.10\ P^{0.67}$$
$$= 4.10\ (0.21)^{0.67}$$
$$= 1.44 \text{ lbs/hr}$$
$$= 0.21 \text{ tons/hr}$$

Where:

E = PM allowable emissions in lbs/hr

and

P = Process weight rate in tons/hr
= 0.21 tons

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: APG, Inc. / KIK Custom Products – Indiana Plant
Source Address: 2730 Middlebury Street, Elkhart, Indiana 46516 & Contiguous Property
Mailing Address: P.O. Box 2988, Elkhart, Indiana 46515 2988
Part 70 Permit No.: T 039-21106-00434

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 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: APG, Inc. / KIK Custom Products – Indiana Plant
Source Address: 2730 Middlebury Street, Elkhart, Indiana 46516 & Contiguous Property
Mailing Address: P.O. Box 2988, Elkhart, Indiana 46515 2988
Part 70 Permit No.: T 039-21106-00434

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**) 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 Describe: 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: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: APG, Inc. / KIK Custom Products – Indiana Plant
Source Address: 2730 Middlebury Street, Elkhart, Indiana 46516 & Contiguous Property
Mailing Address: P.O. Box 2988, Elkhart, Indiana 46515 2988
Part 70 Permit No.: T 039-21106-00434
Facility: Scrap can processing operation
Parameter: Number of Cans Crushed
Limit: 4,500,000 per consecutive twelve-month period with compliance determined at the end of each month.

VOC Emissions = [(# cans with VOC crushed/month) x (0.0111 lbs VOC/can)]

YEAR: _____

Month	**No. of Cans Crushed** (this month)	**No. of Cans Crushed** (previous 11 months)	**No. of Cans Crushed** (12 months total)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: APG, Inc. / KIK Custom Products – Indiana Plant
Source Address: 2730 Middlebury Street, Elkhart, Indiana 46516 & Contiguous Property
Mailing Address: P.O. Box 2988, Elkhart, Indiana 46515 2988
Part 70 Permit No.: T 039-21106-00434
Facility: Lines 1-4, 50-58 and 61-63 & Supporting Equipment
Parameter: VOC emissions
Limit: 248.10 tons of VOC emissions per consecutive 12-month period, with compliance determined at the end of each month. VOC emissions are calculated using the following equation:

VOC Emissions = [(gallons VOC compounded & filled/month) x (0.03 lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (0.0013 lbs VOC/can) + (# cans with VOC crushed/month) x (0.0111 lbs VOC/can)]

YEAR: _____

Month	**VOC Emissions** (this month)	**VOC Emissions** (previous 11 months)	**VOC Emissions** (12 months total)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: APG, Inc. / KIK Custom Products – Indiana Plant
Source Address: 2730 Middlebury Street, Elkhart, Indiana 46516 & Contiguous Property
Mailing Address: P.O. Box 2988, Elkhart, Indiana 46515 2988
Part 70 Permit No.: T 039-21106-00434
Facility: Lines 5-8
Parameter: VOC emissions
Limit: 245.42 tons of VOC emissions per consecutive 12-month period, with compliance determined at the end of each month. VOC emissions are calculated using the following equation:

VOC Emissions = [(gallons VOC compounded & filled/month) x (0.03 lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (0.0013 lbs VOC/can) + (# cans with VOC crushed/month) x (0.0111 lbs VOC/can)]

YEAR: _____

Month	**VOC Emissions** (this month)	**VOC Emissions** (previous 11 months)	**VOC Emissions** (12 months total)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: APG, Inc. / KIK Custom Products – Indiana Plant
Source Address: 2730 Middlebury Street, Elkhart, Indiana 46516 & Contiguous Property
Mailing Address: P.O. Box 2988, Elkhart, Indiana 46515 2988
Part 70 Permit No.: T 039-21106-00434
Facility: Lines 1-8, 50-58 and 61-63 & Supporting Equipment
Parameter: Single HAP Emissions
Limit: 9.5 tons of any single HAP per consecutive 12-month period, with compliance determined at the end of each month. HAP emissions are calculated using the following equation:

HAP Emissions = [(0.03 pounds per gallon of HAP containing VOC) x (weight % HAP / weight % VOC)]

YEAR: _____

HAP Name: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Single HAP Usage This Month	**Single HAP Usage Previous 11 Months**	**12 Month Total Single HAP Usage**
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: APG, Inc. / KIK Custom Products – Indiana Plant
Source Address: 2730 Middlebury Street, Elkhart, Indiana 46516 & Contiguous Property
Mailing Address: P.O. Box 2988, Elkhart, Indiana 46515 2988
Part 70 Permit No.: T 039-21106-00434
Facility: Lines 1-8, 50-58 and 61-63 & Supporting Equipment
Parameter: Total HAP Emissions
Limit: 23.75 tons of total HAP emissions per consecutive 12-month period, with compliance determined at the end of each month. HAP emissions are calculated using the following equation:

HAP Emissions = [(0.03 pounds per gallon of HAP containing VOC) x (weight % HAP / weight % VOC)]

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Total HAP Usage This Month	**Total HAP Usage Previous 11 Months**	**12 Month Total Combination HAP Usage**
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: APG, Inc. / KIK Custom Products – Indiana Plant
Source Address: 2730 Middlebury Street, Elkhart, Indiana 46516 & Contiguous Property
Mailing Address: P.O. Box 2988, Elkhart, Indiana 46515 2988
Part 70 Permit No.: T 039-21106-00434

Months: _____ **to** _____ **Year:** _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, 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:	

Page 2 of 2

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: _____

Attach a signed certification to complete this report.

Attachment A – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Dc] [326 IAC 12]

Source Description and Location

Source Name:	APG, Inc. / KIK Custom Products
Source Location:	2700 Middlebury Street, 2730 Middlebury Street, 711 Middleton Run Road, and 2825 Middlebury Street, Elkhart, IN 46515-2988
County:	Elkhart
SIC Code:	7389
Operation Permit Renewal No.:	T 039-21106-00434
Operation Permit Issuance Date:	November 14, 2006
Significant Source Modification No.:	039-25992-00434
Significant Permit Modification No.:	039-26036-00434
Permit Reviewer:	Kimberly Cottrell

NSPS [40 CFR Part 60, Subpart Dc]

Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

§ 60.40c Applicability and delegation of authority.

(a) Except as provided in paragraph (d) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, §60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO_2) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in §60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under §60.14.

(e) Heat recovery steam generators that are associated with combined cycle gas turbines and meet the applicability requirements of subpart GG or KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/hr) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/hr) heat input of fossil fuel. If the heat recovery steam generator is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG or KKKK, as applicable, of this part).

(f) Any facility covered by subpart AAAA of this part is not covered by this subpart.

(g) Any facility covered by an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not covered by this subpart.

§ 60.41c Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

Cogeneration steam generating unit means a steam generating unit that simultaneously produces both electrical (or mechanical) and thermal energy from the same primary energy source.

Combined cycle system means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

Combustion research means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (*i.e.* , the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

Conventional technology means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Dry flue gas desulfurization technology means a SO_2 control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO_2 control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under §60.48c(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

Fluidized bed combustion technology means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

Heat transfer medium means any material that is used to transfer heat from one point to another point.

Maximum design heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

Natural gas means: (1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or (2) liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §60.17).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

Potential sulfur dioxide emission rate means the theoretical SO_2 emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Steam generating unit means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Wet flue gas desulfurization technology means an SO_2 control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO_2 .

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

§ 60.42c Standard for sulfur dioxide (SO_2).

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that combusts only coal shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2 emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2 emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.

(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that:

(1) Combusts only coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential SO_2 emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of SO_2 in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is fired with coal refuse, the affected facility subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 87 ng/J (0.20 lb/MMBtu) heat input SO_2 emissions limit or the 90 percent SO_2 reduction requirement specified in paragraph (a) of this section and the emission limit is determined pursuant to paragraph (e)(2) of this section.

(2) Combusts only coal and that uses an emerging technology for the control of SO_2 emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 50 percent (0.50) of the potential SO_2 emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 260 ng/J (0.60 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent SO_2 reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under paragraphs (c)(1), (2), (3), or (4).

(1) Affected facilities that have a heat input capacity of 22 MW (75 MMBtu/hr) or less.

(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.

(3) Affected facilities located in a noncontinental area.

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from exhaust gases entering the duct burner.

(d) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 215 ng/J (0.50 lb/MMBtu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(e) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of the following:

(1) The percent of potential SO_2 emission rate or numerical SO_2 emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that

(i) Combusts coal in combination with any other fuel;

(ii) Has a heat input capacity greater than 22 MW (75 MMBtu/hr); and

(iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s = \frac{(K_a H_a + K_b H_b + K_c H_c)}{(H_a + H_b + H_c)}$$

Where:

E_s= SO_2 emission limit, expressed in ng/J or lb/MMBtu heat input;

K_a= 520 ng/J (1.2 lb/MMBtu);

K_b= 260 ng/J (0.60 lb/MMBtu);

K_c= 215 ng/J (0.50 lb/MMBtu);

H_a= Heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [MMBtu];

H_b= Heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (MMBtu); and

$H_c K_a H_b$= Heat input from the combustion of oil, in J (MMBtu).

(f) Reduction in the potential SO_2 emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

(1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential SO_2 emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion SO_2 control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), or (3) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under §60.48c(f), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).

(2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(3) Coal-fired facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(i) The SO_2 emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

§ 60.43c Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

(2) 130 ng/J (0.30 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

(e)(1) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) of this section.

(2) As an alternative to meeting the requirements of paragraph (e)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under §60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO_2 emissions is not subject to the PM limit in this section.

§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.

(a) Except as provided in paragraphs (g) and (h) of this section and §60.8(b), performance tests required under §60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in §60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under §60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO_2 emission limits under §60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affect facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) of this section and §60.8, compliance with the percent reduction requirements and SO_2 emission limits under §60.42c is based on the average percent reduction and the average SO_2 emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and SO_2 emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 of appendix A of this part are used to determine the hourly SO_2 emission rate (E_{ho}) and the 30-day average SO_2 emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the CEMS. Method 19 of appendix A of this part shall be used to calculate $E_{ao}$when using daily fuel sampling or Method 6B of appendix A of this part.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted E_{ho}(E_{ho}o) is used in Equation 19–19 of Method 19 of appendix A of this part to compute the adjusted E_{ao}(E_{ao}o). The E_{ho}o is computed using the following formula:

$$E_{ho}o = \frac{E_{ho} - E_w(1 - X_k)}{X_k}$$

Where:

E_{ho}o = Adjusted E_{ho}, ng/J (lb/MMBtu);

E_{ho}= Hourly SO_2 emission rate, ng/J (lb/MMBtu);

E_w= SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value $E_w$for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure $E_w$if the owner or operator elects to assume E_w= 0.

X_k= Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(2) The owner or operator of an affected facility that qualifies under the provisions of §60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters $E_w$or $X_k$if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under §60.42c(a) or (b) shall determine compliance with the SO_2 emission limits under §60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential SO_2 emission rate is computed using the following formula:

$$\%P_s = 100\left(1 - \frac{\%R_g}{100}\right)\left(1 - \frac{\%R_f}{100}\right)$$

Where:

$\%P_s$= Potential SO_2 emission rate, in percent;

$\%R_g$= SO_2 removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

$\%R_f$= SO_2 removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the $\%P_s$, an adjusted $\%R_g$($\%R_g$o) is computed from E_{ao}o from paragraph (e)(1) of this section and an adjusted average SO_2 inlet rate (E_{ai}o) using the following formula:

$$\%R_g o = 100\left(1 - \frac{E^{\circ}_{ao}}{E^{\circ}_{ai}}\right)$$

Where:

$\%R_g$o = Adjusted $\%R_g$, in percent;

E_{ao}o = Adjusted E_{ao}, ng/J (lb/MMBtu); and

E_{ai}o = Adjusted average SO_2 inlet rate, ng/J (lb/MMBtu).

(ii) To compute E_{ai}o, an adjusted hourly SO_2 inlet rate (E_{hi}o) is used. The E_{hi}o is computed using the following formula:

$$E_{hi}o = \frac{E_{hi} - E_w(1 - X_k)}{X_k}$$

Where:

E_{hi}o = Adjusted E_{hi}, ng/J (lb/MMBtu);

E_{hi}= Hourly SO_2 inlet rate, ng/J (lb/MMBtu);

E_w= SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value $E_w$for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure $E_w$if the owner or operator elects to assume E_w= 0; and

X_k= Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under §60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under §60.46c(d)(2).

(h) For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, the performance test shall consist of the certification, the certification from the fuel supplier, as described under §60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO_2 standards under §60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO_2 emissions data in calculating $\%P_s$ and E_{ho} under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under §60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$ or E_{ho} pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

§ 60.45c Compliance and performance test methods and procedures for particulate matter.

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under §60.43c shall conduct an initial performance test as required under §60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of this section.

(1) Method 1 of appendix A of this part shall be used to select the sampling site and the number of traverse sampling points.

(2) Method 3 of appendix A of this part shall be used for gas analysis when applying Method 5, 5B, or 17 of appendix A of this part.

(3) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 of appendix A of this part may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 8.1 and 11.1 of Method 5B of appendix A of this part may be used in Method 17 of appendix A of this part only if Method 17 of appendix A of this part is used in conjunction with a wet scrubber system. Method 17 of appendix A of this part shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(5) For Method 5 or 5B of appendix A of this part, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 ±14 °C (320±25 °F).

(6) For determination of PM emissions, an oxygen (O_2) or carbon dioxide (CO_2) measurement shall be obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(7) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rates expressed in ng/J (lb/MMBtu) heat input shall be determined using:

(i) The O_2 or CO_2 measurements and PM measurements obtained under this section, (ii) The dry basis F factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(8) Method 9 of appendix A of this part (6-minute average of 24 observations) shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under §60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(c) In place of PM testing with EPA Reference Method 5, 5B, or 17 of appendix A of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using EPA Method 5, 5B, or 17 of appendix A of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(13) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with §60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under §60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraph (d)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (d)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (d)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O_2 (or CO_2) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in paragraph (d)(7)(i) of this section.

(i) For PM, EPA Reference Method 5, 5B, or 17 of appendix A of this part shall be used.

(ii) For O_2 (or CO_2), EPA reference Method 3, 3A, or 3B of appendix A of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.

(d) The owner or operator of an affected facility seeking to demonstrate compliance under §60.43c(e)(4) shall follow the applicable procedures under §60.48c(f). For residual oil-fired affected facilities, fuel supplier certifications are only allowed for facilities with heat input capacities between 2.9 and 8.7 MW (10 to 30 MMBtu/hr).

§ 60.46c Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the SO_2 emission limits under §60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO_2 concentrations and either O_2 or CO_2 concentrations at the outlet of the SO_2 control device (or the outlet of the steam generating unit if no SO_2 control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under §60.42c shall measure SO_2 concentrations and either O_2 or CO_2 concentrations at both the inlet and outlet of the SO_2 control device.

(b) The 1-hour average SO_2 emission rates measured by a CEMS shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.42c. Each 1-hour average SO_2 emission rate must be based on at least 30 minutes of operation, and shall be calculated using the data points required under §60.13(h)(2). Hourly SO_2 emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities subject to the percent reduction requirements under §60.42c, the span value of the SO_2 CEMS at the inlet to the SO_2 control device shall be 125 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted, and the span value of the SO_2 CEMS at the outlet from the SO_2 control device shall be 50 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of §60.42c, the span value of the SO_2 CEMS at the outlet from the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) shall be 125 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emission rate by using Method 6B of appendix A of this part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according the Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO_2 input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B of appendix A of this part may be used in lieu of CEMS to measure SO_2 at the inlet or outlet of the SO_2 control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable SO_2 and CO_2 measurement train operated at the candidate location and a second similar train operated according to the procedures in §3.2 and the applicable procedures in section 7 of Performance Specification 2 of appendix B of this part. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to §60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, as described under §60.48c(f), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

§ 60.47c Emission monitoring for particulate matter.

(a) Except as provided in paragraphs (c), (d), (e), and (f) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under §60.43c shall install, calibrate, maintain, and operate a COMS for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system.

(b) All COMS for measuring opacity shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.06 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO_2 or PM emissions are not required to operate a CEMS for measuring opacity if they follow the applicable procedures under §60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS monitor instead of monitoring opacity must calibrate, maintain, and operate a CEMS, and record the output of the system, for PM emissions discharged to the atmosphere as specified in §60.45c(d). The CEMS specified in paragraph §60.45c(d) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(e) An affected facility that does not use post-combustion technology (except a wet scrubber) for reducing PM, SO_2 , or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur, and is operated such that emissions of CO to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS for measuring opacity. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section.

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in §60.58b(i)(3) of subpart Eb of this part.

(ii) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(iii) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. At least two data points per hour must be used to calculate each 1-hour average.

(iv) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(2) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(3) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(4) You must record the CO measurements and calculations performed according to paragraph (e) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(f) An affected facility that burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur and operates according to a written site-specific monitoring plan approved by the appropriate delegated permitting authority is not required to operate a COMS for measuring opacity. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard.

§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c, or §60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO_2 emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO_2 emission limits of §60.42c, or the PM or opacity limits of §60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) The owner or operator of each coal-fired, oil-fired, or wood-fired affected facility subject to the opacity limits under §60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period.

(d) The owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall submit reports to the Administrator.

(e) The owner or operator of each affected facility subject to the SO_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO_2 emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO_2 emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO_2 or diluent (O_2 or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c; and

(iii) The sulfur content of the oil.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO_2 standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42C to use fuel certification to demonstrate compliance with the SO_2 standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

(h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under §60.42c or §60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (TSD)
for a Part 70 Significant Source Modification and
a Part 70 Significant Permit Modification

Source Description and Location

Source Name:	APG, Inc. / KIK Custom Products
Source Location:	2700 Middlebury Street, 2730 Middlebury Street, 711 Middleton Run Road, and 2825 Middlebury Street, Elkhart, IN 46515-2988
County:	Elkhart
SIC Code:	7389
Operation Permit Renewal No.:	T 039-21106-00434
Operation Permit Issuance Date:	November 14, 2006
Significant Source Modification No.:	039-25992-00434
Significant Permit Modification No.:	039-26036-00434
Permit Reviewer:	Kimberly Cottrell

Public Notice Information

On May 2, 2008, the Office of Air Quality (OAQ) had a notice published in The Elkhart Truth in Elkhart, Indiana, stating that APG, Inc. / KIK Custom Products had applied for a significant modification to their Part 70 Operating Permit Renewal No. T 039-21106-00434 issued on November 14, 2006 to add four (4) aerosol can filling lines and associated equipment to their stationary liquid and aerosol can filling operation. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

KIK Comments and IDEM's Responses

On May 19, 2008, OAQ received comments from John Wingard, on behalf of APG, Inc. / KIK Custom Products. The summary of the comments and IDEM, OAQ responses, including changes to the permit (language deleted is shown in ~~strikeout~~ and language added is shown in **bold**) are as follows:

Company Comment 1: Correction to Facility Description

Section A.3(d)(3) and Section D.1 Emissions Unit Description (d)(3): Change (A) to "Five (5) closed top **mix / run** tanks."

IDEM Response 1:

IDEM has updated the facility description as follows:

(d) …
(3) Line 4 aerosol can filling line, constructed in 1989, which consists of:

(A) Five (5) closed top ~~mixing~~ **mix / run** tanks.
(B) …

Company Comment 2: VOC Emission Factors as Emission Limits

The emission factors should not be indicated as limits.

(a) Section D.1.1: Delete "VOC emissions shall not exceed 0.011 pounds of VOC per can crushed." and replace with "VOC emissions shall be calculated using an **emission factor** of 0.011 pounds of VOC per can crushed."

(b) If the emissions calculation equation from Section D.1.2 is not used in Section D.1.3(b), D.1.3(b) should be corrected to indicate "VOC emissions shall be calculated using the following **emission factors**:

(c) Section D.1.4: Subsection (b) should be corrected to indicate "VOC emissions shall be calculated using the following **emission factors**:

IDEM Response 2:

IDEM agrees with this change for the PSD Minor Limits in Conditions D.1.1, D.1.3 and D.1.4. The changes to Conditions D.1.3 and D.1.4 are detailed in IDEM Response 5. Condition D.1.1 is revised as follows:

D.1.1 VOC BACT Minor Limit - Scrap Can Processing Operations [326 IAC 8-1-6]

Pursuant to Title V Permit Renewal 039-21106-00434, issued on February 9, 2001, and revised by permit modification 039-26036-00434, the number of cans crushed in the Scrap Can Processing Operations shall be less than 4,500,000 per twelve (12) consecutive month period, with compliance determined at the end of each month. ~~VOC Emissions shall not exceed 0.011 pounds of VOC per can crushed.~~ **VOC emissions shall be calculated using an emission factor of 0.011 pounds of VOC per can crushed.** Therefore, VOC emissions shall be limited to less than 25 tons per year. Compliance with this condition will render the requirements of 326 IAC 8-1-6 (General Reduction Requirements) not applicable to the Scrap Can Processing Operations, constructed in 1994 and 1995.

Company Comment 3: VOC Emission Factor

The stated 0.03 pounds per pound of VOC liquid factor is incorrect (the correct factor is pounds of VOC per gallon of VOC liquid, not pounds and not VOC-containing liquid).

~~0.03 pounds per pound of VOC containing liquid.~~

0.03 pounds per gallon of VOC.

IDEM Response 3:

The references to the VOC emission rate have been updated throughout the permit as follows, and changes made to specific conditions are shown in subsequent IDEM Responses specific to those conditions:

0.03 pounds per ~~pound~~ **gallon** of VOC ~~containing liquid~~.

Company Comment 4: PSD BACT Requirements

(a) Sections D.1.2 and D.1.3: In order to streamline the permit, we agree to have the BACT requirements indicated in Section D.1.2 apply to Lines 1, 2 and 63 also so that Sections D.1.2 and D.1.3 can be combined and a single VOC emission limit applied to all existing lines (Lines 1-4, 50-58, 61-63).

If Sections D.1.2 and D.1.3 are not combined as suggested, the emissions calculation equation currently contained in Section D.1.2 should be removed as there is no longer an emissions limit in this Section that requires calculation of emissions. Also, the subsections in D.1.2 currently labeled as (b) through (f) should be relabeled as (a) through (e).

