



*Mitchell E. Daniels, Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

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

TO: Interested Parties / Applicant  
DATE: February 21, 2008  
RE: American Chemical Service / 089-25963-00020  
FROM: Matthew Stuckey, Deputy Branch Chief  
Permits Branch  
Office of Air Quality

### Notice of Decision – Approval

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 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days from 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.

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  
FNPER-AM.dot12/3/07



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live.*

Mitchell E. Daniels, Jr  
Governor

Thomas W. Easterly  
Commissioner

100 North Senate Avenue  
MC 61-53 IGCN 1003  
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Mr. Thomas Froman  
American Chemical Service, Inc.  
P.O. Box 190  
Griffith, Indiana 46319

February 21, 2008

Re: Registration Notice-Only Change  
No. R089-25963-00020

Dear Mr. Froman:

American Chemical Service, Inc. was issued a Registration No. R089-22541-00020 on March 9, 2006 for a stationary specialty chemical manufacturing plant located at 420 South Colfax Avenue, Griffith, Indiana 46319. On January 23, 2008, the Office of Air Quality (OAQ) received a letter from the source requesting the following changes:

1. The storage tank designated as 6007, with a storage capacity of 27,000 gallons of vegetable oils has been removed from the source. Tank 6007 has been replaced by tank 855, which has a storage capacity of 36,720 gallons and is currently listed as an "Idle" tank in our registration. Tank 855 has been renumbered as tank 6001.
2. The storage tank designated as 6006, with a storage capacity of 17,000 gallons has been removed from service. Tank 6006 has been replaced by tank 857, which has a storage capacity of 35,000 gallons and is currently listed as an "Idle" tank in our registration. Tank 857 has been renumbered as tank 6032. Tank 6006 will remain onsite as "idle" equipment.
3. Tank 5106 listed as "Idle" in our registration has been put in service for storage of vegetable oils in the batch bvo process. Tank 5106 has been renumbered as tank 6007.
4. Blend tank 805 listed as "Idle" in our registration has been put in service for product storage of modified vegetable oils in the batch polyol process.
5. The maximum process capacity for various existing storage tanks has been updated due to the addition of the previously idle storage tanks.

The addition of these units to the registration is considered a notice-only change, since the potential emissions of regulated criteria pollutants and hazardous air pollutants are less than the ranges specified in 326 IAC 2-5.5-6(d)(10) and 326 IAC 2-5.5-6(d)(12). The uncontrolled/unlimited potential to emit of the entire source will continue to be within the threshold levels specified in 326 IAC 2-5.5-1(b)(1). No new state rules are applicable to this source. There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) or National Emission standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 20 and 40 CFR Part 61, 63) included in this notice-only change.

In addition, IDEM has begun implementing a new procedure and will no longer list the name or title of the Authorized Individual (AI) in registrations. Pursuant to 326 IAC 2-5.5-6, the registration is hereby revised as follows, with deleted language as ~~strikeouts~~ and new language **bolded**:

Batch EVO Process

...

- (f) Two (2) EVO storage tanks (designated as Units ~~6006~~**6032** and 6026), **each** constructed in ~~1973 and~~ 1998, having a maximum volume of ~~17,000~~**35,000** and 34,825 gallons, a maximum process weight capacity of ~~432~~**720** and ~~865~~ pounds per hour, and exhausting to pipe vents ~~6006-V~~ **6032-V** and 6026-V, respectively.
- (g) ~~One (1) raw material storage tank for storage of linseed oil (designated as Unit 6007), constructed in 1973, and having a maximum volume of 27,000 gallons, a maximum process weight capacity of 999 pounds per hour, and exhausting to pipe vent 6007-V.~~  
**One (1) raw material storage tank for storage of vegetable oil (designated as Unit 6001), constructed in 1992, having a maximum volume of 36,720 gallons, a maximum process weight capacity of 999 pounds per hour, and exhausting to pipe vent 6001-V.**
- ...
- (r) One (1) storage tank for storage of EVO (designated as Unit 6029), constructed in 1998, with a maximum volume of 34,825 gallons, a maximum process weight capacity of ~~865~~**720** pounds per hour, and exhausting to pipe vent 6029-V.

...

Batch BVO Process

...