(b) Section D.1.8 (b): Should be deleted as there is no emission limit in Condition D.1.2.

(c) The quarterly report form on page 49 of 55 should be deleted because there is no emission limit in Condition D.1.2.

(d) The quarterly report forms should reflect the comments given above and be consolidated.

IDEM Response 4:

Paragraph (a) that includes the original 440 tpy limit that is BACT was inadvertently left out of the permit. The technical support document accurately shows what the intended changes. IDEM has revised the condition to insert the missing paragraph (a). Paragraphs (b) and (c) of Condition D.1.8 have been combined. Condition D.1.9 has been revised to clarify that the Quarterly Report required to document compliance with Condition D.1.3 shall also document compliance with Condition D.1.2(a). The changes to the permit are as follows:

D.1.2 PSD and VOC BACT Requirements - Lines 3, 4, 50-58 and 61-62 [326 IAC 2-2-3] [326 IAC 8-1-6]

(a) The gallons of VOC compounded and filled into containers per month; the number of cans filled with VOC propellant per month; and the number of cans filled with VOC that were crushed shall be limited such that the summation of the emissions using the equation below shall not exceed a VOC emissions limit of 440 tons per consecutive twelve-month period, with compliance determined at the end of each month according to the following equation:

VOC Emissions = [(gallons VOC compounded & filled/month) x (Ef, 0.03 lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (Ef, 0.0013 lbs VOC/can) + (# cans with VOC crushed/month) x (Ef, 0.0111 lbs VOC/can)]

D.1.8 Record Keeping Requirements

(a) …

(b) ~~To document compliance with Condition D.1.2, the Permittee shall maintain records in accordance with (1) through (5) below for Lines 3, 4, 50-58 and 61-62. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.1.2:~~

~~(1) The amount and VOC content of the volatile organic liquid (VOL) product filled. Records shall include material safety data sheets (MSDS), product formulation information, VOL compounded/filled and company product records necessary to verify the type and amount used;~~

~~(2) The total VOC compounded/filled for each month;~~

~~(3) The number/amount of cans filled with VOC propellant;~~

~~(4) The number/amount of VOC-containing cans crushed;~~

~~(5) The weight of VOC emitted for each month.~~

~~(c)~~ To document compliance with ~~Condition~~ **Conditions D.1.2 and** D.1.3, the Permittee shall maintain records in accordance with (1) through (5) below for Lines 1-4, 50-58 and 61-63. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in ~~Condition~~ **Conditions D.1.2 and** D.1.3:

(1) The amount and VOC content of the volatile organic liquid (VOL) product filled. Records shall include material safety data sheets (MSDS), product formulation information, VOL compounded/filled and company product records necessary to verify the type and amount used;

(2) The total VOC compounded/filled for each month;

(3) The number/amount of cans filled with VOC propellant;

(4) The number/amount of VOC-containing cans crushed;

(5) The weight of VOC emitted for each month.

~~(d)~~ **(c)** …

~~(e)~~ **(d)** …

~~(f)~~ **(e)** …

D.1.9 Reporting Requirements

(a) A quarterly summary of the information to document compliance with Conditions D.1.1, D.1.2**(a)**, D.1.3, D.1.4, D.1.5**(a)** and D.1.6 **(a) and (b)** shall be submitted to the address listed in Section C – General Reporting Requirements of this permit using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Quarterly Report required to document compliance with Condition D.1.3 shall also document compliance with Condition D.1.2(a).

~~INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT~~
~~OFFICE OF AIR QUALITY~~
~~COMPLIANCE DATA SECTION~~

~~Part 70 Quarterly Report~~

~~Source Name: APG, Inc. / KIK Custom Products – Indiana Plant~~
~~Source Address: 2730 Middlebury Street, Elkhart, Indiana 46516 & Contiguous Property~~

~~Mailing Address: P.O. Box 2988, Elkhart, Indiana 46515-2988~~
~~Part 70 Permit No.: T 039-21106-00434~~
~~Facility: Lines 3, 4, 50-58 and 61-62~~
~~Parameter: VOC emissions~~
~~Limit: 440 tons of VOC emissions per consecutive 12-month period, with compliance determined at the end of each month. VOC emissions are calculated using the following equation:~~

~~VOC Emissions = [(gallons VOC compounded & filled/month) x (0.03 lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (0.0013 lbs VOC/can) + (# cans with VOC crushed/month) x (0.0111 lbs VOC/can)]~~

~~YEAR: _____~~

~~**Month**~~	~~**VOC Emissions** (this month)~~	~~**VOC Emissions** (previous 11 months)~~	~~**VOC Emissions** (12 months total)~~
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

~~☐ No deviation occurred in this quarter.~~

~~☐ Deviations occurred in this quarter.~~
~~Deviation has been reported on: _____~~

~~Submitted By: _____~~

~~Title/Position: _____~~

~~Signature: _____~~

~~Date: _____~~

~~Phone: _____~~

~~Attach a signed certification to complete this report.~~

Company Comment 5: PSD Minor Limit

Section D.1.3: We request that, consistent with the current Title V permit, that the VOC emission limit in subsection (a) include the scrap can processing emissions for a total of 248.1 tons (instead of 223.1 tons) and that the emissions calculation equation currently included in Section D.1.2 (which includes scrap can processing emissions) be used as the emissions calculation equation in D.1.3(b).

IDEM Response 5:

IDEM agrees with this change. The PSD Minor Limits for the existing operations in Condition D.1.3 are modified as follows:

D.1.3 PSD Minor Limit - Lines 1-4, 50-58 and 61-63 [326 IAC 2-2]

Pursuant to permit modification 039-26036-00434 and 326 IAC 2-2, for all emission units constructed prior to 2008 (Lines 1-4, 50-58 and 61-63):

~~(a)~~ The gallons of VOC compounded and filled into containers per month and the number of cans filled with VOC propellant per month shall be limited such that the summation of the emissions using the equation below shall not exceed a VOC emissions limit of ~~223.10~~ **248.10** tons per consecutive twelve-month period, with compliance determined at the end of each month according to the following equation.

VOC Emissions = [(gallons VOC compounded & filled/month) x (**Ef, 0.03** lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (**Ef, 0.0013** lbs VOC/can) **+ (# cans with VOC crushed/month) x (Ef, 0.0111 lbs VOC/can)**]

~~(b) The VOC emission rates from Lines 1-4, 50-58 and 61-63 shall not exceed:~~

~~(1) 0.0013 pounds per can filled with VOC aerosol propellant.~~

~~(2) 0.03 pounds per pound of VOC containing liquid.~~

Compliance with this emission limit for Lines 1-4, 50-58, and 61-63, combined with the potential to emit VOC emissions from all other equipment constructed prior to 2008 will limit the potential to emit from this modification to less than two hundred fifty (250) tons of VOC per year and therefore will render the requirements of 326 IAC 2-2 not applicable to the existing source constructed prior to 2008.

Part 70 Quarterly Report

Facility:	Lines 1-4, 50-58 and 61-63 & Supporting Equipment
Parameter:	VOC emissions
Limit:	~~223.10~~ **248.10** tons of VOC emissions per consecutive 12-month period, with compliance determined at the end of each month. VOC emissions are calculated using the following equation:
VOC Emissions =	[(gallons VOC compounded & filled/month) x (**Ef,** 0.03 lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (**Ef,** 0.0013 lbs VOC/can) **+ (# cans with VOC crushed/month) x (Ef, 0.0111 lbs VOC/can)**]

D.1.4 PSD Minor Limit - Lines 5-8 [326 IAC 2-2]

Pursuant to source modification 039-25992-00434 and 326 IAC 2-2, for Lines 5-8:

~~(a)~~ The gallons of VOC compounded and filled into containers per month and the number of cans filled with VOC propellant per month shall be limited such that the summation of the emissions using the equation below shall not exceed a VOC emissions limit of 245.42 tons per consecutive twelve-month period, with compliance determined at the end of each month according to the following equation.

VOC Emissions = [(gallons VOC compounded & filled/month) x (**Ef, 0.03** lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (**Ef, 0.0013** lbs VOC/can) **+ (# cans with VOC crushed/month) x (Ef, 0.0111 lbs VOC/can)**]

~~(b) The VOC emission rates from Lines 5-8 shall not exceed:~~

~~(1) 0.0013 pounds per can filled with VOC aerosol propellant.~~

~~(2) 0.03 pounds per pound of VOC containing liquid.~~

Compliance with this emission limit for Lines 5-8 combined with the potential to emit VOC emissions from all other equipment associated with this modification will limit the potential to emit from this modification to less than two hundred fifty (250) tons of VOC per year and therefore will render the requirements of 326 IAC 2-2 not applicable to the modification approved under Source Modification No.: 039-25992-00434.

Part 70 Quarterly Report

Facility:	Lines 5-8
Parameter:	VOC emissions
Limit:	245.42 tons of VOC emissions per consecutive 12-month period, with compliance determined at the end of each month. VOC emissions are calculated using the following equation:
VOC Emissions =	[(gallons VOC compounded & filled/month) x (**Ef,** 0.03 lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (**Ef,** 0.0013 lbs VOC/can) **+ (# cans with VOC crushed/month) x (Ef, 0.0111 lbs VOC/can)**]

Company Comment 6: HAP Minor Limit

Section D.1.6: Subsection (c) should be corrected to indicate "The HAP emissions from Lines 1-8, 50-58 and 61-63 shall be calculated using an emission factor of (0.03 pounds per gallon of HAP containing VOC) x (weight % HAP / weight % VOC)."

IDEM Response 6:

The permit is updated as follows:

D.1.6 HAP Minor Limit - Lines 1-8, 50-58 and 61-63 [326 IAC 2-4.1]

The gallons of HAP compounded and filled into containers per month shall be limited such that the summation of the emissions using the equation below shall not exceed the HAP emission limits in paragraphs (~~1~~**a**) and (~~2~~**b**) above:

HAP Emissions = ~~(gallons HAP compounded & filled/month) x (lbs HAP/gal HAP)~~ **[(Ef, 0.03 pounds per gallon of HAP containing VOC) x (weight % HAP / weight % VOC)]**

~~(c) The HAP emission rates from Lines 1-8, 50-58 and 61-63 shall not exceed 0.03 pounds per gallon of HAP containing liquid.~~

Part 70 Quarterly Report

Facility: Lines 1-8, 50-58 and 61-63 & Supporting Equipment
Parameter: Single HAP Emissions
Limit: 9.5 tons of any single HAP per consecutive 12-month period, with compliance determined at the end of each month. HAP emissions are calculated using the following equation:

HAP Emissions = ~~[(gallons HAP compounded & filled/month) x (0.03 lbs HAP/gal HAP)]~~ **[(Ef, 0.03 pounds per gallon of HAP containing VOC) x (weight % HAP / weight % VOC)]**

Part 70 Quarterly Report

Facility: Lines 1-8, 50-58 and 61-63 & Supporting Equipment
Parameter: Total HAP Emissions
Limit: 23.75 tons of ~~any single HAP~~ **total HAP emissions** per consecutive 12-month period, with compliance determined at the end of each month. HAP emissions are calculated using the following equation:

HAP Emissions = ~~[(gallons HAP compounded & filled/month) x (0.03 lbs HAP/gal HAP)]~~ **[(Ef, 0.03 pounds per gallon of HAP containing VOC) x (weight % HAP / weight % VOC)]**

Company Comment 7: HAP Quarterly Report

The Quarterly Report form on page 53 of 55 should indicate the limit of 23.75 tons is for total HAPs instead of any single HAP.

IDEM Response 7:

The corrections to the reporting form are noted in the previous comment response.

Company Comment 8: Technical Support Document

(a) TSD: State Rule Applicability Determination, 326 IAC 2-2 (PSD): Subsection (b) (C) (can crushing operation related to Lines 5-8 shall be conducted off-site) on p. 8 of 32 should be deleted.

(b) Proposed Changes: There is an error in the wording for Condition D.1.2 on page 20 of 32 in that it references the 440 ton limit that was removed from the permit.

(c) TSD should reflect permit changes based on comments provided above, including correcting the 0.03 pounds per pound of VOC containing liquid emission factor to “0.03 pounds VOC per gallon of VOC”, correcting the HAP emission factor to “(0.03 pounds per gallon of HAP containing VOC) x (weight % HAP / weight % VOC)” and not indicating the emission factors as limits (see State Rule Applicability Determination p. 8 of 32, Major Sources of Hazardous Air Pollutants p. 9 of 32, and Proposed Changes p.20-22 of 32).

IDEM Response 8:

(a) The VOC BACT Requirements for Lines 5-8 do not require that the can crushing operations for these lines be conducted offsite. Changes to Condition D.1.5 are detailed in IDEM Response 9 below.

(b) Changes to Condition D.1.2 are detailed in IDEM Response 4 above.

(c) Changes to Condition D.1.6 are detailed in IDEM Response 6 above.

The IDEM does not amend the Technical Support Document (TSD). The TSD is maintained to document the original review. This addendum to the TSD is used to document comments, responses to comments and changes made from the time the permit was drafted until a final decision is made.

Company Comment 9: VOC BACT

Section D.1.5: Subsection (a) should be corrected to indicate "VOC emissions shall be calculated using the following **emission factors**:

IDEM Response 9:

The emission limits in Condition D.1.5 were established as Best Available Control Technology for VOC emissions from Lines 5-8. IDEM has determined that including the equation and emission factors from Condition D.1.2 as part of the BACT requirements does not change the VOC BACT evaluation because the VOC BACT determination was proposed as an emission limit based on the emission rates established by test data for the existing lines. Changing the emission limits to emission factors does not change the BACT determination and the BACT requirements are just as stringent now as they were in the original determination that was placed on public notice.

The VOC BACT Requirements for Lines 5-8 do not require that the can crushing operations for these lines be conducted offsite; however, the emission rate for can crushing was not included as a limit. IDEM has determined that including the can crushing emission limit does not change the VOC BACT evaluation of 245.42 tons per consecutive twelve-month period.

<u>Step 5: Selection of VOC BACT for 326 IAC 8-1-6 is revised as follows:</u>

Pursuant to 326 IAC 8-1-6 (New Facilities; General Reduction Requirements), the permittee shall comply with the following BACT requirements for VOC for Lines 5, 6, 7 and 8:

(a) The gallons of VOC compounded and filled into containers per month and the number of cans filled with VOC propellant per month shall be limited such that the summation of the emissions using the equation below shall not exceed a VOC emissions limit of 245.42 tons per consecutive twelve-month period, with compliance determined at the end of each month according to the following equation.

VOC Emissions = [(gallons VOC compounded & filled/month) x (Ef, 0.03 lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (Ef, 0.0013 lbs VOC/can) + (# cans with VOC crushed/month) x (Ef, 0.0111 lbs VOC/can)]

(b) Through-the-valve pressure filling method shall be utilized at all times.

(c) Open bowl liquid filling reservoirs shall be enclosed wherever possible.

(d) Utilize raw materials having the lowest feasible VOC content and vapor pressure, whenever possible.

(e) Continue movement toward consumer products that contain lower levels of VOCs and lower VOC composite partial vapor pressures.

Paragraph (a) of Condition D.1.5 is modified as follows:

(a) The gallons of VOC compounded and filled into containers per month and the number of cans filled with VOC propellant per month shall be limited such that the summation of the emissions using the equation below shall not exceed a VOC emissions limit of 245.42 tons per consecutive twelve-month period, with compliance determined at the end of each month according to the following equation.

VOC Emissions = [(gallons VOC compounded & filled/month) x (Ef, 0.03 lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (Ef, 0.0013 lbs VOC/can) + (# cans with VOC crushed/month) x (Ef, 0.0111 lbs VOC/can)]

~~(a) The VOC emission rates from Lines 5-8 shall not exceed:~~

~~(1) 0.0013 pounds per can filled with VOC aerosol propellant.~~

~~(2) 0.03 pounds per pound of VOC containing liquid.~~

IDEM Contact

Questions regarding this proposed permit can be directed to:

Kimberly Cottrell
Indiana Department Environmental Management
Office of Air Quality
100 North Senate Avenue
MC 61-53, Room 1003
Indianapolis, Indiana 46204-2251
Toll free (within Indiana): 1-800-451-6027 extension 3-0870
Or dial directly: (317) 233-0870
kcottrel@idem.in.gov

Please refer to Significant Source Modification No.: 039-25992-00434 and Significant Permit Modification No.: 039-26036-00434 in all correspondence.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD)
for a Part 70 Significant Source Modification and
a Part 70 Significant Permit Modification

Source Description and Location

Source Name:	APG, Inc. / KIK Custom Products
Source Location:	2700 Middlebury Street, 2730 Middlebury Street, 711 Middleton Run Road, and 2825 Middlebury Street, Elkhart, IN 46515-2988
County:	Elkhart
SIC Code:	7389
Operation Permit Renewal No.:	T 039-21106-00434
Operation Permit Issuance Date:	November 14, 2006
Significant Source Modification No.:	039-25992-00434
Significant Permit Modification No.:	039-26036-00434
Permit Reviewer:	Kimberly Cottrell

Source Definition

This liquid and aerosol can filling operation consists of four (4) plants:

(a) Plant 1 (APG / KIK Custom Products – Indiana Main Plant) is located at 2730 Middlebury Street, Elkhart, IN 46516;

(b) Plant 2 (APG / KIK Custom Products – Indiana North Plant) is located at 711 Middleton Run Road, Elkhart, Indiana 46516; and

(c) Plant 3 (APG / KIK Custom Products – Indiana South Plant) is located at 2825 Middlebury Street, Elkhart, Indiana 46516.

(d) Plant 4 (APG / KIK Custom Products – Indiana Distribution Center) is located at 2700 Middlebury Street, Elkhart, Indiana 46516.

Since all the four (4) plants are located on contiguous or adjacent properties, belong to the same industrial grouping, and under common control of the same entity, they will be considered one (1) major source as determined in the Part 70 permit, T 039-21106-00434, issued on November 14, 2006, and Significant Source Modification T 039-26036-00434.

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. T 039-21106-00434 on November 14, 2006. The source has since received the following approvals:

Interim Significant Source Modification No. T 039-25990I-00434, issued on February 14, 2008.

County Attainment Status

The source is located in Elkhart County. The following attainment status designations are applicable to Elkhart County:

Table 1: County Attainment Status

Pollutant	Designation
CO	Unclassifiable or attainment effective November 15, 1990.
Lead (Pb)	Not designated.
NO_2	Cannot be classified or better than national standards.
O_3	Attainment effective July 19, 2007, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
SO_2	Better than national standards.

[1] Attainment effective October 18, 2000, for the 1-hour ozone standard for the South Bend-Elkhart area, including Elkhart County, and is a maintenance area for the 1-hour National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour standard was revoked effective June 15, 2005.
Unclassifiable or attainment effective April 5, 2005, for $PM_{2.5}$.

Note: On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to redesignate Allen, Clark, Elkhart, Floyd, LaPorte, and St. Joseph as attainment for the 8-hour ozone standard.

(a) Volatile organic compounds (VOC) and Nitrogen Oxides (NO_X) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NO_X emissions are considered when evaluating the rule applicability relating to ozone. Elkhart County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions and NO_X emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(b) Elkhart County has been classified as attainment for $PM_{2.5}$. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for $PM_{2.5}$ emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for $PM_{2.5}$ emissions, it has directed states to regulate PM_{10} emissions as a surrogate for $PM_{2.5}$ emissions.

(c) Elkhart County has been classified as attainment or unclassifiable for CO, Lead (Pb), NO_2, PM_{10}, and SO_2. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

Source Status Evaluation

2006 Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2006 OAQ emission data.

Table 2: 2006 Actual Emissions	
Pollutant	**Actual Emissions** (ton/yr)
CO	0
NO_X	0
PM	0
PM_{10}	0
$PM_{2.5}$	0
SO_2	0
VOC	169
HAP	none reported

Past Actual VOC Emissions

The following table shows the actual emissions from the source. This information reflects the 2006 OAQ emission data.

Table 3: Past Actual VOC Emissions	
Pollutant	**Actual Emissions** (ton/yr)
2006	169
2005	176
2004	128
2003	112
2002	70
2001	55
2000	57
1999	104
1998	126
1997	126
1996	182
1995	160

(a) Review of past actual emissions from 1995 through 2006 demonstrated that the actual VOC emissions from the source was less than 250 tons per year.

(b) The source has opted to limit VOC emissions to less than 250 tons per year; therefore, this existing source is not a major stationary source, under PSD (326 IAC 2-2), because no regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by APG, Inc. / KIK Custom Products on January 25, 2008, relating to add four (4) aerosol can filling lines and associated equipment to their stationary liquid and aerosol can filling operation.

The proposed expansion will consist of adding the following emission units:

(a) Lines 5-8 aerosol can filling lines, permitted in 2008, which consist of:

(A) Four (4) aerosol can filling lines designated as Line 5, 6, 7 and 8 using Through the Valve (TTV) propellant filling technology.

(B) Seventeen (17) compounding tanks including:

(i) Twelve (12) 6,000 gallon batch/run tanks.

(ii) Five (5) pre-mix tanks consisting of:

(a) One (1) 2,000-gallon tank.

(b) Two (2) 1,500 gallon tanks.

(c) One (1) 1,000-gallon tank.

(d) One (1) 500 gallon tank.

(C) Additional supporting operations including:

(i) one (1) spray-out booth.

(ii) five (5) bulk propellant tanks.

(iii) four (4) single-head recharge gassers.

(iv) secondary packaging operations.

(v) labelers using hot melt adhesives.

(vi) can and carton coders.

(b) One (1) natural gas-fired boiler, identified as B-1, permitted in 2008, and with a maximum heat input capacity of 16.70 MMBtu/hr.

The VOC emissions from this modification will be limited to less than 250 tons per year. Because the new equipment will be less than the major source thresholds, the Prevention of Significant Deterioration (PSD) rules under 326 IAC 2-2 will not be applicable.

Enforcement Issues

There are no pending enforcement actions.

Stack Summary

The following table summarizes the stacks that correspond to the new emission units.

Table 4: Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (^{0}F)
S-5	Line 5	35	2.92	12000	75
S-6	Line 6	35	2.92	12000	75
S-7	Line 7	35	2.92	12000	75
S-8	Line 8	35	2.92	12000	75

Table 4: Stack Summary					
Stack ID	**Operation**	**Height** (ft)	**Diameter** (ft)	**Flow Rate** (acfm)	**Temperature** (^{0}F)
SF-5	Line 5	35	1.17	3000	75
SF-6	Line 6	35	1.17	3000	75
SF-7	Line 7	35	1.17	3000	75
SF-8	Line 8	35	1.17	3000	75
ST-5	Line 5	35	2.00	5000	75
ST-6	Line 6	35	2.00	5000	75
ST-7	Line 7	35	2.00	5000	75
ST-8	Line 8	35	2.00	5000	75
B-1	Boiler B-1	40	2.50	6000	400

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency."

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Table 5: PTE Before Controls of the Modification	
Pollutant	**Potential To Emit** (ton/yr)
CO	16.54
NO_X	20.44
PM	1.51
PM_{10}	1.51
SO_2	0.29
VOC	617.98
HAP Hexane	0.35

This source modification is subject to 326 IAC 2-7-10.5(f)(4) because the potential to emit volatile organic compounds (VOC) is greater than twenty-five (25) tons per year before control. Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d), because the modification requires new emission limitations and significant changes in existing monitoring Part 70 permit terms and conditions.

Permit Level Determination - PSD

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 source modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Table 6: Limited Potential to Emit – Existing Source (Pre-2008) (ton/yr)

Process / Emission Unit	CO	NO_X	PM	PM_{10}	SO_2	VOC
Pre-2008 Line (1-4, 51-58, 61-63) & Miscellaneous Equipment	0	0	0	0	0	223.10
Scrap Can Processing (Crushing)	0	0	0	0	0	<25
Existing Boilers (M-1, M-2, N-1, N-2, and S-2)	12.52	14.90	1.13	1.13	0.09	0.82
Emergency Diesel Fire Pump - 170 HP (fuel oil)	0.23	1.02	0.03	0.03	0.0017	0.03
Total for Existing Operations (Pre-2008)	**12.75**	**15.92**	**1.16**	**1.16**	**0.09**	**<250**
Major Source Threshold	250	250	250	250	250	250

The existing stationary source, consisting of all emission units constructed prior to 2008, is not major because the potential to emit is limited to less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Table 7: Potential to Emit – 2008 Modification (ton/yr)

Process / Emission Unit	CO	NO_X	PM	PM_{10}	SO_2	VOC
Aerosol Filling Lines 5–8 (Compounding and Filling)	0	0	0	0	0	245.42
Volatile Organic Liquid and Propellant Storage Tanks*	0	0	0	0	0	<4
Spray Out Booth**	0	0	0	0	0	Included with Lines5–8
Boiler B-1 (Natural Gas)	6.02	7.17	0.55	0.55	0.04	0.39
SVE Remediation System (increase)	0	0	0	0	0	0.01
Total for 2008 Modification	**6.02**	**7.17**	**0.55**	**0.55**	**0.04**	**<250**
Major Source Threshold	250	250	250	250	250	250

The emissions from Lines 5-8 include supporting operations.
* Based on increased usage of existing tanks.
** Less than 15 lb/day and accounted for in emission factors for propellant filling.

This modification to an existing minor stationary source is not major because the emissions increases are less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Federal Rule Applicability Determination

The following federal rules are applicable to the source due to this modification:

(a) Boiler B-1 is subject to the New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR 60, Subpart Dc), which is incorporated by reference as 326 IAC 12. Boiler B-1 is subject to the following portions of 40 CFR 60, Subpart Dc.

(1) 40 CFR 60.40c,
(2) 40 CFR 60.41c,
(3) 40 CFR 60.42c,
(4) 40 CFR 60.43c,
(5) 40 CFR 60.44c,
(6) 40 CFR 60.45c,
(7) 40 CFR 60.46c,
(8) 40 CFR 60.47c, and
(9) 40 CFR 60.48c.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) applicable to this proposed modification.

(c) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The proposed modification will not add any control devices for Lines 5-8; therefore, the requirements of 40 CFR Part 64, CAM, are not applicable to any of the new and modified emission units as part of this modification.

State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

326 IAC 2-2 (PSD)

(a) Since the unrestricted potential to emit of the existing source (Lines 1-4, 50-58, and 61-63 and all other equipment constructed prior to 2008) is greater than two hundred fifty (250) tons of VOC per year, this source has elected to limit the potential to emit for Lines 1-4, 50-58, and 61-63 as follows:

(A) The gallons of VOC compounded and filled into containers per month and the number of cans filled with VOC propellant per month shall be limited such that the summation of the emissions using the equation below shall not exceed a VOC emissions limit of 223 tons per consecutive twelve-month period, with compliance determined at the end of each month according to the following equation.

VOC Emissions = [(gallons VOC compounded & filled/month) x (lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (lbs VOC/can)]

(B) VOC emissions shall be calculated using the following emission factors:

(1) 0.0013 pounds per can filled with VOC aerosol propellant.

(2) 0.03 pounds per pound of VOC containing liquid.

Compliance with this emission limit for Lines 1-4, 50-58, and 61-63, combined with the potential to emit VOC emissions from all other equipment constructed prior to 2008 will limit the potential to emit from this modification to less than two hundred fifty (250) tons of VOC per year and therefore will render the requirements of 326 IAC 2-2 not applicable to the existing source constructed prior to 2008.

(b) Since the unrestricted potential to emit of this modification is greater than two hundred fifty (250) tons of VOC per year, this source has elected to limit the potential to emit of this modification as follows for Lines 5-8:

(A) The gallons of VOC compounded and filled into containers per month and the number of cans filled with VOC propellant per month shall be limited such that the summation of the emissions using the equation below shall not exceed a VOC emissions limit of 242.5 tons per consecutive twelve-month period, with compliance determined at the end of each month according to the following equation.

VOC Emissions = [(gallons VOC compounded & filled/month) x (lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (lbs VOC/can)]

(B) VOC emissions shall be calculated using the following emission factors:

(1) 0.0013 pounds per can filled with VOC aerosol propellant.

(2) 0.03 pounds per pound of VOC containing liquid.

(C) Can crushing operations related to Lines 5-8 shall be conducted off site.

Compliance with this emission limit for Lines 5-8 combined with the potential to emit VOC emissions from all other equipment associated with this modification will limit the potential to emit from this modification to less than two hundred fifty (250) tons of VOC per year and therefore will render the requirements of 326 IAC 2-2 not applicable to the modification approved under Source Modification No.: 039-25992-00434.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The operation of Lines 1-8, 50-58, and 61-63 and supporting operations will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply to the modification and the entire source is a minor source for HAP.

Lines 1-8, 50-58, and 61-63 (including miscellaneous equipment and scrap can processing operations) shall be limited to:

(a) less than nine and five tenths (9.5) tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month. This usage limit is required to limit the potential to emit of each HAP to less than ten (10) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) less than twenty-three and seventy-five hundredths (23.75) tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month. This usage limit is required to limit the potential to emit of total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The gallons of HAP compounded and filled into containers per month shall be limited such that the summation of the emissions using the equation below shall not exceed the HAP emission limits in paragraphs (1) and (2) above:

HAP Emissions = (gallons HAP compounded & filled/month) x (lbs HAP/gal HAP)

(c) HAP emissions shall be calculated using an emission factors of 0.03 pounds per gallon of HAP containing liquid.

Compliance with these emission limits for Lines 1-8, 50-58, and 61-63 combined with the potential to emit HAP emissions from all other equipment associated with this modification will limit the potential to emit from this modification to less than ten (10) tons per year of any single HAP and less than twenty-five (25) tons per year of any combination of HAPs. Therefore the requirements of 326 IAC 2-4.1 and the Clean Air Act Section 112 are not applicable to the entire source.

326 IAC 2-6 (Emission Reporting)
Since this source is required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, this source is subject to 326 IAC 2-6 (Emission Reporting). In accordance with the compliance schedule in 326 IAC 2-6-3(b)(1), an emission statement must be submitted annually. The first report is due no later than July 1, 2007, and subsequent reports are due every year thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c).

326 IAC 6-2-4 (Particulate Emission Limitations for Source of Indirect Heating)
Pursuant to 326 IAC 6-2-4, the Boiler B-1 shall be limited by the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:
Pt = pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input.
Q = total source maximum operating capacity

Table 8: 326 IAC 6-2-4 Evaluation

Boilers	**Rating** (MMBtu/hr)	**Q** (MMBtu/hr)	**Pt** (lb/MMBtu)
Existing Boilers (M-1, M-2, N-1, N-2, and S-2)	*variable*	*34.71*	*variable*
Boiler B-1	16.70	51.41	0.39

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The provisions of 326 IAC 6-3-2(d) (Particulate Emission Limitations for Manufacturing Processes) do not apply to the spray-out booth because particulate matter (PM) will not be emitted from this operation.

326 IAC 8 (Volatile Organic Compounds Rules)
The provisions of 326 IAC 8 (Volatile Organic Compounds Rules) do not apply to the spray-out booth because the potential to emit VOC is less than fifteen (15) pounds per day.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
Each of the four lines will have potential VOC emission in excess of 25 tons per year; therefore, a Best Available Control Technology (BACT) analysis under 326 IAC 8-1-6 was performed for the new equipment. The detailed BACT analysis is included in Appendix B of this Technical Support Document. The BACT is established for this modification as follows:

(a) The VOC emission rates from Lines 5-8 shall not exceed:

(1) 0.0013 pounds per can filled with VOC aerosol propellant.

(2) 0.03 pounds per pound of VOC containing liquid.

(b) Through-the-valve (TTV) pressure filling method shall be utilized at all times.

(c) Open bowl liquid filling reservoirs shall be enclosed wherever possible.

(d) Utilize raw materials having the lowest feasible VOC content and vapor pressure, whenever possible.

(e) Continue movement toward consumer products that contain lower levels of VOCs and lower VOC composite partial vapor pressures.

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.

<u>Compliance Determination Requirements</u>
Compliance with the following limits shall demonstrate compliance with 326 IAC 8-1-6 (BACT) for Lines 5-8, including supporting operations such as the batch tanks and pre-mix tanks.

(a) Through-the-valve filling method shall be utilized at all times.

(b) Open bowl liquid filling reservoirs shall be enclosed wherever possible.

Compliance with the VOC content limits shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the VOL manufacturer, or by using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit Renewal No. T 039-21106-00434. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Change No. 1 All references to IDEM, OAQ's mailing address have been revised as follows:

Indiana Department of Environmental Management
Office of Air Quality
100 North Senate Avenue, ~~P.O. Box 6015~~
Indianapolis, Indiana ~~46206-6015~~ **46204-2251**

Change No. 2 The IDEM address has been updated throughout the permit as follows to include the mail code specific to each section of the Office of Air Quality:

Technical Support and Modeling Section:	**MC 61-50, IGCN 1003**
Asbestos Section:	**MC 61-52, IGCN 1003**
Compliance Branch:	**MC 61-53, IGCN 1003**
Air Compliance Section:	**MC 61-53, IGCN 1003**
Compliance Data Section:	**MC 61-53, IGCN 1003**
Permits Branch:	**MC 61-53, IGCN 1003**

Change No. 3 All references to the IDEM, OAQ, Compliance Section telephone number have been revised as follows: ~~317-233-5674~~ **317-233-0178**. All references to the IDEM, OAQ, Compliance Section facsimile number have been revised as follows: ~~317-233-5967~~ **317-233-6865**.

Change No. 4 All references to "This permit" have been replaced with "The Operating Permit Renewal,

Change No. 5 To minimize future amendments to the issued Part 70 Permits, the OAQ decided to delete the name and/or title of the Responsible Official (RO) in Condition A.1, General Information, of the permit. However, OAQ will still be evaluating if a change in RO meets the criteria specified in 326 IAC 2-7-1(34).

Change No. 6 Elkhart County is now considered Attainment for all criteria pollutants; therefore, Condition A.1 to show the correct status.

The revised Condition A.1 is as follows:

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

The Permittee owns and operates a stationary liquid and aerosol can filling operation.

~~Responsible Official: Regional General Manager~~

Source Address:	**2700 Middlebury Street,** 2730 Middlebury Street, ~~Elkhart, IN 46516 and~~ 711 Middleton Run Road, ~~Elkhart, IN 46516,~~ and 2825 Middlebury Street, Elkhart, IN, 46516
Mailing Address:	P.O. Box 2988, Elkhart, Indiana, 46515-2988
General Source Phone Number:	(574) 295-0000
SIC Code:	7389
County Location:	Elkhart
Source Location Status:	~~Nonattainment for 8-hour ozone~~ Attainment for all ~~other~~ criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD ~~and Emission Offset~~ Major Source, Section 112 of the Clean Air Act

Change No. 7 The Part 70 Source Definition in Condition A.2 has been updated to include the address for the Indiana Distribution Center as Plant 4. Additionally, the Source Address in Condition A.1 was updated above to include the address for Plant 4.

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

This liquid and aerosol can filling operation consists of ~~three (3)~~ **four (4)** plants:

(a) Plant 1 (APG / KIK Custom Products – Indiana Main Plant) is located at 2730 Middlebury Street, Elkhart, IN 46516;

(b) Plant 2 (APG / KIK Custom Products – Indiana North Plant) is located at 711 Middleton Run Road, Elkhart, Indiana 46516; and

(c) Plant 3 (APG / KIK Custom Products – Indiana South Plant) is located at 2825 Middlebury Street, Elkhart, Indiana 46516.

(d) Plant 4 (APG / KIK Custom Products – Indiana Distribution Center) is located at 2700 Middlebury Street, Elkhart, Indiana 46516.

Since all the ~~three (3)~~ **four (4)** plants are located on contiguous or adjacent properties, belong to the same industrial grouping, and under common control of the same entity, they will be considered one (1) major source as determined in the Part 70 permit, ~~T 039-6875-00434, issued on February 9, 2001~~ **T 039-21106-00434, issued on November 14, 2006, and Significant Source Modification T 039-26036-00434**.

Change No. 8 The emission unit descriptions in Condition A.3 and in Section D.1 have been updated as follows to include the new emission units. Additionally, all emission unit descriptions have been updated to maintain consistency.

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

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

~~(c)~~ **(a)** Scrap Can Processing Operations including automatic and manual devices used to recover contents and allow recycling of scrap metal from aerosol cans from the production operations that are unusable, constructed in 1994 and 1995 unless otherwise indicated below. The manual devices utilize add-on canisters of activated carbon for VOC emission control. ~~The capacity of the scrap can processing operations is limited by permit to less than 4,545,000 scrap cans processed per year.~~

(b) One (1) natural gas-fired boiler, identified as B-1, permitted in 2008, and with a maximum heat input capacity of 16.70 MMBtu/hr. Boiler B-1 is an affected source under the Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [326 IAC 12 and 40 CFR Part 60, Subpart Dc].

~~(a)~~ **(c)** VOC-containing Propellant Handling Operations including bulk and smaller container unloading, storage, transfer and filling into aerosol product containers, constructed in 1994 and 1995 **and 2008** unless otherwise indicated below. The source has ~~seven (7)~~ **eleven (11)** aerosol product production lines~~ with a total capacity of 420 million aerosol cans per year~~.

~~(b)~~ **(d)** VOC-containing Liquid Handling Operations including bulk and smaller container unloading, storage, transfer, mixing, and filling into liquid and aerosol product containers ~~with a maximum capacity of 674,915,000 pounds per year of VOC-containing liquids, constructed in 1994 and 1995 unless otherwise indicated below~~. The source has nine (9) liquid product filling lines in addition to the ~~seven (7)~~ **eleven (11)** aerosol product filling lines and all ~~sixteen (16)~~ **twenty (20)** lines involve VOC-containing liquid handling.

The following lines are used in the VOC-containing propellant handling, VOC-containing liquid handling and scrap can processing operations described above:

~~(8) Lines 1 and 2, which consist of open and closed mixing tanks and product and propellant fillers. These lines were constructed in 1976.~~

(1) Lines 1 and 2 aerosol can filling lines, constructed in 1976, which consist of:

(A) Open and closed mixing tanks.

(B) Product and propellant fillers.

~~(1) Line 3, which consist of one (1) closed bowl liquid product filler and one (1) non-VOC propellant filler. This line was constructed in 1989.~~

(2) Line 3 aerosol can filling line, constructed in 1989, which consists of:

(A) Two (2) closed bowl liquid product filler.

(B) Two (2) non-VOC propellant filler.

~~(2) Line 4, which consists of four (4) closed top mixing tanks, one (1) closed bowl and two (2) portable liquid product fillers, two (2) UTC VOC propellant fillers, two (2) VOC propellant pressure fillers, and two (2) non-VOC propellant fillers. This line was constructed in 1989.~~

(3) Line 4 aerosol can filling line, constructed in 1989, which consists of:

(A) Five (5) closed top mix/run tanks.

(B) One (1) closed bowl liquid product fillers.

(C) Two (2) portable liquid product fillers.

(D) Two (2) UTC VOC propellant fillers.

(E) Two (2) VOC propellant pressure fillers.

(F) Two (2) non-VOC propellant fillers.

(4) Lines 5-8 aerosol can filling lines, permitted in 2008, which consist of:

(A) Four (4) aerosol can filling lines using Through the Valve (TTV) propellant filling technology.

(B) Seventeen (17) compounding tanks including:

(i) Twelve (12) 6,000 gallon batch/run tanks.

(ii) Five (5) pre-mix tanks consisting of:

(a) One (1) 2,000-gallon tank.

(b) Two (2) 1,500 gallon tanks.

(c) One (1) 1,000-gallon tank.

(d) One (1) 500 gallon tank.

~~(3)~~ **(5)** Line 50 **aerosol can filling line**, **constructed in 1994,** an aerosol can filling line which is located at the Indiana South Plant.

~~(4) Lines 51 through 58, which consists of eight (8) container filling and packaging operations and includes seven (7) mixing/batch tanks, ten (10) liquid closed bowl fillers, one (1) liquid open bowl filler, and two (2) tube fillers. These lines are only used in the VOC-containing liquid handling operations.~~

(6) Lines 51 through 58 liquid can filling lines, constructed in 1994, which consists of:

(A) Eight (8) container filling and packaging operations.

(B) Seven (7) mixing/batch tanks.

(C) Ten (10) liquid closed bowl fillers.

(D) One (1) liquid open bowl filler.

(E) Two (2) tube fillers.

These lines are only used in the VOC-containing liquid handling operations.

~~(5) Line 61, which consists of four (4) closed top mixing tanks, two (2) closed liquid product fillers, one (1) UTC propellant filler and one (1) pressure propellant filler. This line was constructed in 1993. This line is only used in the VOC-containing propellant handling and VOC-containing liquid handling operations.~~

(7) Line 61 aerosol can filling line, constructed in 1993, which consists of:

(A) Four (4) closed top mixing tanks.

(B) Two (2) closed liquid product fillers.

(C) One (1) UTC propellant filler.

(D) One (1) pressure propellant filler.

This line is only used in the VOC-containing propellant handling and VOC-containing liquid handling operations.

~~(6)~~ **(8)**—Line 62 **liquid can filling lines**, **constructed in 1993,** which consists of**:**

(A) Two (2) closed top mixing tanks.

(B) One ~~one~~ (1) closed bowl liquid product filler.

~~This line was constructed in 1993.~~ This line is only used in the VOC-containing liquid handling operations only.

~~(7) Line 63, which consists of open and closed mixing tanks and product and propellant fillers.~~

(9) Lines 63 aerosol can filling lines, constructed in 1997, which consists of:

(A) Open and closed mixing tanks.

(B) Product and propellant fillers.

~~(d)~~ **(e)** APG, Inc. / KIK Custom Products – Indiana Main and North Plant facilities miscellaneous equipment, constructed in 1994 and 1995 **and 2008**, include**:**

(1) Thirty~~ thirty~~-six (36) bulk VOC and non-VOC liquid storage tanks**.**

(2) Twenty (20)~~, fifteen (15)~~ bulk VOC and non-VOC propellant storage tanks**.**

(3) Seven~~, seven~~ (7) pre-mix tanks**.**

(4) Seven~~, seven~~ (7) run/storage tanks**.**

(5) Two~~, two~~ (2) surge tanks for compounding areas**.**

(6) Four (4)~~, three~~ spray-out booths**.**

(7) Nine (9)~~, five (5)~~ single-head recharge gassers**.**

(8) Secondary~~, secondary~~ packaging operations**.**

(9) Labelers~~, labelers~~ using hot melt adhesives**.**

(10) Can~~, and can~~ and carton coders.

~~(e)~~ **(f)** APG, Inc. / KIK Custom Products – Indiana South Plant facilities miscellaneous equipment, constructed in 1994, include**:**

(1) Twenty~~ twenty~~-eight (28) VOC and non-VOC liquid pre-mix, run and storage tanks**.**

(2) **Two**~~; two~~ (2) VOC propellant storage tanks**.**

(3) **Can**~~, and can~~ and carton coders.

~~(f)~~ **(g)** Volatile Organic Liquid (VOL) Storage Tanks:

(1) Five (5) VOL storage tanks, constructed after July 23, 1984, identified as A1, A6, A7, A12 and A13, with a storage capacity of 15,000 gallons, each;

(2) One (1) VOL storage tank, constructed after July 23, 1984, identified as P21, with a storage capacity of 12,000 gallons;

(3) ~~One (1) VOL storage tank, constructed after July 23, 1984, identified as P23, with a storage capacity of 12,500 gallons;~~

~~(4)~~ Two (2) VOL storage tanks, constructed after July 23, 1984, identified as P18 and P20, with a storage capacity of 18,000 gallons, each;

~~(5) One (1) VOL storage tank, constructed before May 19, 1978, identified as P1A, with a storage capacity of 25,000 gallons;~~

~~(6)~~ **(4)** Two (2) VOL storage tanks, constructed after May 19, 1978 and before July 23, 1984, identified as P16 and P17, with a storage capacity of 30,000 gallons, each;

~~(7)~~ **(5)** One (1) VOL storage tank, constructed after July 23, 1984, identified as P19, with a storage capacity of 30,000 gallons; and

~~(8)~~ **(6)** One (1) VOL storage tank, constructed after July 23, 1984, identified as P22, with a storage capacity of 100,000 pounds.

Change No. 9 The emission unit descriptions for Insignificant Activities in Condition A.4 have been updated to remove the solvent distillation unit, Model LS-55IID, and to update the status of the soil and groundwater remediation systems.