- (ff) One (1) raw material storage tank for storage of vegetable oil (designated as Unit 6007), constructed in 1991, having a maximum volume of 7,200 gallons, a maximum process weight capacity of 46 pounds per hour, and exhausting to pipe vent 6007-V.**
- (#gg) One (1) raw material storage tank for storage of soybean oil (designated as Unit 6012), constructed in 1976, with a maximum volume of 10,000 gallons, a maximum process weight capacity of 108 pounds per hour, and exhausting to pipe vent 6012-V.**
- (gghh) One (1) raw material storage tank for storage of hexane (designated as Unit 6016), constructed in 1976, with a maximum volume of 11,200 gallons, a maximum process weight capacity of 23 pounds per hour, and exhausting to pipe vent 6016-V.**
- (hhii) One (1) thin film condensate receiver (designated as Units 6017), constructed in 1976, having a maximum volume of 11,200 gallons, a maximum process weight capacity of 55 pounds per hour, and exhausting to pipe vent 6017-V.**
- (#jj) One (1) separation vessel (designated as Units 6019), constructed in 1976, having a maximum volume of 5,500 gallons, a maximum process weight capacity of 316 pounds per hour, and exhausting to pipe vent 6019-V.**
- (jjkk) One (1) open top tank for treatment of hexane-contaminated waste water (designated as Units 6020), constructed in 1976, having a maximum volume of 1,000 gallons, and a maximum process weight capacity of 128 pounds per hour.**
- (kkll) One (1) bromine scrubber (designated as Unit 6100), constructed in 1983, with a maximum volume of 950 gallons, a maximum process weight capacity of 0.8 pounds per hour, and exhausting to pipe vent 6100-V.**
- (#mm) One (1) process wash vessel (designated as Units C-3), constructed in 1973, having a maximum volume of 4,860 gallons, a maximum process weight capacity of 289 pounds per hour, and exhausting to pipe vent C-3-V.**
- (#mnn) One (1) batch reactor (designated as Units C-10), constructed in 1976, having a maximum volume of 750 gallons, a maximum process weight capacity of 316 pounds per hour, and exhausting to pipe vent C-10-V.**

### Batch Polyol Process

- ~~(rr)~~ One (1) storage tank for storage of methanol-contaminated wastewater (designated as Unit 351), constructed in 1972, having a maximum volume of 14,900 gallons, a maximum process weight capacity of 123 pounds per hour, and exhausting to pipe vent 351-V.
- ~~(eepp)~~ One (1) batch pot distillation vessel (designated as Unit V-500), constructed in 1980, modified in 2005, having a maximum volume of 6,450 gallons, a maximum process weight capacity of 2,998 pounds per hour, and exhausting to pipe vents 500-V and 4100-V.
- ~~(ppqq)~~ Two (2) product storage tanks for storage of polyol (designated as Units 501 and 502), both constructed in 1991, having a maximum volume of 36,720 gallons, a maximum process weight capacity of 4,072,132 pounds per hour, and exhausting to pipe vents 501-V and 502-V, respectively.
- (rr) One (1) product storage tank for storage of polyol (designated as Unit 805), constructed in 1991, having a maximum volume of 24,000 gallons, a maximum process weight capacity of 2,132 pounds per hour, and exhausting to pipe vent 805-V.**
- ~~(eeqq)~~ Two (2) raw material storage tanks for storage of EVO (designated as Units 504 and 506), constructed in 1975 and 1992, and having a maximum volume of 33,840 and 36,720 gallons, a maximum process weight capacity of 4,111 pounds per hour each, and exhausting to pipe vents 504-V and 506-V, respectively.
- ~~(rrtt)~~ One (1) raw material storage tank for storage of methanol (designated as Unit 505), constructed in 1972, modified in April 2005, with a maximum volume of 14,900 gallons, a maximum process weight capacity of 180 pounds per hour, and exhausting to pipe vent 505-V.
- ~~(ssuu)~~ One (1) distillation receiver, designated as Units R-500, constructed in 1980, having a maximum volume of 1,370 gallons, a maximum process weight capacity of 123 pounds per hour, and exhausting to pipe vent R-500-V;
- ~~(ttvv)~~ One (1) distillation receiver (designated as Unit R-401), constructed in 1972, modified in April 2005, having a maximum volume of 5,400 gallons, a maximum process weight capacity of 720 pounds per hour, and exhausting to pipe vents R-401-V.
- ~~(uuww)~~ One (1) batch polyol reactor (designated as Unit V-600), constructed in 1980, modified in April 2005, with a maximum volume of 8,000 gallons, a maximum process weight capacity of 4,234 pounds per hour, and exhausting to pipe vent 600-V.
- ~~(vxxx)~~ One (1) catalyst mixing vessel (designated as T-450), constructed in 2006, having a maximum volume of 80 gallons, a maximum process weight capacity of 37 pounds per hour, and exhausting to pipe vent 450-V.
- ~~(wwyy)~~ One (1) distillation receiver (designated as T-101; formerly designated as R-100), constructed in 1972, modified in April 2006 having a maximum volume of 1,300 gallons, a maximum process weight capacity of 47 pounds per hour, and exhausting to pipe vent 101-V.
- ~~(xxzz)~~ One (1) recycle vessel (designated as T-5500), constructed in 1972, modified in April 2006, having a maximum volume of 12,000 gallons, a maximum process weight capacity of 1,196 pounds per hour, and exhausting to pipe vent 5500-V.
- ~~(yyaaa)~~ One (1) polyol reactor (designated as V-400), constructed in 1972, modified in April 2006, having a maximum volume of 6,450 gallons, a maximum process weight capacity of