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

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

(b) ~~One (1) solvent distillation unit, Model LS-55IID, to recover isopropyl alcohol (IPA)/solvents for reuse. This unit is capable of recovering 55 gallons per 8-hour shift.~~

~~(c)~~ Single-head recharge gassers used to add propellant to lightweight cans.

~~(d)~~ **(c)** Soil and groundwater remediation systems consisting of soil vapor extraction and air sparging equipment installed for temporary operation under a Remediation Work Plan approved by the IDEM Voluntary Remediation Program. ~~This operation is idle and the source has not conducted any remediation since prior to November 12, 2004.~~ **The main systems are idle and have not been operated since prior to November 12, 2004; however, a separate insignificant source SVE system continues to operate in the waste pad area.**

Change No. 10 On July 30, 2007, the Court of Appeals for the District of Columbia Circuit issued its mandate in NRDC v. EPA, vacating and remanding EPA's CISWI Definitions Rule and the Boilers Rule. IDEM has removed the relevant language from the emission unit descriptions in Condition A.4(h) [*now A.4(g)*] and Section D.2 as follows:

~~Under NESHAP, Subpart DDDDD, these boilers are considered to belong to the small gaseous fuel subcategory.~~

Change No. 11 IDEM has clarified the General Record Keeping Requirements pertaining to "reasonable possibility" in Condition C.17 (original paragraph (c), now paragraphs (c) and (d)) as follows:

C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2]

~~(c) If there is a reasonable possibility that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll) at an existing emissions unit, other than projects at a Clean Unit, which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:~~

~~(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1(ll)) 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(rr)(2)(A)(iii) and/or 326 IAC 2-3-1(mm)(2)(A)(iii); and~~
~~(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.~~

~~(2) 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~~

~~(3) 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) If there is a reasonable possibility (as defined in 40 CFR 51.165 (a)(6)(vi)(A), 40 CFR 51.165 (a)(6)(vi)(B), 40 CFR 51.166 (r)(6)(vi)(a), and/or 40 CFR 51.166 (r)(6)(vi)(b)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) 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(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:

(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) 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(rr)(2)(A)(iii) and/or 326 IAC 2-3-1 (mm)(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 40 CFR 51.165 (a)(6)(vi)(A) and/or 40 CFR 51.166 (r)(6)(vi)(a)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) 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(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), 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.

Change No. 12 IDEM has updated the General Reporting Requirements in Condition C.18, paragraphs (f), (f)(2), (g) and (h)(2) as follows to correct the references to Condition C.17:

C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3]

(f) If the Permittee is required to comply with the recordkeeping provisions of ~~(c)~~ **(d)** in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll) at an existing Electric Utility Steam Generating Unit, then for that project the Permittee shall:

(2) Submit a report to IDEM, OAQ within sixty (60) days after the end of each year during which records are generated in accordance with ~~(c)(2) and (3)~~ **(d)(1) and (2)** in Section C - General Record Keeping Requirements. The report shall contain all information and data describing the annual emissions for the emissions units during the calendar year that preceded the submission of report.

(g) 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(qq) and/or 326 IAC 2-3-1(ll)) 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(xx) and/or 326 IAC 2-3-1(qq), 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).

~~(g)~~ **(h)**

(2) The annual emissions calculated in accordance with ~~(c)(2) and (3)~~ **(d)(1) and (2)** in Section C - General Record Keeping Requirements.

~~(h)~~ **(i)**

Change No. 13 Condition D.1.1 is revised as follows:

D.1.1 ~~Volatile Organic Compounds (VOC)~~ **VOC BACT Minor Limit - Scrap Can Processing Operations** [326 IAC 8-1-6]

~~The~~ **Pursuant to Title V Permit Renewal 039-21106-00434, issued on February 9, 2001, and revised by permit modification 039-26036-00434, the** number of cans crushed in the Scrap Can Processing Operations shall ~~not exceed 4,545,000~~ **be less than 4,500,000** per twelve (12) consecutive month period, with compliance determined at the end of each month. **VOC** Emissions shall not exceed 0.011 pounds of VOC per can crushed. Therefore, VOC emissions shall be limited to less than 25 tons per year. Compliance with this condition will render the requirements of 326 IAC 8-1-6 (General Reduction Requirements) not applicable to the Scrap Can Processing Operations**, constructed in 1994 and 1995**.

Change No. 14 Condition D.1.2 is revised as follows:

D.1.2 PSD ~~Best Available Control Technology Review;~~ **and VOC BACT** Requirements **- Lines 3, 4, 50-58 and 61-62** [326 IAC 2-2-3] [326 IAC 8-1-6]

Pursuant to Title V Permit 039-6875-00434, issued on February 9, 2001 and 326 IAC 2-2-3(a)(2), the source shall apply the best available control technology (BACT) for each pollutant subject to the regulation under the provisions of the Clean Air Act for which said source has the potential to emit in significant amounts as defined in 326 IAC 2-2-1. Pursuant to 326 IAC 8-1-6, ~~lines 3, 4, 61, 62 and 50-58~~ **Lines 3, 4, 50-58 and 61-62** shall use BACT to control volatile organic compound (VOC) emissions and shall be limited by the following:

~~(1)~~ **(a)** The gallons of VOC compounded and filled into containers per month; the number of cans filled with VOC propellant per month; and the number of cans filled with VOC that were crushed shall be limited such that the summation of the emissions using the equation below shall not exceed a VOC emissions limit of 440 tons per consecutive twelve-month period, with compliance determined at the end of each month **according to the following equation:**~~.~~

VOC Emissions = [(gallons VOC compounded & filled/month) x (Ef, 0.03 lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (Ef, 0.0013 lbs VOC/can) + (# cans with VOC crushed/month) x (Ef, 0.0111 lbs VOC/can)]

~~(2)~~ **(b)** Pressure filling or through-the-valve filling method shall be utilized at all times when the product being filled allows for this method.

~~(3)~~ **(c)** When pressure filling can not be utilized, Under the Cup fill method with vapor reclaim shall be utilized, or an equivalent means of reduction.

~~(4)~~ **(d)** Continue enclosure of open bowl liquid filling reservoirs, wherever possible.

~~(5)~~ **(e)** Utilized raw materials having the lowest feasible VOC content and vapor pressure, whenever possible.

~~(6)~~ **(f)** Continue movement toward consumer products that contain lower levels of VOCs and lower VOC composite partial vapor pressures.

Compliance with ~~this~~ **these** PSD BACT **Requirements** shall demonstrate compliance with 326 IAC 8-1-6 (BACT) for ~~lines 3, 4, 61, 62, 63 and 50-58~~ **Lines 3, 4, 50-58 and 61-62**.

Change No. 15 New Condition D.1.3 is added as follows to include a PSD Minor Limit (requested by KIK) for the existing equipment constructed prior to 2008:

D.1.3 PSD Minor Limit - Lines 1-4, 50-58 and 61-63 [326 IAC 2-2]

Pursuant to permit modification 039-26036-00434 and 326 IAC 2-2, for all emission units constructed prior to 2008 (Lines 1-4, 50-58 and 61-63):

(a) The gallons of VOC compounded and filled into containers per month and the number of cans filled with VOC propellant per month shall be limited such that the summation of the emissions using the equation below shall not exceed a VOC emissions limit of 223.10 tons per consecutive twelve-month period, with compliance determined at the end of each month according to the following equation.

VOC Emissions = [(gallons VOC compounded & filled/month) x (lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (lbs VOC/can)]

(b) The VOC emission rates from Lines 1-4, 50-58 and 61-63 shall not exceed:

(1) 0.0013 pounds per can filled with VOC aerosol propellant.

(2) 0.03 pounds per pound of VOC containing liquid.

Compliance with this emission limit for Lines 1-4, 50-58, and 61-63, combined with the potential to emit VOC emissions from all other equipment constructed prior to 2008 will limit the potential to emit from this modification to less than two hundred fifty (250) tons of VOC per year and therefore will render the requirements of 326 IAC 2-2 not applicable to the existing source constructed prior to 2008.

Change No. 16 New Condition D.1.4 is added as follows to include a PSD Minor Limit for VOC for Lines 5-8:

D.1.4 PSD Minor Limit - Lines 5-8 [326 IAC 2-2]

Pursuant to source modification 039-25992-00434 and 326 IAC 2-2, for Lines 5-8:

(a) The gallons of VOC compounded and filled into containers per month and the number of cans filled with VOC propellant per month shall be limited such that the summation of the emissions using the equation below shall not exceed a VOC emissions limit of 245.42 tons per consecutive twelve-month period, with compliance determined at the end of each month according to the following equation.

VOC Emissions = [(gallons VOC compounded & filled/month) x (lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (lbs VOC/can)]

(b) The VOC emission rates from Lines 5-8 shall not exceed:

(1) 0.0013 pounds per can filled with VOC aerosol propellant.

(2) 0.03 pounds per pound of VOC containing liquid.

Compliance with this emission limit for Lines 5-8 combined with the potential to emit VOC emissions from all other equipment associated with this modification will limit the potential to emit from this modification to less than two hundred fifty (250) tons of VOC per year and therefore will render the requirements of 326 IAC 2-2 not applicable to the modification approved under Source Modification No.: 039-25992-00434.

Change No. 17 New Condition D.1.5 is added as follows to include the VOC BACT Requirements for Lines 5-8:

D.1.5 VOC BACT Requirements - Lines 5-8 [326 IAC 8-1-6]

Pursuant to source modification 039-25992-00434, and 326 IAC 8-1-6, Lines 5-8 shall use BACT to control volatile organic compound (VOC) emissions and shall be limited by the following:

(a) The VOC emission rates from Lines 5-8 shall not exceed:

(1) 0.0013 pounds per can filled with VOC aerosol propellant.

(2) 0.03 pounds per pound of VOC containing liquid.

(b) Through-the-valve (TTV) pressure filling method shall be utilized at all times.

(c) Open bowl liquid filling reservoirs shall be enclosed wherever possible.

(d) Utilize raw materials having the lowest feasible VOC content and vapor pressure, whenever possible.

(e) Continue movement toward consumer products that contain lower levels of VOCs and lower VOC composite partial vapor pressures.

Change No. 18 New Condition D.1.6 is added as follows to include a Minor Limit for Hazardous Air Pollutants for the entire source:

D.1.6 HAP Minor Limit - Lines 1-8, 50-58 and 61-63 [326 IAC 2-4.1]

Pursuant to source modification 039-25992-00434, Lines 1-8, 50-58 and 61-63 (including miscellaneous equipment and scrap can processing operations) shall be limited to:

(a) less than nine and five tenths (9.5) tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month. This usage limit is required to limit the potential to emit of each HAP to less than ten (10) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) less than twenty-three and seventy-five hundredths (23.75) tons per twelve (12) consecutive month period with compliance demonstrated at the end of each month. This usage limit is required to limit the potential to emit of total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The gallons of HAP compounded and filled into containers per month shall be limited such that the summation of the emissions using the equation below shall not exceed the HAP emission limits in paragraphs (1) and (2) above:

HAP Emissions = (gallons HAP compounded & filled/month) x (lbs HAP/gal HAP)

(c) The HAP emission rates from Lines 1-8, 50-58 and 61-63 shall not exceed 0.03 pounds per gallon of HAP containing liquid.

Compliance with these emission limits for Lines 1-8, 50-58 and 61-63 combined with the potential to emit HAP emissions from all other equipment associated with this modification will limit the potential to emit from this modification to less than ten (10) tons per year of any single HAP and less than twenty-five (25) tons per year of any combination of HAPs. Therefore the requirements of 326 IAC 2-4.1 and the Clean Air Act Section 112 are not applicable to the entire source.

Change No. 19 Subsequent permit conditions in Section D.1 have been renumbered and the references to the new and modified Emission Limitations and Standards have been added and/or updated. The revisions are as follows:

~~D.1.3~~ **D.1.7** Volatile Organic Compounds (VOC)[326 IAC 8-1-2] [326 IAC 8-1-4]

Compliance with the VOC content **limits** contained in ~~condition D.1.1 and D.1.2~~ **Conditions D.1.1, D.1.2, D.1.3, D.1.4 and D.1.5** shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the VOL manufacturer. However, IDEM, OAQ reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

~~D.1.4 Record Keeping Requirements~~

~~(b) To document compliance with condition D.1.1, the permittee shall maintain records in accordance with (1) below. Records maintained for (1) shall be complete and sufficient to establish compliance with the VOC emission limitations established in Condition D.1.1.~~

~~(1) The number/amount of VOC containing cans crushed.~~

~~(a) To document compliance with Condition D.1.2, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.1.2:~~

~~(1) The amount and VOC content of the volatile organic liquid (VOL) product filled. Records shall include material safety data sheets (MSDS), product formulation information, VOL compounded/filled and company product records necessary to verify the type and amount used;~~

~~(2) The total VOC compounded/filled for each month;~~

~~(3) The number/amount of cans filled with VOC propellant;~~

~~(4) The number/amount of VOC containing cans crushed;~~

~~(5) The weight of VOC emitted for each compliance period.~~

~~(c) All records shall be maintained in accordance with Section C – General Record Keeping Requirements of this permit.~~

D.1.8 Record Keeping Requirements

(a) To document compliance with condition D.1.1, the permittee shall maintain records of the number/amount of VOC-containing cans crushed in the Scrap Can Processing Operations. Records maintained shall be complete and sufficient to establish compliance with the VOC emission limitations established in Condition D.1.1.

(b) To document compliance with Condition D.1.2, the Permittee shall maintain records in accordance with (1) through (5) below for Lines 3, 4, 50-58 and 61-62. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.1.2:

(1) The amount and VOC content of the volatile organic liquid (VOL) product filled. Records shall include material safety data sheets (MSDS), product formulation information, VOL compounded/filled and company product records necessary to verify the type and amount used;

(2) The total VOC compounded/filled for each month;

(3) The number/amount of cans filled with VOC propellant;

(4) The number/amount of VOC-containing cans crushed;

(5) The weight of VOC emitted for each month.

(c) To document compliance with Condition D.1.3, the Permittee shall maintain records in accordance with (1) through (5) below for Lines 1-4, 50-58 and 61-63. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.1.3:

(1) The amount and VOC content of the volatile organic liquid (VOL) product filled. Records shall include material safety data sheets (MSDS), product formulation information, VOL compounded/filled and company product records necessary to verify the type and amount used;

(2) The total VOC compounded/filled for each month;

(3) The number/amount of cans filled with VOC propellant;

(4) The number/amount of VOC-containing cans crushed;

(5) The weight of VOC emitted for each month.

(d) To document compliance with Conditions D.1.4 and D.1.5, the Permittee shall maintain records in accordance with (1) through (4) below for Lines 5-8. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Conditions D.1.4 and D.1.5:

(1) The amount and VOC content of the volatile organic liquid (VOL) product filled. Records shall include material safety data sheets (MSDS), product formulation information, VOL compounded/filled and company product records necessary to verify the type and amount used;

(2) The total VOC compounded/filled for each month;

(3) The number/amount of cans filled with VOC propellant;

(4) The weight of VOC emitted for each month.

(e) To document compliance with Conditions D.1.6, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the HAP usage limits and/or the HAP emission limits established in Condition D.1.6.

(1) The amount and HAP content of the volatile organic liquid (VOL) product filled. Records shall include material safety data sheets (MSDS), product formulation information, VOL compounded/filled and company product records necessary to verify the type and amount used;

(2) The total HAP compounded/filled for each month;

(3) The number/amount of cans filled with HAP propellant;

(4) The weight of HAP emitted for each month.

(f) All records shall be maintained in accordance with Section C – General Record Keeping Requirements of this permit.

~~D.1.5~~ **D.1.9** Reporting Requirements

A quarterly summary of the information to document compliance with ~~Conditions D.1.1 and D.1.2~~ **Conditions D.1.1, D.1.2, D.1.3, D.1.4, D.1.5 and D.1.6** shall be submitted to the address listed in Section C – General Reporting Requirements of this permit using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Change No. 20 Pursuant to 326 IAC 6-2-4(Particulate Emissions Limitations for Sources of Indirect Heating), emission limitations have been added to Condition D.2.1 for Boiler B-1 as follows:

D.2.1 Particulate Matter Limitation [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2 (Particulate Emissions Limitations for Sources of Indirect Heating), the boilers shall be limited as follows:

Boiler ID	Capacity (MMBtu/hr)	Date of Construction	Q (MMBtu/hr)	PM Allowable Emissions (lbs/MMBtu)
M-1	8.37	1976	8.37	0.60
M-2	6.28	1976	14.65	0.60
N-1	8.37	1993	23.02	0.48
S-1	1.50	1995	24.52	0.47
N-2	7.00	1997	31.52	0.44
S-2	3.19	2001	34.71	0.43
B-1	**16.70**	**2008**	**51.41**	**0.39**

These emission limitations are based on the following:

(a) Pursuant to 326 IAC 6-2-3 (e), Boiler M-1 and Boiler M-2 particulate emissions shall not exceed 0.6 lbs/MMBtu heat input.

(b) Pursuant to 326 IAC 6-2-4, Boiler N-1, Boiler S-1, Boiler N-2 and Boiler S-2, **and Boiler B-1** shall be limited by the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:
Pt pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input.
Q = total source maximum operating capacity

Change No. 21 Boiler B-1 is subject to the New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR 60, Subpart Dc). the NSPS language has been included in the permit as Attachment A, and new Conditions D.2.2 and D.2.3 have been added to Section D.2 as follows:

New Source Performance Standards [326 IAC 12] [40 CFR Part 60, Subparts A and Dc]

D.2.2 General Provisions Relating to the Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [326 IAC 12] [40 CFR Part 60, Subpart A]

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 for Boiler B-1.

D.2.3 Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [326 IAC 12] [40 CFR Part 60, Subpart Dc]

The Permittee shall comply with the following provisions of the Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR Part 60, Subpart Dc; included as Attachment A of this permit) for Boiler B-1 upon startup:

(a) 40 CFR 60.40c,
(b) 40 CFR 60.41c,
(c) 40 CFR 60.42c,
(d) 40 CFR 60.43c,
(e) 40 CFR 60.44c,
(f) 40 CFR 60.45c,
(g) 40 CFR 60.46c,
(h) 40 CFR 60.47c, and
(i) 40 CFR 60.48c.

Change No. 22 Condition D.1.1 requires that the VOC emissions from the Scrap Can Processing Operation are limited to less than 25 tons per year; therefore, the quarterly reporting form for the Scrap Can Processing Operation has been modified as follows:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name:	APG, Inc. / KIK Custom Products – Indiana Plant
Source Address:	2730 Middlebury Street, Elkhart, Indiana 46516 & Contiguous Property
Mailing Address:	P.O. Box 2988, Elkhart, Indiana 46515 2988
Part 70 Permit No.:	T 039-21106-00434
Facility:	Scrap ~~can processing operation~~ **Can Processing Operation**
Parameter:	Number of Cans Crushed
Limit:	~~4,545,000~~ **4,500,000** per consecutive twelve-month period with compliance determined at the end of each month. **VOC emissions are calculated using the following equation:**

VOC Emissions = [(# cans with VOC crushed/month) x (0.0111 lbs VOC/can)]

YEAR: _____

Month	**No. of Cans Crushed** (this month)	**No. of Cans Crushed** (previous 11 months)	**No. of Cans Crushed** (12 months total)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Change No. 23 New quarterly reporting forms have been added to document compliance with Conditions D.1.3, D.1.4, D.1.5 and D.1.6 as follows:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: **APG, Inc. / KIK Custom Products – Indiana Plant**
Source Address: **2730 Middlebury Street, Elkhart, Indiana 46516 & Contiguous Property**
Mailing Address: **P.O. Box 2988, Elkhart, Indiana 46515 2988**
Part 70 Permit No.: **T 039-21106-00434**
Facility: **Lines 1-4, 50-58 and 61-63 & Supporting Equipment**
Parameter: **VOC emissions**
Limit: **223.10 tons of VOC emissions per consecutive 12-month period, with compliance determined at the end of each month. VOC emissions are calculated using the following equation:**

VOC Emissions = **[(gallons VOC compounded & filled/month) x (0.03 lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (0.0013 lbs VOC/can)]**

YEAR: _____

Month	VOC Emissions (this month)	VOC Emissions (previous 11 months)	VOC Emissions (12 months total)

☐ **No deviation occurred in this quarter.**

☐ **Deviations occurred in this quarter.**
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: APG, Inc. / KIK Custom Products – Indiana Plant
Source Address: 2730 Middlebury Street, Elkhart, Indiana 46516 & Contiguous Property
Mailing Address: P.O. Box 2988, Elkhart, Indiana 46515 2988
Part 70 Permit No.: T 039-21106-00434
Facility: Lines 5-8
Parameter: VOC emissions
Limit: 245.42 tons of VOC emissions per consecutive 12-month period, with compliance determined at the end of each month. VOC emissions are calculated using the following equation:

VOC Emissions = [(gallons VOC compounded & filled/month) x (0.03 lbs VOC/gal VOC) + (# cans filled with VOC propellant/month) x (0.0013 lbs VOC/can)]

YEAR: _____

Month	VOC Emissions (this month)	VOC Emissions (previous 11 months)	VOC Emissions (12 months total)

☐ **No deviation occurred in this quarter.**

☐ **Deviations occurred in this quarter.**
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: APG, Inc. / KIK Custom Products – Indiana Plant
Source Address: 2730 Middlebury Street, Elkhart, Indiana 46516 & Contiguous Property
Mailing Address: P.O. Box 2988, Elkhart, Indiana 46515 2988
Part 70 Permit No.: T 039-21106-00434
Facility: Lines 1-8, 50-58 and 61-63 & Supporting Equipment
Parameter: Single HAP Emissions
Limit: 9.5 tons of any single HAP per consecutive 12-month period, with compliance determined at the end of each month. HAP emissions are calculated using the following equation:

HAP Emissions = [(gallons HAP compounded & filled/month) x (0.03 lbs HAP/gal HAP)]

YEAR: _____

HAP Name: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Single HAP Usage This Month	Single HAP Usage Previous 11 Months	12 Month Total Single HAP Usage
Month 1			
Month 2			
Month 3			

☐ **No deviation occurred in this quarter.**

☐ **Deviations occurred in this quarter.**
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: APG, Inc. / KIK Custom Products – Indiana Plant
Source Address: 2730 Middlebury Street, Elkhart, Indiana 46516 & Contiguous Property
Mailing Address: P.O. Box 2988, Elkhart, Indiana 46515 2988
Part 70 Permit No.: T 039-21106-00434
Facility: Lines 1-8, 50-58 and 61-63 & Supporting Equipment
Parameter: Total HAP Emissions
Limit: 23.75 tons of any single HAP per consecutive 12-month period, with compliance determined at the end of each month. HAP emissions are calculated using the following equation:

HAP Emissions = [(gallons HAP compounded & filled/month) x (0.03 lbs HAP/gal HAP)]

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Total HAP Usage This Month	**Total HAP Usage Previous 11 Months**	**12 Month Total Combination HAP Usage**
Month 1			
Month 2			
Month 3			

☐ **No deviation occurred in this quarter.**

☐ **Deviations occurred in this quarter.**
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Conclusion and Recommendation

The construction and operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 039-25992-00434 and Significant Permit Modification No. 039-26036-00434, respectively. Based on the facts, conditions and evaluations made, OAQ recommends to the IDEM Commissioner that Significant Source Modification No. 039-25992-00434 and Significant Permit Modification No. 039-26036-00434 be approved.

TSD Appendices

The following are the appendices of this TSD:

- Appendix A – Emissions Calculations
- Appendix B – VOC BACT Analysis (326 IAC 8-1-6)
- Appendix C – VOC BACT Economic Impacts Analysis (326 IAC 8-1-6)

IDEM Contact

Questions regarding this proposed permit can be directed to:

Kimberly Cottrell
Indiana Department Environmental Management
Office of Air Quality
100 North Senate Avenue
MC 61-53, Room 1003
Indianapolis, Indiana 46204-2251
Toll free (within Indiana): 1-800-451-6027 extension 3-0870
Or dial directly: (317) 233-0870
kcottrel@idem.in.gov

Please refer to Significant Source Modification No.: 039-25992-00434 and Significant Permit Modification No.: 039-26036-00434 in all correspondence.

Indiana Department of Environmental Management
Office of Air Quality

Appendix A – Emission Calculations
Technical Support Document (TSD)
Significant Source Modification (SSM) of a Part 70 Source
Significant Permit Modification (SPM) of Part 70 Operating Permit

Source Description and Location

Company Name:	APG, Inc. / KIK Custom Products
Address City IN Zip:	2700 Middlebury St., 2730 Middlebury St., 711 Middleton Run Rd., and 2825 Middlebury St., Elkhart, IN 46515-2988
County:	Elkhart
SIC / NAICS Code:	7389
Significant Source Modification No.:	039-25992-00434
Significant Permit Modification No.:	039-26036-00434
Permit Reviewer:	Kimberly Cottrell
Date:	April 28, 2008

Summary of Potential to Emit

The tables below summarize the potential to emit calculations submitted by APG, Inc. / KIK Custom Products. The subsequent pages of this document are the complete calculations provided by APG, Inc. / KIK Custom Products. IDEM has reviewed these calculations and verified their accuracy.

	Lines 5-8 Modification Uncontrolled Potential To Emit (ton/yr)								
Process / Emission Unit	**CO**	**NO_X**	**PM**	**PM_{10}**	**SO_2**	**VOC**	**Single HAP**	**Single HAP Name**	**Combination HAPs**
Aerosol Filling Line 5	0	0	0	0	0	154.22	0.45	not specified	1.13
Aerosol Filling Line 6	0	0	0	0	0	154.22	0.45	not specified	1.13
Aerosol Filling Line 7	0	0	0	0	0	154.22	0.45	not specified	1.13
Aerosol Filling Line 8	0	0	0	0	0	154.22	0.45	not specified	1.13
Storage Tanks (increased usage)	0	0	0	0	0	<4	0	NA	0
Spray-out Booth	0	0	0	0	0	2.90	0	NA	0
Boiler B-1 (Natural Gas)	6.02	7.17	0.55	0.55	0.04	0.39	0.13	Hexane	>0.13
SVE Remediation System (negligible)	0	0	0	0	0	0.01	0	NA	0
Totals:	**6.02**	**7.17**	**0.55**	**0.55**	**0.04**	**624.07**	**1.94**		**4.65**

	Lines 5-8 Modification Limited Potential To Emit (ton/yr)								
Process / Emission Unit	**CO**	**NO_X**	**PM**	**PM_{10}**	**SO_2**	**VOC***	**Single HAP**	**Single HAP Name**	**Combination HAPs**
Aerosol Filling Line 5	0	0	0	0	0	60.63	0.45	not specified	1.13
Aerosol Filling Line 6	0	0	0	0	0	60.63	0.45	not specified	1.13
Aerosol Filling Line 7	0	0	0	0	0	60.63	0.45	not specified	1.13
Aerosol Filling Line 8	0	0	0	0	0	60.63	0.45	not specified	1.13
Storage Tanks (increased usage)	0	0	0	0	0	<4	0	NA	0
Spray-out Booth	0	0	0	0	0	2.90	0	NA	0
Boiler B-1 (Natural Gas)	6.02	7.17	0.55	0.55	0.04	0.39	0.13	Hexane	>0.13
SVE Remediation System (negligible)	0	0	0	0	0	0.01	0	NA	0
Totals:	**6.02**	**7.17**	**0.55**	**0.55**	**0.04**	**249.70**	**1.94**		**4.65**

*Total VOC emissions from this modification will be limited to less than 250 tons per year.

	Pre-2008 Emission Units Limited Potential To Emit (ton/yr)								
Process / Emission Unit	**CO**	**NO_X**	**PM**	**PM_{10}**	**SO_2**	**VOC***	**Single HAP**	**Single HAP Name**	**Combination HAPs**
Pre-2008 Line (1-4, 50-58, 61-63) & Miscellaneous Equipment	0	0	0	0	0	223.10	7.24	not specified	18.10
Scrap Can Processing (Crushing)	0	0	0	0	0	<25	0.45	not specified	1.13
Existing Boilers (M-1, M-2, N-1, N-2, and S-2)	12.52	14.90	1.13	1.13	0.09	0.82	0.27	Hexane	>0.27
Emergency Diesel Fire Pump - 170 HP	0.23	1.02	0.03	0.03	0.0017	0.03	0	NA	0
Totals:	**12.75**	**15.92**	**1.16**	**1.16**	**0.09**	**<250**	**7.96**		**19.49**

*Total VOC emissions from the existing operations constructed prior to 2008 will be limited to less than 250 tons per year.

	Entire Source Total Limited Potential To Emit (ton/yr)								
	CO	**NO_X**	**PM**	**PM_{10}**	**SO_2**	**VOC**	**Single HAP**	**Single HAP Name**	**Combination HAPs**
Total Limited PTE After Modification	18.78	23.10	1.71	1.71	0.13	498.70	<10		<25

*Single HAP emissions from the entire source will be limited to less than 10 tons per year.
*Total HAP emissions from the entire source will be limited to less than 25 tons per year.

Potential Emissions from Aerosol Filling Lines 5-8

Maximum Annual Throughput:	300,000,000	cans/yr
Maximum Annual Throughput (per line):	75,000,000	cans/yr/line
Maximum Hourly Throughput (per line):	8,562	cans/hr/line
Propellant emission factor:	0.0013	lb of VOC/can
Compound & Filled emission factor:	0.03	lb of VOC/gal of VOC in filled product
Theoretical VOC Content*:	100%	for each can
Theoretical Fillable Volume*:	12	oz/can
Can Crushing emission factor:	0.0111	lb of VOC/can
Annual Amount of Cans Crushed onsite:	0	cans punctured or rejected/year

Can crushing is conducted offsite

Uncontrolled Emissions

Line	Throughput (cans/year)	VOC Content	Size of Can (gallons)	Gallons of VOC filled/year	VOC Emissions - Propellant (tpy)	VOC Emissions - Compounding (tpy)	VOC Emissions - Crushing (tpy)	VOC Emissions (lb/year)	VOC Emissions (tpy)
5	75,000,000	100%	0.09375	7,031,250	48.75	105.47	0.00	308,438	154.22
6	75,000,000	100%	0.09375	7,031,250	48.75	105.47	0.00	308,438	154.22
7	75,000,000	100%	0.09375	7,031,250	48.75	105.47	0.00	308,438	154.22
8	75,000,000	100%	0.09375	7,031,250	48.75	105.47	0.00	308,438	154.22
	300,000,000								**616.88**

The emissions from the aerosol filling lines include supporting operations such as the batch tanks and pre-mix tanks.

Methodology

VOC Emission equation from the current Title V permit 039-21106-00434
VOC Emissions = [(gallons VOC compounded & filled/month) x (0.03 lb VOC/gal VOC) + (# cans filled with VOC propellant/month) x (0.0013 lbs VOC/can) + (# cans with VOC crushed/month) x (0.0111 lbs VOC/can)]
*These calculations are based on a worst-case theoretical 12 ounce can which contains 100% VOC.

PSD Minor Limit and VOC BACT for Aerosol Filling Lines 5-8

Process Limitations for VOC BACT and PSD Minor Limit:

Limited Annual Throughput:	50,000,000	cans/yr/line
VOC Content:	60%	for each can
Fillable Volume:	8	oz/can

Limited Emissions

Line	Throughput (cans/year)	VOC Content	Size of Can (gallons)	Gallons of VOC filled/year	VOC Emissions - Propellant (tpy)	VOC Emissions - Compounding (tpy)	VOC Emissions (lb/year)	VOC Emissions (tpy)
5	50,000,000	60%	0.0625	1,875,000	32.50	28.13	121,250	60.63
6	50,000,000	60%	0.0625	1,875,000	32.50	28.13	121,250	60.63
7	50,000,000	60%	0.0625	1,875,000	32.50	28.13	121,250	60.63
8	50,000,000	60%	0.0625	1,875,000	32.50	28.13	121,250	60.63
	200,000,000							**242.50**

Limited Annual Throughput: 260,000 lb VOC-containing liquid per year

Methodology

VOC Emissions = [(gallons VOC compounded & filled/month) x (0.03 lb VOC/gal VOC) + (# cans filled with VOC propellant/month) x (0.0013 lbs VOC/can)
These calculations are based on a typical can filled to 8 ounces containing 60% VOC.

Summary of All Product Lines after Modification - Uncontrolled

Line	Installation Year	Product Filling Type	Maximum Throughput Capacity (cans/hr)	Maximum Throughput Capacity (cans/yr)	VOC - Propellant Filling (lb VOC/yr)	VOC - Compounding (lb VOC/yr)	Total VOC (lb VOC/yr)	Total VOC (tpy)
1	1976	aerosol	8,400	73,584,000	95,659	206,955	302,614	151.31
2	1976	aerosol	8,400	73,584,000	95,659	206,955	302,614	151.31
3	1989	aerosol	6,300	55,188,000	71,744	155,216	226,961	113.48
4	1989	aerosol	15,120	132,451,200	172,187	372,519	544,706	272.35
5	**2008**	**aerosol**	**8,562**	**75,000,000**	**97,500**	**210,938**	**308,438**	154.22
6	**2008**	**aerosol**	**8,562**	**75,000,000**	**97,500**	**210,938**	**308,438**	154.22
7	**2008**	**aerosol**	**8,562**	**75,000,000**	**97,500**	**210,938**	**308,438**	154.22
8	**2008**	**aerosol**	**8,562**	**75,000,000**	**97,500**	**210,938**	**308,438**	154.22
50	1994	aerosol	4,200	36,792,000	47,830	103,478	151,307	75.65
51	1994	liquid	2,000	17,520,000	22,776	49,275	72,051	36.03
52	1994	liquid	600	5,256,000	6,833	14,783	21,615	10.81
53	1994	liquid	4,500	39,420,000	51,246	110,869	162,115	81.06
54	1994	liquid	600	5,256,000	6,833	14,783	21,615	10.81
55	1994	liquid	3,750	32,850,000	42,705	92,391	135,096	67.55
56	1994	liquid	2,100	18,396,000	23,915	51,739	75,654	37.83
57	1994	liquid	2,100	18,396,000	23,915	51,739	75,654	37.83
58	1994	liquid	2,100	18,396,000	23,915	51,739	75,654	37.83
61	1993	aerosol	7,500	65,700,000	85,410	184,781	270,191	135.10
62	1993	liquid	7,500	65,700,000	85,410	184,781	270,191	135.10
63	1993	aerosol	7,500	65,700,000	85,410	184,781	270,191	135.10
	Total	***aerosol***	***91,667***	***802,999,200***	***1,043,899***	***2,258,435***	***3,302,334***	***1,651.17***
	Total	***liquid***	***25,250***	***221,190,000***	***287,547***	***622,097***	***909,644***	***454.82***
	Combined Total		**116,917**	**1,024,189,200**	**1,331,446**	**2,880,532**	**4,211,978**	**2,105.99**

Insignificant Activities

		Potential to Emit After Controls						
Emission Unit		**CO**	**NO_X**	**PM**	**PM_{10}**	**SO_2**	**VOC**	**Hexane***
Boiler B-1 (natural gas)	Emission Factor (lb/mmcf)	84	100	7.6	7.6	0.6	5.5	1.8
400 hp; 16.7 MMBtu/hr; 0.0164 MMCF/hr								
	PTE (TPY)	**6.0238**	**7.1712**	**0.5450**	**0.5450**	**0.0430**	**0.3944**	**0.1291**
Existing Boilers (M-1, M-2, N-1, N-2, and S-2)	Emission Factor (lb/mmcf)	84	100	7.6	7.6	0.6	5.5	1.8
	PTE (TPY)	**12.5201**	**14.9049**	**1.1328**	**1.1328**	**0.0894**	**0.8198**	**0.2683**
Emergency Diesel Fire Pump (fuel oil)	Emission Factor (lb/hp-hr)	0.0055	0.024	0.0007	0.0007	4.045E-05	0.000705	
Fuel Sulfur Content (%) =	0.5%							
Rating (hp-hr) =	170							
Back up Generator Hours =	500							
	PTE (TPY)	**0.2338**	**1.0200**	**0.0298**	**0.0298**	**0.0017**	**0.0300**	
SVE Remediation System	Emission Factor (lb/yr)						16	
	PTE (TPY)						**0.0080**	
	Total Emissions	**6.26**	**8.19**	**0.57**	**0.57**	**0.04**	**0.43**	**0.13**

326 IAC 6-2-4 Evaluation

Boilers	**Rating** (MMBtu/hr)	**Q** (MMBtu/hr)	**Pt** (lb/MMBtu)
Existing Boilers (M-1, M-2, N-1, N-2, and S-2)	*variable*	*34.71*	*variable*
Boiler B-1	16.70	51.41	0.39

$$Pt = \frac{1.09}{Q^{0.26}}$$

Pt = PM Emission Rate
Q = total source maximum operating capacity

Notes
PM emission factors are filterable PM only. PM10 emission factors are filterable and condensable PM10 combined.
*There are several HAPs emitted during natural gas combustion; however, only the worst case HAP, Hexane, is calculated for this table.

Conversion Factors
34.5 lb steam/hp, 970 BTU output/lb steam, 1 BTU input/0.8 BTU output
1,020 BTU = 1 cf
250 hp = 0.0103 mmcf
8,760 hours = 1 year (365 days/year * 24 hours/day)
1 ton = 2,000 pounds
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Calculation Methodology
Boiler Emission Factors are from AP 42, Chapter 1.4
Boiler Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
All boiler emission factors are based on normal firing.
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMBtu/hr) x (1 CF/1020 Btu) x Emission Factor (lb/MMCF) x 8760 hr/yr / 2000 lb/ton

Fire Pump Emission Factors are from AP 42, Chapter 3.4
Fire Pump Emission Factor for SO2: 0.00809 x Sulfur Content (%)
Emission (tons/yr) = Rating (hp-hr) x Hours of Operation (hr) x Emission Factor (lb/hp-hr) / 2000 lb/ton

SVE Remediation System emission factor for VOC is estimated as 16 pounds per year (based on data collected by KIK).
Emission (tons/yr) = Emission Factor (lb/year)/2,000 lb/ton

HAP Emissions

METHODOLOGY

CAA Section 112 Major Source Threshholds: 10 tons per year for single HAP; 25 tons per year for total HAPs
Minor Source Limit (tons per year) = 95% x CAA major source threshold (tons per year)
Minor Source Limit (pounds per hour) = Minor Source Limit (tons per year) x 2000 pound per ton / 8760 hours per year

ASSUMPTIONS

95% CAA Section 112 threshold is sufficient to establish minor HAP limit for 112(g) applicability

	Single HAP	Total HAPs
CAA Section 112 Major Source Threshholds (potential to emit in tons per year):	10.00	25.00
Minor Source Limits (tons per year):	9.50	23.75
Minor Source Limits (pounds per hour):	2.17	5.42

Potential Emissions from Existing Lines 1-4, 50-58, and 61-63

Maximum Annual Throughput:	502,999,200 cans/yr	Aerosol	Lines 1-4, 50, 61, & 63
Maximum Annual Throughput:	221,190,000 cans/yr	Liquid	Lines 51-58 & 62
Maximum Annual Throughput:	724,189,200 cans/yr		
Propellant emission factor:	0.0013 lb of VOC/can		
Compound & Filled emission factor:	0.03 lb of VOC/gal of VOC in filled product		
Theoretical VOC Content*:	100% for each can		
Theoretical Fillable Volume*:	12 oz/can		
Can Crushing emission factor:	0.0111 lb of VOC/can		
Current Permitted Annual Can Crushing Capacity:	4,545,000 cans punctured or rejected/year		
Limited Annual Can Crushing Capacity:	4,500,000 cans punctured or rejected/year		

Uncontrolled Emissions

Line	Throughput (cans/year)	VOC Content	Size of Can (gallons)	Gallons of VOC filled/year	VOC Emissions - Propellant (tpy)	VOC Emissions - Compounding (tpy)	VOC Emissions - Crushing (tpy)	VOC Emissions (lb/year)	VOC Emissions (tpy)
1-4, 50-58, 61-63	724,189,200	100%	0.09375	67,892,738	470.72	1018.39	25.22	3,028,678	1,514.34
PTE of BACT Units (Lines 3, 4, 50-58, 61, & 62):	511,321,200	100%	0.09375	47,936,363	332.36	719.05	24.98	2,153,258	1,076.38

Methodology
VOC Emission equation from the current Title V permit 039-21106-00434
VOC Emissions = [(gallons VOC compounded & filled/month) x (0.03 lb VOC/gal VOC) + (# cans filled with VOC propellant/month) x (0.0013 lbs VOC/can) + (# cans with VOC crushed/month) x (0.0111 lbs VOC/can)]
*These calculations are based on a worst-case theoretical 12 ounce can which contains 100% VOC.

Limited Emissions (Based on Permit Limits in T 039-21106-00434)

Line	Throughput (cans/year)	VOC Content	Size of Can (gallons)	Gallons of VOC filled/year	VOC Emissions - Propellant (tpy)	VOC Emissions - Compounding (tpy)	VOC Emissions - Crushing (tpy)	VOC Emissions (lb/year)	VOC Emissions (tpy)
Current BACT Limit (Lines 3, 4, 50-58, 61, & 62):	363,038,052	60%	0.0625	13,613,927	235.97	204.21	<25	930,817	464.18
Lines 1, 2, and 63	212,868,000	60%	0.0625	7,982,550	138.36	119.74		566,654	258.10

Methodology
VOC Emission equation from the current Title V permit 039-21106-00434
VOC Emissions = [(gallons VOC compounded & filled/month) x (0.03 lb VOC/gal VOC) + (# cans filled with VOC propellant/month) x (0.0013 lbs VOC/can) + (# cans with VOC crushed/month) x (0.0111 lbs VOC/can)]
*These calculations are based on a worst-case theoretical 12 ounce can which contains 100% VOC.

PSD Minor Limit for this Modification

Process Limitations for VOC BACT and PSD Minor Limit:

Limited Annual Throughput:	184,000,000 cans/yr/line	*estimated based on PSD Minor Limit of 249 tpy for all existing units*
VOC Content:	60% for each can	*25% throughput reduction*
Fillable Volume:	8 oz/can	

Limited Emissions

Line	Throughput (cans/year)	VOC Content	Size of Can (gallons)	Gallons of VOC filled/year	VOC Emissions - Propellant (tpy)	VOC Emissions - Compounding (tpy)	VOC Emissions (lb/year)	VOC Emissions (tpy)
1-4, 50-58, 61-63	184,000,000	60%	0.0625	6,900,000	119.60	103.50	496,650	223.10

Methodology
VOC Emissions = [(gallons VOC compounded & filled/month) x (0.03 lb VOC/gal VOC) + (# cans filled with VOC propellant/month) x (0.0013 lbs VOC/can)
These calculations are based on a typical can filled to 8 ounces containing 60% VOC.