6,506 pounds per hour, and exhausting to pipe vent 400-V and 4100-V.

(~~zzbbb~~) One (1) reactor overhead receiver (designated as T-402; formerly designated as R-400), constructed in 1972, modified in April 2006, having a maximum volume of 1,300 gallons, a maximum process weight capacity of 47 pounds per hour, and exhausting to pipe vent 402-V.

(~~aaacc~~) One (1) polyol reactor (designated as V-100), constructed in 1972, modified in April 2006, having a maximum volume of 6,450 gallons, a maximum process weight capacity of 3,198 pounds per hour, and exhausting to pipe vent 100-V and 4100-V.

(~~bbddd~~) Two (2) product storage tanks (designated as T-301 and T-302), both constructed in 1972, modified in April 2006, having a maximum volume of 33,840 gallons each, a **maximum process weight capacity of 2,132 and 2,158 pounds per hour**, and exhausting to pipe vent 301-V and 302-V, respectively.

Combustion Related Sources

(~~eeeee~~) Two (2) natural gas-fired steam boilers, designated as Units B-100 and B-200, each respectively installed in 1972 and 1955, and rated at 10 MMBtu/hr and 6 MMBtu/hr. Unit B-100 can also use fuel oil no. 2 as emergency backup.

(~~defff~~) Two (2) natural gas-fired process hot oil heaters for heating of chemicals in reactors, designated as Units H-100 and H-200, each respectively constructed in 1972 and 1980, and rated at 5 MMBtu/hr and 5 MMBtu/hr.

(~~eeegg~~) One (1) natural gas fired emergency generator, designated as Unit G-100, constructed in 1979, operated at less than 500 hours per year, rated at 0.81 MMBtu/hr, and exhausting to stack G-100-V.

(~~ffhhh~~) One (1) fuel oil no. 2 fired emergency generator, designated as Unit G-200, constructed in 1973, operated at less than 500 hours per year, rated at 2.47 MMBtu/hr, and exhausting to stack G-200-V.

(~~gggiii~~) Two (2) above ground horizontal storage tanks for storage of fuel oil no. 2, designated as Units 405 and 406, each constructed in 1978, with a maximum volume of 9,000 gallons, used to provide an emergency back-up fuel source for steam boiler B-100. Unit 405 is also used to provide fuel oil no. 2 for annual test run purposes. Unit 406 is not currently storing any material, but may potentially store fuel oil no. 2 in the future.

Idle Process Equipment

The source also includes the following emission units that are not currently used (denoted as "idle equipment"). The source has stated that there are no plans for using these units and that the potential VOC and HAP emissions from these units are equal to zero. The source has agreed to a restriction on the use of this idle equipment, such that any change or modification to the idle equipment that may increase the potential to emit of Volatile Organic Compounds (VOCs) or hazardous air pollutants (HAPs) shall require prior approval from the Office of Air Quality.