Potential Emissions from All Filling Lines

Summary of All Product Lines after Modification - Uncontrolled

Line	Installation Year	Product Filling Type	Maximum Throughput Capacity (cans/hr)	Maximum Throughput Capacity (cans/yr)	VOC - Propellant Filling (lb VOC/yr)	VOC - Compounding (lb VOC/yr)	Total VOC (lb VOC/yr)	Total VOC (tpy)
1	1976	aerosol	8,400	73,584,000	95,659	206,955	302,614	151.31
2	1976	aerosol	8,400	73,584,000	95,659	206,955	302,614	151.31
3	1989	aerosol	6,300	55,188,000	71,744	155,216	226,961	113.48
4	1989	aerosol	15,120	132,451,200	172,187	372,519	544,706	272.35
5	2008	aerosol	8,562	75,000,000	97,500	210,938	308,438	154.22
6	2008	aerosol	8,562	75,000,000	97,500	210,938	308,438	154.22
7	2008	aerosol	8,562	75,000,000	97,500	210,938	308,438	154.22
8	2008	aerosol	8,562	75,000,000	97,500	210,938	308,438	154.22
50	1994	aerosol	4,200	36,792,000	47,830	103,478	151,307	75.65
51	1994	liquid	2,000	17,520,000	22,776	49,275	72,051	36.03
52	1994	liquid	600	5,256,000	6,833	14,783	21,615	10.81
53	1994	liquid	4,500	39,420,000	51,246	110,869	162,115	81.06
54	1994	liquid	600	5,256,000	6,833	14,783	21,615	10.81
55	1994	liquid	3,750	32,850,000	42,705	92,391	135,096	67.55
56	1994	liquid	2,100	18,396,000	23,915	51,739	75,654	37.83
57	1994	liquid	2,100	18,396,000	23,915	51,739	75,654	37.83
58	1994	liquid	2,100	18,396,000	23,915	51,739	75,654	37.83
61	1993	aerosol	7,500	65,700,000	85,410	184,781	270,191	135.10
62	1993	liquid	7,500	65,700,000	85,410	184,781	270,191	135.10
63	1993	aerosol	7,500	65,700,000	85,410	184,781	270,191	135.10
	Total	***aerosol***	***91,667***	***802,999,200***	***1,043,899***	***2,258,435***	***3,302,334***	***1,651.17***
	Total	***liquid***	***25,250***	***221,190,000***	***287,547***	***622,097***	***909,644***	***454.82***
	Combined Total		**116,917**	**1,024,189,200**	**1,331,446**	**2,880,532**	**4,211,978**	**2,105.99**

Summary of All Product Lines after Modification - Limited

Line	Installation Year	Product Filling Type	Limited Throughput Capacity (cans/hr)	Limited Throughput Capacity (cans/yr)	Limited VOC - Propellant Filling (lb VOC/yr)	Limited VOC - Compounding (lb VOC/yr)	Total Limited VOC (lb VOC/yr)	Total Limited VOC (tpy)
1	1976	aerosol	2,134	18,696,020	24,305	21,033	45,338	22.67
2	1976	aerosol	2,134	18,696,020	24,305	21,033	45,338	22.67
3	1989	aerosol	1,601	14,022,015	18,229	15,775	34,003	17.00
4	1989	aerosol	3,842	33,652,837	43,749	37,859	81,608	40.80
5	2008	aerosol	5,708	50,000,000	65,000	56,250	121,250	60.63
6	2008	aerosol	5,708	50,000,000	65,000	56,250	121,250	60.63
7	2008	aerosol	5,708	50,000,000	65,000	56,250	121,250	60.63
8	2008	aerosol	5,708	50,000,000	65,000	56,250	121,250	60.63
50	1994	aerosol	1,067	9,348,010	12,152	10,517	22,669	11.33
51	1994	liquid	508	4,451,433	5,787	5,008	10,795	5.40
52	1994	liquid	152	1,335,430	1,736	1,502	3,238	1.62
53	1994	liquid	1,143	10,015,725	13,020	11,268	24,288	12.14
54	1994	liquid	152	1,335,430	1,736	1,502	3,238	1.62
55	1994	liquid	953	8,346,438	10,850	9,390	20,240	10.12
56	1994	liquid	534	4,674,005	6,076	5,258	11,334	5.67
57	1994	liquid	534	4,674,005	6,076	5,258	11,334	5.67
58	1994	liquid	534	4,674,005	6,076	5,258	11,334	5.67
61	1993	aerosol	1,906	16,692,875	21,701	18,779	40,480	20.24
62	1993	liquid	1,906	16,692,875	21,701	18,779	40,480	20.24
63	1993	aerosol	1,906	16,692,875	21,701	18,779	40,480	20.24
	Total	***aerosol***	***37,420***	***327,800,653***	***426,141***	***368,776***	***794,917***	***397.46***
	Total	***liquid***	***6,415***	***56,199,347***	***73,059***	***63,224***	***136,283***	***68.14***
	Combined Total		**43,836**	**384,000,000**	**499,200**	**432,000**	**931,200**	**465.60**

Indiana Department of Environmental Management
Office of Air Quality

Appendix B – VOC BACT Analysis (326 IAC 8-1-6)
Technical Support Document (TSD)
Significant Source Modification (SSM) of a Part 70 Source
Significant Permit Modification (SPM) of Part 70 Operating Permit

Source Description and Location

Source Name:	APG, Inc. / KIK Custom Products
Source Location:	2700 Middlebury Street, 2730 Middlebury Street, 711 Middleton Run Road, and 2825 Middlebury Street, Elkhart, IN 46515-2988
County:	Elkhart
SIC Code:	7389
Operation Permit No.:	T 039-21106-00434
Operation Permit Issuance Date:	November 14, 2006
Significant Source Modification No.:	039-25992-00434
Significant Permit Modification No.:	039-26036-00434
Permit Reviewer:	Kimberly Cottrell

Proposed Expansion

On January 25, 2008, the Office of Air Quality (OAQ) received an application from APG, Inc. / KIK Custom Products to add four (4) aerosol can filling lines and associated equipment to their stationary liquid and aerosol can filling operation, located at 2730 Middlebury Street, 711 Middleton Run Road, and 2825 Middlebury Street, in Elkhart, Indiana, in Elkhart County.

The proposed expansion will consist of adding the following emission units:

(a) Lines 5-8 aerosol can filling lines, permitted in 2008, which consist of:

(A) Four (4) aerosol can filling lines designated as Line 5, 6, 7 and 8 using Through the Valve (TTV) propellant filling technology.

(B) Seventeen (17) compounding tanks including:

(i) Twelve (12) 6,000 gallon batch/run tanks.

(ii) Five (5) pre-mix tanks consisting of:

(a) One (1) 2,000-gallon tank.

(b) Two (2) 1,500 gallon tanks.

(c) One (1) 1,000-gallon tank.

(d) One (1) 500 gallon tank.

(C) Additional supporting operations including:

(i) one (1) spray-out booth.

(ii) five (5) bulk propellant tanks.

(iii) four (4) single-head recharge gassers.

(iv) secondary packaging operations.

(v) labelers using hot melt adhesives.

(vi) can and carton coders.

(b) One (1) natural gas-fired boiler, identified as B-1, permitted in 2008, and with a maximum heat input capacity of 16.7 MMBtu/hr.

Requirement for Best Available Control Technology (BACT)

As part of this application, KIK is requesting that VOC emission from its existing plant be limited to a maximum of 249 tons per year. This will make the existing plant a minor source under Prevention of Significant Deterioration (PSD) rules in 326 IAC 2-2.

The new lines will be limited to a total increase of 249 tons per year of volatile organic compounds (VOC) emissions. Because the new equipment will not exceed the major source thresholds, the Prevention of Significant Deterioration (PSD) rules under 326 IAC 2-2 will not be applicable. Each of the four lines will have potential VOC emissions in excess of 25 tons per year; therefore, a Best Available Control Technology (BACT) analysis under 326 IAC 8-1-6 was performed for the new equipment.

See Appendix A – Emission Calculations – of this TSD for detailed Potential to Emit (PTE) calculations.

Summary of the Best Available Control Technology (BACT) Process

BACT is a mass emission limitation based on the maximum degree of pollution reduction of emissions, which is achievable on a case-by-case basis. BACT analysis takes into account the energy, environmental, and economic impacts on the source. These reductions may be determined through the application of available control techniques, process design, work practices, and operational limitations.

IDEM guidance on BACT requires an evaluation that follows a “top down” process. In this approach, the applicant identifies the best-controlled similar source on the basis of controls required by regulation or permit, or controls achieved in practice. The highest level of control is then evaluated for technical feasibility.

The five (5) basic steps of a top-down BACT analysis are listed below:

Step 1: Identify Potential Control Technologies

The first step is to identify potentially “available” control options for each emission unit and for each pollutant under review. Available options should consist of a comprehensive list of those technologies with a potentially practical application to the emissions unit in question. The list should include lowest achievable emission rate (LAER) technologies, innovative technologies, and controls applied to similar source categories.

For this analysis, the following sources were researched:

- EPA's New Source Review Website;
- U.S. EPA's on-line RACT/BACT/LAER Clearinghouse (RBLC) database;
- USEPA, State Air Quality Permits;
- Technical books and articles;
- Communications with control device equipment manufacturers; and
- Guidance documents and communications with state agencies.

Step 2: Eliminate Technically Infeasible Options

The second step is to eliminate technically infeasible options from further consideration. To be considered feasible, a technology must be both available and applicable. It is important in this step that any presentation of a technical argument for eliminating a technology from further consideration be clearly documented based on physical, chemical, engineering, and source-specific factors related to safe and successful use of the controls. Innovative control means a control that has not been demonstrated in a commercial application on similar units. Only available and proven control technologies are evaluated. A control technology is considered available when there are sufficient data indicating that the technology results in a reduction in emissions of regulated pollutants.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

The third step is to rank the technologies not eliminated in Step 2 in order of descending control effectiveness for each pollutant of concern. The ranked alternatives are reviewed in terms of environmental, energy, and economic impacts specific to the proposed modification. If the analysis determines that the evaluated alternative is not appropriate as BACT due to any of the impacts, then the next most effective control is evaluated. This process is repeated until a control alternative is chosen as BACT. If the highest ranked technology is proposed as BACT, it is not necessary to perform any further technical or economic evaluation, except for the environmental analyses.

Step 4: Evaluate the Most Effective Controls and Document the Results

The fourth step entails an evaluation of energy, environmental, and economic impacts for determining a final level of control. The evaluation begins with the most stringent control option and continues until a technology under consideration cannot be eliminated based on adverse energy, environmental, or economic impacts.

Step 5: Select BACT

The fifth and final step is to select as BACT the most effective of the remaining technologies under consideration for VOC. For the technologies determined to be feasible, there may be several different limits that have been set as BACT for the same control technology. The permitting agency has to choose the most stringent limit as BACT unless the applicant demonstrates in a convincing manner why that limit is not feasible. The final BACT determination would be the technology with the most stringent corresponding limit that is economically feasible. BACT must, at a minimum, be no less stringent than the level of control required by any applicable New Source Performance Standard (NSPS) and National Emissions Standard for Hazardous Air Pollutants (NESHAP) or state regulatory standards applicable to the emission units included in the permits.

The Office of Air Quality (OAQ) makes BACT determinations by following the five steps identified above.

Review of Federal and State Regulations

One of the requirements of a BACT analysis is the review of all State and Federal regulations for potentially applicable limitations. By definition, BACT must be at least as stringent as other applicable limits. Federal and State rules were reviewed to identify emission limitations that will be applicable to the emission units proposed at the KIK facility. This analysis also identifies emission limitations that would be applicable to similar operations, but might not be applicable to the specific operations proposed for KIK.

Federal VOC Rules

National Emission Standards for Hazardous Air Pollutant (NESHAP) rules contain limitations on hazardous air pollutant (HAP) emissions from various operations (40 CFR Part 61 and 63, National Emission Standards for Hazardous Air Pollutants). There are no NESHAP rules currently applicable to the KIK facility. Hazardous air pollutant (HAP) emissions will be limited to emission rates below major source thresholds (less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs). As a result of the fact that no standards are currently applicable and the new equipment will not emit HAPs in a major amount, there are no NESHAPs applicable to this expansion.

None of the equipment being installed as part of this project is subject to the requirements of New Source Performance Standards (40 CFR 60).

State VOC Rules

There are no State rules that limit VOC emissions from these operations, nor are there rules which create limitations that are applicable to similar operations.

Summary of Similar Sources

The USEPA RACT/BACT/LAER Clearinghouse (RBLC) database was searched to identify emission limitations that have been achieved in practice or have been established in permits for similar sources. The database is used by industry and regulating agencies to assess the levels of pollution control achieved in practice. The table below summarizes existing sources with similar operations (SIC Code 7389, RBLC Source Code 49.001 – Aerosol Can Filling) that are listed in the U.S. EPA RACT/BACT/LAER (RBLC) Clearinghouse database and other resources, such as other permitting agencies websites. Sources are listed in alphabetical order.

Table 1: Sources with SIC Code 7389, RBLC Source Code 49.001

Company Name and Location	Industry Type
Accra Pac Group, Inc. 2730 Middlebury St. Elkhart, IN	Aerosol Can Filling Operations
Airosol, Inc. 11th and Illinois Neodesha, KS	Aerosol Can Filling Operations
Apollo Industries 1850 S. Cobb Industrial Blvd. Smyrna, GA	Aerosol Can Filling Operations

Table 1: Sources with SIC Code 7389, RBLC Source Code 49.001	
Company Name and Location	**Industry Type**
CCL Custom Manufacturing, Inc. 35 Martin St. Cumberland, RI	Aerosol Can Filling Operations
KIK Custom Products, Inc. 1 West Hegeler Lane Danville, IL	Aerosol Can Filling Operations
Pharmasol Corporation 1 Norfolk Ave. South Easton, MA	Aerosol Can Filling Operations
Rawn Company P.O. Box 9 Spooner, WI	Aerosol Can Filling Operations
S.C. Johnson & Sons 1525 Howe St. Racine, WI	Aerosol Can Filling Operations
Sherwin-Williams 636 E. 40th St. Holland, MI	Aerosol Can Filling Operations
United Coatings 2850 Festival Drive Kankakee, IL	Aerosol Can Filling Operations

Step 1: Identify Potential Control Technologies

The first step in the BACT analysis is to identify potential control measures for applicable pollutants. Potential BACT options include the following:

- Propellant Substitution;
- Process Modification; and
- Add-on VOC Controls.

Step 2: Eliminate Technically Infeasible Options

PROPELLANT SUBSTITUTION NOT FEASIBLE

Propellant substitution control measure is the process of reducing VOC emission through substitution of VOC propellants with non-VOC or exempt-VOC propellant compounds. KIK is a contract manufacturer and is in the business of filling and packaging consumer aerosol products for other companies. As a contract manufacturer, KIK must fill aerosol products to their customer specifications and does not have control over any of the formulations or product characteristics desired by customers and ultimately the consumer market. The VOC content of many of the products manufactured by KIK is limited through consumer product rules set by the EPA. Propellant substitution cannot be considered a technically feasible emission reduction option for the new aerosol filling lines.

PROCESS MODIFICATIONS FEASIBLE

Process modifications for the reduction of VOC emissions could involve physical modifications to the aerosol filling machines that are used within the gas house of the filling line.

Aerosol can filling operations historically utilize two different standard filling methods with propellant:

(1) Through the Valve (TTV) pressure fill.

(2) Under the Cup (UTC) filling.

Through the Valve (TTV) Pressure Filling Method
TTV filling inherently results in lower propellant losses relative to the UTC method because filling occurs directly through the valve as opposed to injected through a gap between the valve assembly and the lip of the container in UTC method.

Under the Cup (UTC) Filling Method
The emission rate when operating in the UTC mode is significantly higher than when operating in the TTV mode.

Under the Cup (UTC) Filling Method
In order to achieve greater VOC destruction efficiency while employing the UTC method, the filling lines may be equipped with a propellant reclaim system including vacuum collection that collects the excess propellant that is not injected into the can and escapes from the filling head. This collected excess propellant is then condensed and burned off in a flare. This control represents a reduction of approximately 83 percent over uncontrolled UTC filling.

Based on this information, the emission rates for aerosol filling operations under various scenarios are:

(1) TTV = 0.0013 lb VOC/can filled

(2) UTC (uncontrolled) = 0.00765 lb VOC/can filled

(3) UTC (controlled with reclaim and flare) = 0.0013 lb VOC/can filled

The VOC emission rates from the controlled UTC operation is comparable to the VOC emission rate from TTV operation. Although the addition of vacuum collection and reclaim to the UTC process reduces emissions from this filling method, it does not reduce emissions below the levels achieved by using TTV filling.

Additionally, Propellant 152A, a principle component of the KIK aerosol can filling operations, cannot be destroyed through a flare, which would diminish the overall destruction efficiency of the UTC filling method using vacuum collection, solvent reclamation system, and flare.

The UTC filling method, with vacuum collection and reclaim and destruction of VOCs by a flare, does not reduce emissions below the levels achieved by using TTV filling. Therefore, the TTV propellant filling method represents the best recognized technology available to minimize VOC emissions from propellant filling.

Enclosure of the Open Bowl Liquid Filling Reservoirs
In addition to propellant filling, liquid filling is part of the filling process where liquid product is added to a reservoir or “bowl” that is situated above a carousel-type filling unit. A pre-set amount of liquid is injected into each container as it moves through the filling unit. Enclosure of the bowl reservoirs whenever possible will minimize evaporative losses of VOCs. This represents the best technology that has been used to minimize VOC emissions from liquid filling operations.

At this time, no additional modifications have been identified which would assist in emission reductions from propellant filling operations or from liquid filling operations. Therefore, further process modifications are not considered technically feasible for implementation as BACT.

ADD-ON VOC CONTROL TECHNOLOGIES

There are two categories of controls for volatile organic compounds (VOCs); destruction processes and reclamation processes. Destruction technologies reduce the VOC concentration by high temperature oxidation into carbon dioxide and water vapor. Reclamation is the capture of VOCs for reuse or disposal. Commercially available combinations of reclamation and destruction technologies were also considered.

Destruction Control Methods FEASIBLE

Combustion control technologies include:

- Recuperative Thermal Oxidation,
- Regenerative Thermal Oxidation, and
- Catalytic Oxidation.

The destruction of organic compounds usually requires temperatures ranging from 1,200°F to 2,200°F for direct thermal incinerators or 600°F to 1,200°F for catalytic systems. Combustion temperature depends on the chemical composition and the desired destruction efficiency. Carbon dioxide and water vapor are the typical products of complete combustion. Turbulent mixing and combustion chamber retention times of 0.5 to 1.0 seconds are needed to obtain high destruction efficiencies.

Fume incinerators typically need supplemental fuel. Concentrated VOC streams with high heat contents obviously require less supplementary fuel than more dilute streams. VOC streams sometimes have a heat content high enough to be self-sustaining, but a supplemental fuel firing rate equal to about 5% of the total incinerator heat input is usually needed to stabilize the burner flame. Natural gas is the most common fuel for VOC incinerators, but fuel oil is an option in some circumstances.

Innovative Control Methods NOT FEASIBLE

Review of the literature indicates that other technologies may destroy VOC pollutants. Biofilters, either outdoor piles similar to compost piles or sophisticated installations involving fixed film on granular activated carbon substrates, appear to work, although such systems are large and require considerable space. Systems applying ultraviolet radiation, either with a titanium dioxide catalyst or in combination with hydrogen peroxide, also show promise. None of these innovative applications are well documented, with little information on process costs; therefore, none of these novel technologies are considered commercially available or technically feasible.

Reclamation Control Methods

Organic compounds may be reclaimed by one of three possible methods; carbon adsorption, gas absorption (scrubbing) or condensation. In general, the organic compounds are separated from the emission stream and reclaimed for reuse or disposal. Depending on the nature of the contaminant and the inlet concentration of the emission stream, recovery technologies can reach efficiencies of 98%.

Carbon Adsorption NOT FEASIBLE

Carbon adsorption is a surface phenomenon where attraction between the carbon and the VOC molecules binds the pollutants to the carbon surface. Both carbon and VOC are chemically intact after adsorption. The VOCs may be removed, or desorbed, from the carbon and reclaimed or destroyed.

The majority of the propellant material used by KIK (isobutene, n-butane, and propane) are low molecular weight compounds, and have very high vapor pressures; the materials are gases at room temperature. Carbon adsorption is much better suited to VOC materials with vapor pressures such that they are liquids at room temperature. For this reason, carbon adsorption is not considered technically feasible for the application as BACT to the proposed new filling lines.

Gas Absorption NOT FEASIBLE

Gas absorption is a unit operation where components of a gas phase mixture (pollutants) are selectively transferred to a relatively nonvolatile liquid, usually water. Sometimes, organic liquids or non-volatile hydrocarbons, are suitable absorption solvents. The choice of solvent depends on cost and the solubility of the pollutant in the solvent.

Gas absorption, also known as “scrubbing”, is feasible when the VOC materials are readily soluble in the absorbent material. The most expensive and readily available solvent for absorption is water. The propellant materials at KIK are not readily soluble in water. To absorb gases such as isobutene and propane another solvent would be required as absorbent material. These gases are soluble in certain alcohols or ethers. However, these materials are VOCs themselves. Therefore, gas absorption is not considered technically feasible for this application for the control of VOC emissions. Gas absorption is, however, considered in conjunction with the oxidation control technologies described above to control hydrogen fluoride (HF) emissions that would be created from the combustion of propellants containing HCFC-152a.

Condensation NOT FEASIBLE

Condensation is the separation of VOCs from an emission stream through a phase change, by either increasing the system pressure or, more commonly, lowering the system temperature below the dew point of the VOC vapor. When condensers are used for air pollution control, they usually operate at the pressure of the emission stream, and typically require a refrigeration unit to obtain the temperature necessary to condense the VOCs from the emission stream.

Condensation is viable only for fairly concentrated VOC streams of materials that have a high boiling point. Because the propellants are gases at room temperature, they are not readily condensable and therefore, condensation is not technically feasible for this application.

Combination Control Methods

In some cases, a combination of control technologies offers the most efficient and cost effective VOC control.

Carbon Adsorption with Thermal Oxidizer NOT FEASIBLE

The combination of carbon adsorption with recuperative thermal oxidizer (VOC Concentration/Oxidation) is available from several vendors. This system concentrates the VOC stream by using carbon adsorption to remove low concentration VOCs in an emission stream and then uses a lower volume of hot air, commonly one-tenth the original flow, to desorb the pollutants. A recuperative incinerator for destroying pollutants in the concentrated stream is much smaller and has lower supplemental fuel requirements than an incinerator sized for the full emission stream volume. Based on the technically infeasible reasons for the carbon adsorption, the VOC Concentration / Oxidation will also be technically infeasible.

Gas Absorption with Thermal Oxidizer NOT FEASIBLE

Gas absorption systems can also be used to concentrate emission streams to reduce the size of destruction equipment. The concentration effect is not as extreme as with carbon adsorption, a concentrated exhaust stream one quarter the volume of the inlet stream seems to be the practical limit. Gas absorption concentrators are typically suited for batch processes or to equalize pollutant concentrations in a variable stream. The physical characteristics stated above that drive the absorption of pollutants into a liquid also limit the opportunity to remove those pollutants from the liquid stream. Based on the technically infeasible reasons for the gas adsorption, the VOC Concentration / Oxidation will also be technically infeasible.

Summary of Control Options and Technical Feasibility

The following table summarizes the results of the technical feasibility analyses.