Unit ID	Previous Process	Previous Function	Construction Date	Maximum Volume (gallons)
H-5200	Additive Manufacturing	Fume Incinerator	1978	NA
V-202	Additive Manufacturing	Raw Material Storage	1972	13,350
V-300	Additive Manufacturing	Recycle Vessel	1972	13,052
305	Additive Manufacturing	Raw Material Storage	1972	18,630
350	Additive Manufacturing	Waste Water Storage	1972	17,060

Unit ID	Previous Process	Previous Function	Construction Date	Maximum Volume (gallons)
352	Additive Manufacturing	Raw Material Storage	1972	14,900
353	Additive Manufacturing	Product or Intermediate Storage	1972	20,200
354	Additive Manufacturing	Product or Intermediate Storage	1972	24,530
355	Additive Manufacturing	Product or Intermediate Storage	1972	24,530
503	Additive Manufacturing	Product Storage	1975	33,840
<del>5406</del>	<del>Additive Manufacturing</del>	<del>Reactor Pre-Charge Vessel</del>	<del>1994</del>	<del>7,200</del>
5505	Additive Manufacturing	Raw Material Storage	1972	10,000
5506	Additive Manufacturing	Raw Material Storage	1972	13,000
102	Additive Blending	Raw Material Storage	1975 est.	5,000
103	Additive Blending	Raw Material Storage	1975 est.	5,000
801	Additive Blending	Blend Vessel	1971	8,675
802	Additive Blending	Blend Vessel	1971	17,880
803	Additive Blending	Blend Vessel	1971	8,675
804	Additive Blending	Blend Vessel	1971	12,166
<del>805</del>	<del>Additive Blending</del>	<del>Blend Vessel</del>	<del>1994</del>	<del>24,000</del>
847	Additive Blending	Product Storage	1980	36,720
848	Additive Blending	Raw Material Storage	1980	36,720
850	Additive Blending	Raw Material Storage	1989	18,009
851	Additive Blending	Raw Material Storage	1972	18,009
852	Additive Blending	Product Storage	1971 est.	18,000
853	Additive Blending	Raw Material Storage	1980	36,720
854	Additive Blending	Product Storage	1980	36,720
<del>855</del>	<del>Additive Blending</del>	<del>Raw Material Storage</del>	<del>1992</del>	<del>36,720</del>
856	Additive Blending	Product Storage	1994	22,173
<del>857</del>	<del>Additive Blending</del>	<del>Product Storage</del>	<del>1998</del>	<del>35,000</del>
859	Additive Blending	Product Storage	1975 est.	13,465
861	Additive Blending	Product Storage	1975 est.	13,465
V-11	Other	Batch Reactor	1975 est.	1,500
V-24	Other	Batch Reactor	1975 est.	3,000
<b>6006</b>	<b>Batch EVO</b>	<b>Product Storage</b>	<b>1973</b>	<b>17,000</b>

The following conditions shall be applicable:

...

(c) Pursuant to 326 IAC 8-9 (Volatile Organic Compounds; Volatile Organic Liquid Storage Vessels), the owner or operator shall maintain the following records for the life of the vessels (Units T-301, T-302, 351, 405, 406, 501, 502, 504, 505, 506, **805, 6001**, 6002, 6005, 6006, 6007, 6012, 6016, 6025, 6026, ~~and 6029~~, **and 6032**) as follows:

- (1) The vessel identification number;
- (2) The vessel dimensions;
- (3) The vessel capacity; and
- (4) A description of the emission control equipment for each vessel described in 326 IAC 8-9-4(a) and 4(b), if applicable, or a schedule for installation of emission control equipment on vessels described in 326 IAC 8-9-4(a) and 4(b), if applicable, with a certification that the emission control equipment meets the applicable standards.

...

IDEM, OAQ has decided to make additional revisions to the permit as described below. The permit is revised as follows with deleted language as ~~strikeouts~~ and new language **bolded**:

- (a) All occurrences of IDEM mailing addresses have been revised to include a mail code (MC) as follows:

Asbestos Section:	<b>MC 61-52 IGCN 1003</b>
Compliance Branch:	<b>MC 61-53 IGCN 1003</b>
Permits Branch:	<b>MC 61-53 IGCN 1003</b>
Technical Support and Modeling Section:	<b>MC 61-50 IGCN 1003</b>

The source shall continue to operate according to 326 IAC 2-5.5. Please find enclosed the revised registration.