Table 2: Summary of Control Options and Technical Feasibility

Control Option	Category	Technical Feasibility
Propellant Substitution	Process Modification	Not Feasible
Through the Valve (TTV) pressure filling	Process Modification	Feasible
Under the Cup (UTC) filling	Process Modification	Feasible
Under the Cup (UTC) filling with vacuum collection, propellant reclaim and flare	Process Modification plus Add-On Control	Feasible
Enclosure of the Open Bowl Liquid Filling Reservoirs	Process Modification	Feasible
Recuperative Thermal Oxidation	Add-On Control	Feasible
Regenerative Thermal Oxidation	Add-On Control	Feasible
Catalytic Oxidation	Add-On Control	Feasible
Biofiltration	Innovative Method	Not Feasible
Carbon Adsorption	Reclamation	Not Feasible
Gas Absorption	Reclamation	Not Feasible
Condensation	Reclamation	Not Feasible
Carbon Adsorption with Thermal Oxidizer	Reclamation plus Add-On Control	Not Feasible
Gas Adsorption with Thermal Oxidizer	Reclamation plus Add-On Control	Not Feasible

The following options were determined to be technically feasible so they are ranked according to control effectiveness in the next section:

- Through the Valve (TTV) pressure filling
- Under the Cup (UTC) filling
- Under the Cup (UTC) filling with vacuum collection, propellant reclaim and flare
- Enclosure of the Open Bowl Liquid Filling Reservoirs Liquid Filling
- Recuperative Thermal Oxidation
- Regenerative Thermal Oxidation
- Catalytic Oxidation

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

After elimination of the infeasible control measures revealed from Step 2, the following list of control measures represent the “top” BACT for this facility:

Table 3: Ranking of Control Technologies	
Control Method	**Control Effectiveness**
ADD-ON CONTROL TECHNOLOGY	
1. Recuperative Thermal Oxidation	98%
2. Regenerative Thermal Oxidation	98%
3. Catalytic Oxidation	98%
PROCESS MODIFICATIONS	
4. Through the Valve (TTV) pressure filling	83% more than uncontrolled UTC
5. Under the Cup (UTC) filling with vacuum collection, propellant reclaim and Flare	<83% more than uncontrolled UTC*
6. Under the Cup (UTC) filling	base filling method
7. Enclosure of the Open Bowl Liquid Filling Reservoirs Liquid Filling	**

* Propellant 152A cannot be destroyed through a flare, which diminishes the overall destruction efficiency of the UTC filling method using vacuum collection, solvent reclamation system, and flare.
** Enclosure of the open bowl liquid filling reservoirs liquid filling is a process modification that is feasible for all operating scenarios. The additional control effectiveness of this process modification is undetermined.

Step 4: Evaluate the Most Effective Controls and Document the Results

Based on results above, the following "top" emission limitations for pollutant/source combinations have been summarized and reviewed to determine the VOC BACT requirements for this modification:

(1) Recuperative Thermal Oxidation.

(2) Regenerative Thermal Oxidation.

(3) Catalytic Oxidation.

(4) Through the Valve (TTV) pressure filling with enclosure of the open bowl liquid filling reservoirs liquid filling.

ECONOMIC IMPACTS

It would not be cost effective to use oxidation technology to reduce VOC emissions from the airflow of the entire operation because of the volume of the air that would need to be vented to the control device. However, since propellant filling operations are isolated from the rest of the process, cost analyses were conducted to estimate the feasibility of controlling this portion of the VOC emissions.

Plant-specific cost information utilized in computing the cost of add-on control equipment included the following:

- The air flow rate from each gas house stack is assumed to be 12,000 acfm.
- The temperature of the air stream was assumed to be 75°F.

- Based on prior emission testing results, the following conservative emission factors have been incorporated into KIK's Part 70 operating permit to use in calculating its VOC emissions from operations associated with aerosol filling operations. It is often difficult to quantify (and therefore to regulate) VOC emissions from individual process vents. As a result, KIK has historically characterized its emissions as:

  - 0.03 lb VOC/lb VOC liquid, and

  - 0.0013 lb VOC/can filled with VOC aerosol propellant

- Actual utility and labor costs from the plant were used in computing site-specific costs. These costs include:

  - Electricity Cost = $0.06/kWh

  - Natural Gas Cost = $8.95/1000 scf

  - Cooling Water Cost = $0.032/1000 gal

  - Operating Labor Cost = $19.00/hr

  - Maintenance Labor Cost = $29.00/hr

In addition to standard equipment costs associated with specific equipment designs, additional auxiliary equipment costs may be necessary in instances where special considerations are needed to address individual plant needs. In the case of designing equipment for this situation at the KIK Indiana plant, additional auxiliary costs are believed necessary to address the following:

1. Costs associated with additional ductwork. Due to the nature of this application, considerable ductwork would be necessary to route all aerosol lines gas house stacks to a common control unit. In addition, the location of this equipment is such that additional ductwork would be necessary to route the collected air stream to a location where a collector could be constructed.

2. Costs associated with a boiler to produce steam for carbon adsorption control systems. The plant does not currently have the capacity to produce steam for control systems which would require steam (i.e., carbon adsorption control systems). The cost of a package boiler to produce necessary steam will be included in analyses, which estimate control costs for carbon adsorption control systems.

IMPACTS of ADD-ON VOC CONTROL TECHNOLOGIES

IDEM evaluated the economic feasibility of several thermal destruction control methods on propellant filling operations. Although it may be technically feasible to employ such controls on liquid filling operations, such controls would need to handle a larger, more dilute air flow rate (due to the need to include a larger number of collection points), and therefore would be less cost effective on a cost per ton basis.

The control options considered in this analysis were:

- Recuperative thermal oxidation;

- Regenerative thermal oxidation; and

- Catalytic oxidation.

There are two proposed scenario for using an oxidizer:

Scenario 1 – One Oxidizer per Line:

Each of the four new aerosol filling lines are equipped with a dedicated oxidizer and the oxidizer is designated with a bypass valve to allow for direct discharge of the gas house emission if the propellant contains HCFC-152a. Direct discharge of propellant containing HCFC-152a is never used alone, but in conjunction with other VOCs. However, the formation of highly corrosive HF gas will be prevented. Having four separate oxidizers prevent having to vent emissions from all four lines when only one or two of the lines are utilizing propellant containing HCFC-152a.

Scenario 2 – One Large Oxidizer:

One large oxidizer is used to control the flow rate from all four aerosol filling lines. This would provide some economy of scale in controlling VOC emissions. However, given that any of the four lines could be utilizing propellant at any time containing HCFC-152a, the large oxidizer system must be designed to accommodate the combustion of HCFC-152a and the associated generation of HF gas. Therefore, the oxidizer must be equipped with an acid gas scrubber to remove the significant amount of HF generated in the combustion process.

Using results outlined above, estimated capital and annual operating costs were computed for each option that was considered to be technically feasible. Capital and annual operating costs were estimated using the methodology presented in the U.S. EPA's "OAQPS Control Cost Manual" (U.S. EPA 1996). The direct and indirect installation costs for the control technologies are estimated factors of the basic equipment costs. The basic equipment costs are estimated using formulas provided in the Control Cost Manual based on the required air flow rate of the stream to be controlled. The costs are escalated from the base year to the present using the Consumer Price Index (CPI) conversion factors that are based on the Congressional Budget Office and Office of Management and Budget estimates conducted in 2001.

Annual costs are comprised of maintenance labor and materials, utilities, administrative costs, and capital recovery. Labor and material costs for operation of the equipment were estimated using the assumption sin the "OAQPS Control Cost Manual" and actual KIK labor costs. Natural gas requirements were calculated using a heat balance and accounting for the Btu heating value that is present from the VOCs in the exhaust stream. Electricity requirements for operating the system fan were calculated using the equations in the "OAPQS Control Cost Manual." Actual KIK utility costs were used. The capital recovery costs were based on an expected equipment life of 10 years and an interest rate of 8.25%.

Economic impacts for the control technologies evaluated are summarized below.

Table 4: Cost Summaries for Control Technology Feasible for the KIK Expansion

Technology (Scenario listed as 1 or 2)	Capital Cost	Annual Cost	Cost Effectiveness ($/ton removed)
Recuperative Thermal 1	$3,018,400	$2,746,800	$21,600
Regenerative Thermal 1	$4,762,000	$1,554,800	$12,200
Catalytic Oxidation 1	$3,726,000	$2,253,600	$17,700
Recuperative Thermal 2	$3,509,700	$3,179,340	$25,000
Regenerative Thermal 2	$4,975,900	$1,934,140	$15,200
Catalytic Oxidation 2	$4,259,800	$2,694,040	$21,100

Detailed tables showing the capital and annual cost calculations are presented in Appendix C of this Technical Support Document.

Scenario 1 – One Oxidizer per Line:

In Scenario 1, a dedicated oxidizer is required for each line, and the oxidizer is bypassed when the line is filling products containing HCFC-152a to prevent the production of highly corrosive HF gas. In this scenario, the cost effectiveness is based on controlling 130.0 tons per year of VOCs over all four lines (32.5 tons per year per line), which represents all of the VOC that would be associated with propellants. This figure is conservatively high, as only a portion of these emissions would be captured through control of the gas houses emissions, and would not account for VOC emissions which were emitted during times that the control system was bypassed due to the presence of HCFC-152a.

The total capital investment for the add-on controls ranges from $3,018,400 for four recuperative thermal oxidizers to $4,762,000 for four regenerative thermal oxidizers. The annual operating costs for all four lines ranges from $1,554,800 for four regenerative thermal oxidizers to $2,746,800 for four recuperative thermal oxidizers. The associated cost effectiveness of control ranges from $12,200 per ton of VOC controlled for regenerative thermal oxidation to $21,600 per ton of VOC controlled for recuperative thermal oxidation.

Scenario 2 – One Large Oxidizer:

In scenario 2, one large oxidizer is used to control the flow rate from all four aerosol filling lines. The oxidizer is equipped with an acid gas scrubber to remove the significant amount of HF generated in the combustion process. In the scenario, the cost effectiveness is based on controlling 130.0 tons over all four lines, which represents 98% of the total VOC emitted (both alone and combined with HCFC-152a). As noted above, this emission rate is conservative, as some of these emissions would not occur in the gas house.

The total capital investment for the add-on controls ranges from $1,157,800 for recuperative thermal oxidation to $2,624,000 for regenerative thermal oxidation. The acid gas scrubber used in this scenario to remove HF created during the combustion of HCFC-152a in the oxidizer has a total capital investment of $2,351,900, with an annual operating cost of $652,240. The cost effectiveness for this scenario is based on the total annual cost of the oxidizer plus the annual cost of the acid gas scrubber. The total annual operating cost ranges from $1,934,140 for regenerative thermal oxidation to $3,179,340 for recuperative thermal oxidation. The associated cost effectiveness of control ranges from $15,200 per ton of VOC controlled for regenerative thermal oxidation to $25,000 per to of VOC controlled for recuperative thermal oxidation.

OTHER IMPACTS

Direct energy impacts would vary widely for the oxidation control alternatives given the difference in thermal recovery efficiency between regenerative oxidation and the other oxidation technologies.

The primary environmental impacts for oxidation-based technologies would be increased nitrogen oxide (NO_X) and carbon monoxide (CO) emissions, which are regulated emissions. The destruction of HCFC-152a results in creation of hydrofluoric acid emissions. Secondary control systems would be required to control such emissions. There are also safety concerns regarding the use of thermal control systems in situations where VOC vapors may be present in explosive concentrations, specifically in propellant filling operations.

CONCLUSION: THERMAL AND CATALYTIC OXIDATION IS NOT ECONOMICALLY FEASIBLE

Based on the analysis provided above, thermal and catalytic destruction control methods are not economically feasible for Lines 5-8.

IMPACTS of PROPELLANT SUBSTITUTION (TTV) NO ADVERSE ECONOMIC IMPACT

Costs associated with implementing the existing level of control of Through the Valve (TTV) pressure filling with enclosure of the open bowl liquid filling reservoirs liquid filling on the new aerosol filling lines are negligible.

Summary of Emission Limitations for Existing Aerosol Filling Facilities

Emission limitations associated with aerosol can filling process were obtained based on a review of information contained in RBLC, historic Technical Report Documents prepared by IDEM for similar types of facilities and other research of other similar facilities. The emission limitations associated with this operation are summarized below.

Table 5: Summary of Emission Limitations for Aerosol Filling Facilities

Facility	Emission Units	Identified Through	Date	BACT/LAER Determination
APG, Inc. / KIK Custom Products (Accra Pac Group, Inc.) 2730 Middlebury St. Elkhart, IN	Lines 5-8	**PROPOSED BACT**	2008	- PSD Minor VOC Limit: 249 tpy (rolled monthly) - 0.03 lbs VOC/gal VOC - 0.0013 lbs VOC/can - TTV filling method at all times when product allows - Enclosure of open bowl liquid filling reservoirs where possible Add-on control is not feasible.
APG, Inc. / KIK Custom Products (Accra Pac Group, Inc.) 2730 Middlebury St. Elkhart, IN	Lines 3, 4, 50-58, and 61-63	RBLC ID: IN-0102; PSD permit 039-6875-00434	2001	- VOC Limit: 249 tpy (rolled monthly; revised in 2008) - 0.03 lbs VOC/gal VOC - 0.0013 lbs VOC/can - 0.0111 lbs VOC/can - Pressure filling or TTV filling method at all times when product allows - UTC fill method with vapor reclaim when TTV cannot be utilized - Enclosure of open bowl liquid filling reservoirs where possible - Use raw materials with lowest possible VOC content & vapor pressure Add-on control is not feasible.
Sherwin-Williams 636 E. 40th St. Holland, MI	Installation of replacement pressure gasser (TTV) on Line 10	Michigan DEQ permit review	2003	BACT: TTV filling. Add-on control is not economically feasible.
Sherwin-Williams 636 E. 40th St. Holland, MI	Installation of pressure filling technology on Lines 1 through 6	RBLC ID: MI-0277	1999	TTV or “pressure” filling. Add-on control is not economically feasible. Significant safety issues exist with retrofitting an oxidizer.

Table 5: Summary of Emission Limitations for Aerosol Filling Facilities				
Facility	**Emission Units**	**Identified Through**	**Date**	**BACT/LAER Determination**
S.C. Johnson & Sons 1525 Howe St. Racine, WI	3 aerosol filling operations, 3 TTV filling operations, 1 pilot scale filling operation 1 pilot scale TTV filling operation	RBLC ID: WI-0211	1995	LAER: TTV filling system. Significant safety concerns with oxidizer systems. Capture/reclaim systems as used on UTC filling are not feasible for TTV. Condensation is not feasible.
CCL Custom Manufacturing, Inc. 35 Martin St. Cumberland, RI	Aerosol filling line C07	Owned by the same parent company as KIK Custom Products, Inc.	1999	BACT: TTV filling. Add-on control is not economically feasible and significant safety issues exist with the oxidizer technologies.
	Aerosol filling line C09		2002	
KIK Custom Products, Inc. 1 West Hegeler Lane Danville, IL	3 new aerosol filling lines and compounding support equipment		2005	- TTV filling method or UTC filling method with solvent reclaim system and flare - 0.001 lb of VOM per can filled, on a three-hour average.
Airosol, Inc. 11th and Illinois Neodesha, KS	Aerosol filling	IDEM - TSD for PSD KIK permit 039-6875-00434	NA	UTC with vapor recovery
Apollo Industries 1850 S. Cobb Industrial Blvd. Smyrna, GA	Aerosol filling	IDEM - TSD for PSD KIK permit 039-6875-00434	NA	UTC filling
Pharmasol Corporation 1 Norfolk Ave. South Easton, MA	Aerosol filling	IDEM - TSD for PSD KIK permit 039-6875-00434	NA	No information
Rawn Company P.O. Box 9 Spooner, WI	Aerosol filling	IDEM - TSD for PSD KIK permit 039-6875-00434	NA	pressure filling and under the cup filling
United Coatings 2850 Festival Drive Kankakee, IL	Aerosol filling	IDEM - TSD for PSD KIK permit 039-6875-00434	NA	pressure filling

KIK proposes to use the TTV propellant filling method and enclosure of open bowl liquid filling reservoirs wherever possible. Because the limit proposed by KIK is equal to or more stringent than any existing limit required for any similar operation, and it is not economically feasible to install controls, this limit is the "top" BACT, and no further analysis is required.

Step 5: Selection of VOC BACT for 326 IAC 8-1-6

Pursuant to 326 IAC 8-1-6 (New Facilities; General Reduction Requirements), the permittee shall comply with the following BACT requirements for VOC for Lines 5, 6, 7 and 8:

(a) The VOC emission rates from Lines 5, 6, 7 and 8 shall not exceed:

(1) 0.0013 pounds per can filled with VOC aerosol propellant.

(2) 0.03 pounds per pound of VOC containing liquid.

(b) Through-the-valve pressure filling method shall be utilized at all times.

(c) Open bowl liquid filling reservoirs shall be enclosed wherever possible.

(d) Utilize raw materials having the lowest feasible VOC content and vapor pressure, whenever possible.

(e) Continue movement toward consumer products that contain lower levels of VOCs and lower VOC composite partial vapor pressures.

Compliance Determination and Monitoring

The OAQ has evaluated the compliance monitoring requirements and recommends the following:

Compliance with the VOC content limits shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the VOL manufacturer, or by using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

IDEM Contact

Questions regarding this proposed permit can be directed to:

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Office of Air Quality
100 North Senate Avenue
MC 61-53, Room 1003
Indianapolis, Indiana 46204-2251
Toll free (within Indiana): 1-800-451-6027 extension 3-0870
Or dial directly: (317) 233-0870
kcottrel@idem.in.gov

Please refer to Significant Source Modification No.: 039-25992-00434 and Significant Permit Modification No.: 039-26036-00434 in all correspondence.

Indiana Department of Environmental Management
Office of Air Quality

Appendix C – VOC BACT Economic Impacts Analysis (326 IAC 8–1–6)
Technical Support Document (TSD)
Significant Source Modification (SSM) of a Part 70 Source
Significant Permit Modification (SPM) of Part 70 Operating Permit

Source Description and Location

Company Name:	APG, Inc. / KIK Custom Products
Address City IN Zip:	2700 Middlebury St., 2730 Middlebury St., 711 Middleton Run Rd., and 2825 Middlebury St., Elkhart, IN 46515-2988
County:	Elkhart
SIC / NAICS Code:	7389
Significant Source Modification No.:	039-25992-00434
Significant Permit Modification No.:	039-26036-00434
Permit Reviewer:	Kimberly Cottrell
Date:	April 16, 2008

Results of Cost Analyses

The table below summarizes the cost analyses submitted by APG, Inc. / KIK Custom Products. The subsequent pages of this document are the complete calculations provided by APG, Inc. / KIK Custom Products. IDEM has reviewed these calculations and verified their accuracy.

Emission Units:	Aerosol Can Filling Lines 5-8		
Limited Annual Production Rate:	200,000,000	cans/year	*from page 2 of TSD Appendix A*
Total Limited Potential to Emit:	60.63	tons/year	*from page 2 of TSD Appendix A*
Limited Potential to Emit from Propellant Filling*:	**32.50**	**tons/year**	*from page 2 of TSD Appendix A*

*It would not be cost effective to add on control to reduce VOC emissions from the airflow of the entire operation. However, since propellant filling operations are isolated from the rest of the process, cost analyses were conducted to estimate the feasibility of controlling this portion of the VOC emissions.

Control Scenario	Technology (Scenario listed as 1 or 2)	Capital Cost	Annual Cost	Cost Effectiveness ($/ton removed)	Control Effectiveness (%)
Oxidizer Controls Scenario 1 - One Oxidizer per Line, No Control on HCFC-152a	Recuperative Thermal 1	$3,018,400	$2,746,800	$21,600	98%
	Regenerative Thermal 1	$4,762,000	$1,554,800	$12,200	98%
	Catalytic Oxidation 1	$3,726,000	$2,253,600	$17,700	98%
Oxidizer Controls Scenario 2 - One Oxidizer for All Three Lines with Acid Gas Control for HF	Recuperative Thermal 2	$3,509,700	$3,179,340	$25,000	98%
	Regenerative Thermal 2	$4,975,900	$1,934,140	$15,200	98%
	Catalytic Oxidation 2	$4,259,800	$2,694,040	$21,100	98%
Existing Level of Control	TTV with propellant reclaim	$0	$0	$0	NA

Recuperative Thermal Oxidation
Scenario 1 - One Oxidizer per Line, No Control on HCFC-152a
Capital Costs

Control Efficiency	98%
Heat Recovery	70%
Operating Schedule (hr/yr)	8,760
Actual Flow Rate (acfm)	12,000
Exhaust Temperature (°F)	75
Flow Rate and Std. Temp. (Q) (scfm)	11,843

Item	Factor	Cost
Direct Costs		
Purchased Equipment Costs		
Basic Equipment Cost	21,342*Q^0.25	$222,600
Escalated Equipment Cost (A1)	1989 - 2008 OAQPS	$378,700
Auxilliary Costs (A2)	As Required	$0
Total Equipment Costs (A)	A = A1+A2	$378,700
Instrumentation	0.1 x A	$37,900
Sales Taxes	0.03 x A	$11,400
Freight	0.05 x A	$18,900
Total Purchased Equipment Costs (B)	B = 1.18 x A	$446,900
Direct Installation costs		
Foundation and Supports	0.08 x B	$35,800
Handling and Erection	0.14 x B	$62,600
Electrical	0.04 x B	$17,900
Piping	0.02 x B	$8,900
Insulation for Ductwork	0.01 x B	$4,500
Painting	0.01 x B	$4,500
Total Direct Installation costs	0.3 x B	$134,200
Site Preparation	As Required	$10,000
Buildings & Safety Equipment	As Required	$25,000
Total Direct Costs	1.3 x B + Site Prep/Bldgs	$616,100
Indirect Costs (Installation)		
Engineering	0.1 x B	$44,700
Construction and Field Expenses	0.05 x B	$22,300
Contractor Fees	0.1 x B	$44,700
Start-up	0.02 x B	$8,900
Performance Test	0.01 x B	$4,500
Contingencies	0.03 x B	$13,400
Total Indirect Costs	0.31 x B	$138,500
Total Capital Investment	**1.61 x B + Site Prep/Bldgs**	**$754,600**

Recuperative Thermal Oxidation
Scenario 1 - One Oxidizer per Line, No Control on HCFC-152a
Annual Costs

Control Efficiency	98%
Heat Recovery	70%
Operating Schedule (hr/yr)	8,760
Actual Flow Rate (acfm)	12,000
Exhaust Temperature (°F)	75
Flow Rate and Std. Temp. (Q) (scfm)	11,843

Cost Item	Cost Factor	Unit Cost	Total Cost
Direct Annual Costs			
Operating Labor			
Operator	.5 hr/shift	$19 /hr	$10,400
Supervisor	15% of Operator	NA	$1,600
Operating Materials	NA	NA	
Maintenance			
Maintenance Labor	1.0 hr/shift	$29 /hr	$15,900
Supervisor	15% of Labor	NA	$2,400
Material	100% of Labor	NA	$15,900
Replacement Parts	NA	NA	NA
Utilities			
BTU Requirement	Heat Balance	51,260 MMBtu/yr	
Heat Contribution of Waste Stream	Assume Iso-Butane	1,318 MMBtu/yr	
Natural Gas Requirement	NA	49,942 MMBtu/yr	
Natural Gas Cost	NA	$8.95 /MMBtu	$447,000
Electricity Requirement	NA	366,070 kWhr/yr	
Electricity Cost	NA	$0.060 /kWhr	$22,000
Indirect Annual Cost			
Overhead	60% (Labor + Materials)		$27,700
Administrative Charges	2% TCI		$15,100
Property Taxes	1% TCI		$7,500
Insurance	1% TCI		$7,500
Equipment Life	NA	10 yrs	
Interest Rate	NA	8%	
Capital Recovery Factor	NA	0.151	
Capital Recovery	CRF x TCI		$113,700
Total Annual Cost per Filling Line			$686,700
Total VOC Emission Rate per Filling Line (tpy)			32.50
VOC Controlled (tpy)			31.85
Cost Effectiveness ($/ton controlled)			**$21,600**

Regenerative Thermal Oxidation
Scenario 1 - One Oxidizer per Line; No Control on HCFC-152a
Capital Costs

Control Efficiency	98%
Heat Recovery	95%
Operating Schedule (hr/yr)	8,760
Actual Flow Rate (acfm)	12,000
Exhaust Temperature (°F)	75
Flow Rate and Std. Temp. (Q) (scfm)	11,843

Item	Factor	Cost
Direct Costs		
Purchased Equipment Costs - RTO		
Basic Equipment Cost	2.204E05 + 11.57Q	$357,400
Escalated Equipment Costs (A1)	1989-2008 OAQPS	$608,100
Auxilliary Costs (A2)	As Required	$0
Total Equipment Costs (A)	A = A1+A2	$608,100
Instrumentation	0.1 x A	$60,800
Sales Taxes	0.03 x A	$18,200
Freight	0.05 x A	$30,400
Total Purchased Equipment Costs (B)	B = 1.18 x A	$717,500
Direct Installation costs		
Foundation and Supports	0.08 x B	$57,400
Handling and Erection	0.14 x B	$100,500
Electrical	0.04 x B	$28,700
Piping	0.02 x B	$14,400
Insulation for Ductwork	0.01 x B	$7,200
Painting	0.01 x B	$7,200
Total Direct Installation costs	0.3 x B	$215,400
Site Preparation	As Required	$10,000
Buildings & Safety Equipment	As Required	$25,000
Total Direct Costs	1.3 x B + Site Prep/Bldgs	$967,900
Indirect Costs (Installation)		
Engineering	0.1 x B	$71,800
Construction and Field Expenses	0.05 x B	$35,900
Contractor Fees	0.1 x B	$71,800
Start-up	0.02 x B	$14,400
Performance Test	0.01 x B	$7,200
Contingencies	0.03 x B	$21,500
Total Indirect Costs	0.31 x B	$222,600
Total Capital Investment	**1.61 x B + Site Prep/Bldgs**	**$1,190,500**

Regenerative Thermal Oxidation
Scenario 1 - One Oxidizer per Line; No Control on HCFC-152a
Annual Costs

Control Efficiency	98%
Heat Recovery	95%
Operating Schedule (hr/yr)	8,760
Actual Flow Rate (acfm)	12,000
Exhaust Temperature (°F)	75
Flow Rate and Std. Temp. (Q) (scfm)	11,843

Cost Item	Cost Factor	Unit Cost	Total Cost
Direct Annual Costs			
Operating Labor			
Operator	.5 hr/shift	$19 /hr	$10,400
Supervisor	15% of Operator	NA	$1,600
Operating Materials	NA	NA	
Maintenance			
Maintenance Labor	.5 hr/shift	$29 /hr	$15,900
Supervisor	15% of Labor	NA	$2,400
Material	100% of Labor	NA	$15,900
Replacement Parts	NA	NA	NA
Utilities			
BTU Requirement	Heat Balance	8,543 MMBtu/yr	
Heat Contribution of Waste Stream	Assume Iso-Butane	1,318 MMBtu/yr	
Natural Gas Requirement	NA	7,225 MMBtu/yr	
Natural Gas Cost	NA	$8.95 /MMBtu	$64,700
Electricity Requirement	NA	385,337 kWhr/yr	
Electricity Cost	NA	$0.060 /kWhr	$23,100
Indirect Annual Cost			
Overhead	60% (Labor + Materials)		$27,700
Administrative Charges	2% TCI		$23,800
Property Taxes	1% TCI		$11,900
Insurance	1% TCI		$11,900
Equipment Life	NA	10 yrs	
Interest Rate	NA	8%	
Capital Recovery Factor	NA	0.151	
Capital Recovery	CRF x TCI		$179,400
Total Annual Cost per Filling Line			$388,700
VOC Emission Rate (tpy)			32.50
VOC Controlled (tpy)			31.85
Cost Effectiveness ($/ton controlled)			**$12,200**

Catalytic Oxidation
Scenario 1 - One Oxidizer per Line; No Control on HCFC-152a
Capital Costs

Control Efficiency	98%
Heat Recovery	70%
Operating Schedule (hr/yr)	8,760
Actual Flow Rate (acfm)	12,000
Exhaust Temperature (°F)	75
Flow Rate and Std. Temp. (Q) (scfm)	11,843

Item	Factor	Cost
Direct Costs		
Purchased Equipment Costs		
Basic Equipment Cost	1,433*Q^0.5527	$255,651
Escalated Equipment Costs (A1)	1989-2008 OAQPS	$435,000
Auxilliary Costs (A2)	As Required	$0
Total Equipment Costs (A)	A = A1+A2	$435,000
Instrumentation	0.1 x A	$43,500
Sales Taxes	0.03 x A	$13,100
Freight	0.05 x A	$21,800
Total Purchased Equipment Costs (B)	B = 1.18 x A	$513,400
Direct Installation costs		
Foundation and Supports	0.08 x B	$41,100
Handling and Erection	0.14 x B	$71,900
Electrical	0.04 x B	$20,500
Piping	0.02 x B	$10,300
Insulation for Ductwork	0.01 x B	$5,100
Painting	0.01 x B	$5,100
Total Direct Installation costs	0.3 x B	$154,000
Site Preparation	As Required	$30,000
Buildings & Safety Equipment	As Required	$75,000
Total Direct Costs	1.3 x B + Site Prep/Bldgs	$772,400
Indirect Costs (Installation)		
Engineering	0.1 x B	$51,300
Construction and Field Expenses	0.05 x B	$25,700
Contractor Fees	0.1 x B	$51,300
Start-up	0.02 x B	$10,300
Performance Test	0.01 x B	$5,100
Contingencies	0.03 x B	$15,400
Total Indirect Costs	0.31 x B	$159,100
Total Capital Investment	**1.61 x B + Site Prep/Bldgs**	**$931,500**

Catalytic Oxidation
Scenario 1 - One Oxidizer per Line; No Control on HCFC-152a
Annual Costs

Control Efficiency	98%
Heat Recovery	70%
Operating Schedule (hr/yr)	8,760
Actual Flow Rate (acfm)	12,000
Exhaust Temperature (°F)	75
Flow Rate and Std. Temp. (Q) (scfm)	11,843

Cost Item	Cost Factor	Unit Cost	Total Cost
Direct Annual Costs			
Operating Labor			
Operator	.5 hr/shift	$19 /hr	$10,400
Supervisor	15% of Operator	NA	$1,600
Operating Materials	NA	NA	
Maintenance			
Maintenance Labor	0.5 hr/shift	$29 /hr	$15,900
Supervisor	15% of Labor	NA	$2,400
Material	100% of Labor	NA	$15,900
Replacement Parts	N/A	N/A	N/A
Space Velocity	precious metal catalysts	1000 /min	
Catalyst Volume	NA	11.84 cu. ft.	
Catalyst Life	NA	2 yrs	
Interest Rate	NA	8%	
Capital Recovery Factor	NA	0.563	
Catalyst Cost		$3,170 /cu. ft.	
Catalyst Replacement Cost	volume x unit cost x CRF		$21,100
Utilities			
BTU Requirement	Heat Balance	31,092 MMBtu/yr	
Heat Contribution of Waste Stream	Assume Iso-Butane	1,318 MMBtu/yr	
Natural Gas Requirement	NA	29,774 MMBtu/yr	
Natural Gas Cost	NA	8.95 /MMBtu	$266,500
Electricity Requirement	NA	404,604 kWhr/yr	
Electricity Cost	NA	$0.060 /kWhr	$24,300
Indirect Annual Cost			
Overhead	60% (Labor + Materials)	N/A	$27,700
Administrative Charges	2% TCI	N/A	$18,600
Property Taxes	1% TCI	N/A	$9,300
Insurance	1% TCI	N/A	$9,300
Equipment Life	NA	10 yrs	
Interest Rate	NA	8%	
Capital Recovery Factor	NA	0.151	
Capital Recovery	CRF x TCI		$140,400
Total Annual Cost			$563,400
VOC Emission Rate (tpy)			32.50
VOC Controlled (tpy)			31.85
Cost Effectiveness ($/ton controlled)			**$17,700**

Recuperative Thermal Oxidation
Scenario 2 - One Oxidizer for All Three Lines with Acid Gas Control for HF
Capital Costs

Control Efficiency	98%
Heat Recovery	70%
Operating Schedule (hr/yr)	8,760
Actual Flow Rate (acfm)	48,000
Exhaust Temperature (°F)	75
Flow Rate and Std. Temp. (Q) (scfm)	47,372

Item	Factor	Cost
Direct Costs		
Purchased Equipment Costs		
Basic Equipment Cost	21,342*Q^0.25	$314,900
Escalated Equipment Cost (A1)	1989 - 2008 OAQPS	$535,800
Auxilliary Costs (A2)	As Required	$0
Total Equipment Costs (A)	A = A1+A2	$535,800
Instrumentation	0.1 x A	$53,600
Sales Taxes	0.03 x A	$16,100
Freight	0.05 x A	$26,800
Total Purchased Equipment Costs (B)	B = 1.18 x A	$632,300
Direct Installation costs		
Foundation and Supports	0.08 x B	$50,600
Handling and Erection	0.14 x B	$88,500
Electrical	0.04 x B	$25,300
Piping	0.02 x B	$12,600
Insulation for Ductwork	0.01 x B	$6,300
Painting	0.01 x B	$6,300
Total Direct Installation costs	0.3 x B	$189,600
Site Preparation	As Required	$40,000
Buildings & Safety Equipment	As Required	$100,000
Total Direct Costs	1.3 x B + Site Prep/Bldgs	$961,900
Indirect Costs (Installation)		
Engineering	0.1 x B	$63,200
Construction and Field Expenses	0.05 x B	$31,600
Contractor Fees	0.1 x B	$63,200
Start-up	0.02 x B	$12,600
Performance Test	0.01 x B	$6,300
Contingencies	0.03 x B	$19,000
Total Indirect Costs	0.31 x B	$195,900
Total Capital Investment	**1.61 x B + Site Prep/Bldgs**	**$1,157,800**
Total Capital Investment of Gas Absorber		**$ 2,351,900**
Total Capital Investment		**$3,509,700**

Recuperative Thermal Oxidation
Scenario 2 - One Oxidizer for All Three Lines with Acid Gas Control for HF
Annual Costs

Control Efficiency	98%
Heat Recovery	70%
Operating Schedule (hr/yr)	8,760
Actual Flow Rate (acfm)	48,000
Exhaust Temperature (°F)	75
Flow Rate and Std. Temp. (Q) (scfm)	47,372

Cost Item	Cost Factor	Unit Cost	Total Cost
Direct Annual Costs			
Operating Labor			
Operator	.5 hr/shift	$19 /hr	$10,400
Supervisor	15% of Operator	NA	$1,600
Operating Materials	NA	NA	
Maintenance			
Maintenance Labor	.5 hr/shift	$29 /hr	$15,900
Supervisor	15% of Labor	NA	$2,400
Material	100% of Labor	NA	$15,900
Replacement Parts	NA	NA	NA
Utilities			
BTU Requirement	Heat Balance	205,041 MMBtu/yr	
Heat Contribution of Waste Stream	Assume Iso-Butane	5,272 MMBtu/yr	
Natural Gas Requirement	NA	199,769 MMBtu/yr	
Natural Gas Cost	NA	$8.95 /MMBtu	$1,787,900
Electricity Requirement	NA	1,464,281 kWhr/yr	
Electricity Cost	NA	$0.060 /kWhr	$87,900
Indirect Annual Cost			
Overhead	60% (Labor + Materials)		$27,700
Administrative Charges	2% TCI		$23,200
Property Taxes	1% TCI		$11,600
Insurance	1% TCI		$11,600
Equipment Life	NA	10 yrs	
Interest Rate	NA	8%	
Capital Recovery Factor	NA	0.151	
Capital Recovery	CRF x TCI		$529,000
Annual Cost of Oxidizer			$2,525,100
Annual Cost of Gas Absorber			$654,240
Total Annual Cost			$3,179,340
Total VOC Emission Rate for all four Filling Lines (tpy)			130.00
VOC Controlled (tpy)			127.40
Cost Effectiveness ($/ton controlled)			**$25,000**

Regenerative Thermal Oxidation
Scenario 2 - One Oxidizer for All Three Lines with Acid Gas Control for HF
Capital Costs

Control Efficiency	98%
Heat Recovery	95%
Operating Schedule (hr/yr)	8,760
Actual Flow Rate (acfm)	48,000
Exhaust Temperature (°F)	75
Flow Rate and Std. Temp. (Q) (scfm)	47,372

Item	Factor	Cost
Direct Costs		
Purchased Equipment Costs - RTO		
Basic Equipment Cost	2.204E05 + 11.57Q	$768,500
Escalated Equipment Costs (A1)	1989-2008 OAQPS	$1,307,500
Auxilliary Costs (A2)	As Required	$0
Total Equipment Costs (A)	A = A1+A2	$1,307,500
Instrumentation	0.1 x A	$130,800
Sales Taxes	0.03 x A	$39,200
Freight	0.05 x A	$65,400
Total Purchased Equipment Costs (B)	B = 1.18 x A	$1,542,900
Direct Installation costs		
Foundation and Supports	0.08 x B	$123,400
Handling and Erection	0.14 x B	$216,000
Electrical	0.04 x B	$61,700
Piping	0.02 x B	$30,900
Insulation for Ductwork	0.01 x B	$15,400
Painting	0.01 x B	$15,400
Total Direct Installation costs	0.3 x B	$462,800
Site Preparation	As Required	$40,000
Buildings & Safety Equipment	As Required	$100,000
Total Direct Costs	1.3 x B + Site Prep/Bldgs	$2,145,700
Indirect Costs (Installation)		
Engineering	0.1 x B	$154,300
Construction and Field Expenses	0.05 x B	$77,100
Contractor Fees	0.1 x B	$154,300
Start-up	0.02 x B	$30,900
Performance Test	0.01 x B	$15,400
Contingencies	0.03 x B	$46,300
Total Indirect Costs	0.31 x B	$478,300
Total Capital Investment	**1.61 x B + Site Prep/Bldgs**	**$2,624,000**
Total Capital Investment of Gas Absorber		**$ 2,351,900**
Total Capital Investment		**$4,975,900**

Regenerative Thermal Oxidation
Scenario 2 - One Oxidizer for All Three Lines with Acid Gas Control for HF
Annual Costs

Control Efficiency	98%
Heat Recovery	95%
Operating Schedule (hr/yr)	8,760
Actual Flow Rate (acfm)	48,000
Exhaust Temperature (°F)	75
Flow Rate and Std. Temp. (Q) (scfm)	47,372

Cost Item	Cost Factor	Unit Cost	Total Cost
Direct Annual Costs			
Operating Labor			
Operator	.5 hr/shift	$19 /hr	$10,400
Supervisor	15% of Operator	NA	$1,600
Operating Materials	NA	NA	
Maintenance			
Maintenance Labor	.5 hr/shift	$29 /hr	$15,900
Supervisor	15% of Labor	NA	$2,400
Material	100% of Labor	NA	$15,900
Replacement Parts	NA	NA	NA
Utilities			
BTU Requirement	Heat Balance	34,173 MMBtu/yr	
Heat Contribution of Waste Stream	Assume Iso-Butane	5,272 MMBtu/yr	
Natural Gas Requirement	NA	28,902 MMBtu/yr	
Natural Gas Cost	NA	$8.95 /MMBtu	$258,700
Electricity Requirement	NA	1,541,348 kWhr/yr	
Electricity Cost	NA	$0.060 /kWhr	$92,500
Indirect Annual Cost			
Overhead	60% (Labor + Materials)		$27,700
Administrative Charges	2% TCI		$52,500
Property Taxes	1% TCI		$26,200
Insurance	1% TCI		$26,200
Equipment Life	NA	10 yrs	
Interest Rate	NA	8%	
Capital Recovery Factor	NA	0.151	
Capital Recovery	CRF x TCI		$749,900
Annual Cost of Oxidizer			$1,279,900
Annual Cost of Gas Absorber			$654,240
Total Annual Cost			$1,934,140
Total VOC Emission Rate for all four Filling Lines (tpy)			130.00
VOC Controlled (tpy)			127.40
Cost Effectiveness ($/ton controlled)			**$15,200**

Catalytic Oxidation
Scenario 2 - One Oxidizer for All Three Lines with Acid Gas Control for HF
Capital Costs

Control Efficiency	98%
Heat Recovery	70%
Operating Schedule (hr/yr)	8,760
Actual Flow Rate (acfm)	48,000
Exhaust Temperature (°F)	75
Flow Rate and Std. Temp. (Q) (scfm)	47,372

Item	Factor	Cost
Direct Costs		
Purchased Equipment Costs		
Basic Equipment Cost	1,433*Q^0.5527	$550,056
Escalated Equipment Costs (A1)	1989-2008 OAQPS	$935,900
Auxilliary Costs (A2)	As Required	$0
Total Equipment Costs (A)	A = A1+A2	$935,900
Instrumentation	0.1 x A	$93,600
Sales Taxes	0.03 x A	$28,100
Freight	0.05 x A	$46,800
Total Purchased Equipment Costs (B)	B = 1.18 x A	$1,104,400
Direct Installation costs		
Foundation and Supports	0.08 x B	$88,400
Handling and Erection	0.14 x B	$154,600
Electrical	0.04 x B	$44,200
Piping	0.02 x B	$22,100
Insulation for Ductwork	0.01 x B	$11,000
Painting	0.01 x B	$11,000
Total Direct Installation costs	0.3 x B	$331,300
Site Preparation	As Required	$30,000
Buildings & Safety Equipment	As Required	$100,000
Total Direct Costs	1.3 x B + Site Prep/Bldgs	$1,565,700
Indirect Costs (Installation)		
Engineering	0.1 x B	$110,400
Construction and Field Expenses	0.05 x B	$55,200
Contractor Fees	0.1 x B	$110,400
Start-up	0.02 x B	$22,100
Performance Test	0.01 x B	$11,000
Contingencies	0.03 x B	$33,100
Total Indirect Costs	0.31 x B	$342,200
Total Capital Investment of CO	**1.61 x B + Site Prep/Bldgs**	**$1,907,900**
Total Capital Investment of Gas Absorber		**$ 2,351,900**
Total Capital Investment		**$4,259,800**

Catalytic Oxidation
Scenario 2 - One Oxidizer for All Three Lines with Acid Gas Control for HF
Annual Costs

Control Efficiency	98%
Heat Recovery	70%
Operating Schedule (hr/yr)	8,760
Actual Flow Rate (acfm)	48,000
Exhaust Temperature (°F)	75
Flow Rate and Std. Temp. (Q) (scfm)	47,372

Cost Item	Cost Factor	Unit Cost	Total Cost
Direct Annual Costs			
Operating Labor			
Operator	.5 hr/shift	$19 /hr	$10,400
Supervisor	15% of Operator	NA	$1,600
Operating Materials	NA	NA	
Maintenance			
Maintenance Labor	0.5 hr/shift	$29 /hr	$15,900
Supervisor	15% of Labor	NA	$2,400
Material	100% of Labor	NA	$15,900
Replacement Parts	N/A	N/A	N/A
Space Velocity	precious metal catalysts	1000 /min	
Catalyst Volume	NA	47.37 cu. ft.	
Catalyst Life	NA	2 yrs	
Interest Rate	NA	8%	
Capital Recovery Factor	NA	0.563	
Catalyst Cost		$3,170 /cu. ft.	
Catalyst Replacement Cost	volume x unit cost x CRF		$84,500
Utilities			
BTU Requirement	Heat Balance	124,369 MMBtu/yr	
Heat Contribution of Waste Stream	Assume Iso-Butane	5,272 MMBtu/yr	
Natural Gas Requirement	NA	119,097 MMBtu/yr	
Natural Gas Cost	NA	8.95 /MMBtu	$1,065,900
Electricity Requirement	NA	1,618,416 kWhr/yr	
Electricity Cost	NA	$0.060 /kWhr	$97,100
Indirect Annual Cost			
Overhead	60% (Labor + Materials)	N/A	$27,700
Administrative Charges	2% TCI	N/A	$38,200
Property Taxes	1% TCI	N/A	$19,100
Insurance	1% TCI	N/A	$19,100
Equipment Life	NA	10 yrs	
Interest Rate	NA	8%	
Capital Recovery Factor	NA	0.151	
Capital Recovery	CRF x TCI		$642,000
Annual Cost of Oxidizer			$2,039,800
Annual Cost of Gas Absorber			$654,240
Total Annual Cost			$2,694,040
Total VOC Emission Rate for all four Filling Lines (tpy)			130.00
VOC Controlled (tpy)			127.40
Cost Effectiveness ($/ton controlled)			**$21,100**