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 Brian Williams, at (800) 451-6027, press 0 and ask for Brian Williams or extension 4-5375, or dial (317) 234-5375.

Original signed by,

Iryn Calilung, Section Chief  
Permits Branch  
Office of Air Quality

IC/BMW

Attachment: Revised Registration

cc: File - Lake County  
Lake County Health Department  
Air Compliance Section  
IDEM Northwest Regional Office  
Permit Tracking  
Compliance Data Section  
Permits Administrative and Development  
Billing, Licensing and Training Section



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Indianapolis, Indiana 46204-2251  
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## REGISTRATION OFFICE OF AIR QUALITY

**American Chemical Service, Inc.  
420 South Colfax Avenue  
Griffith, Indiana 46319**

Pursuant to 326 IAC 2-5.1 (Construction of New Sources: Registrations) and 326 IAC 2-5.5 (Registrations), (herein known as the Registrant) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this registration.

Registration No. 089-20338-00020	
Issued by: Original signed by Paul Dubenetzky, Chief Permits Branch Office of Air Quality	Issuance Date: December 14, 2004

First Registration Revision No. 089-22541-00020, issued on March 9, 2006.

Registration Notice-Only Change No. 089-25963-00020	Pages Affected: Entire Permit
Original signed by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: February 21, 2008

## SECTION A

## SOURCE SUMMARY

This registration 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 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Registrant 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 Registrant to obtain additional permits pursuant to 326 IAC 2.

### A.1 General Information

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The Registrant owns and operates a stationary specialty chemical manufacturing plant.

Source Address:	420 South Colfax Avenue, Griffith, Indiana 46319
Mailing Address:	P.O. Box 190, Griffith, Indiana 46319
General Source Phone Number:	(219) 924-4370
SIC Code:	2869
County Location:	Lake County
Source Location Status:	Nonattainment for 1-hour ozone standard Nonattainment for 8-hour ozone standard Nonattainment for PM 2.5 standard Attainment for all other criteria pollutants
Source Status:	Registration

### A.2 Emission Units and Pollution Control Equipment Summary

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

#### **Batch EVO Process**

- (a) Two (2) thin film condensate receivers (designated as Units 6001 and 6022), constructed in 1973 and 1988, respectively. Unit 6001 is not currently being used, while Unit 6022 has a maximum volume of 5,500 gallons, a maximum process weight capacity of 1553 pounds per hour, and exhausts to pipe vent 6022-V.
- (b) One (1) raw material storage tank for storage of soybean oil (designated as Unit 6002), constructed in 1993, with a maximum volume of 36,720 gallons, a maximum process weight capacity of 999 pounds per hour, and exhausting to pipe vent 6002-V. Unit 6002 is also utilized in the BVO process at maximum process weight capacity of 46 pounds per hour.
- (c) Two (2) raw material storage tanks for storage of 70% hydrogen peroxide (designated as Units 6003A and 6003B), each constructed in 1973, and each having a maximum volume of 8,000 gallons, a maximum process weight capacity of 464 pounds per hour, and exhausting to pipe vents 6003A-V and 6003B-V, respectively.
- (d) One (1) raw material storage tank for storage of 50% sodium hydroxide (designated as Unit 6004), constructed in 1973, and having a maximum volume of 5,964 gallons, a maximum process weight capacity of 50 pounds per hour, and exhausting to pipe vent 6004-V.
- (e) One (1) raw material storage tank for storage of toluene (designated as Unit 6005), constructed in 1973, and having a maximum volume of 8,460 gallons, a maximum process weight capacity of 1497 pounds per hour, and exhausting to pipe vent 6005-V;
- (f) Two (2) EVO storage tanks (designated as Units 6032 and 6026), each constructed in 1998, having a maximum volume of 35,000 and 34,825 gallons, a maximum process weight capacity of 720 pounds per hour, and exhausting to pipe vents 6032-V and 6026-

V, respectively.

- (g) One (1) raw material storage tank for storage of vegetable oil (designated as Unit 6001), constructed in 1992, having a maximum volume of 36,720 gallons, a maximum process weight capacity of 999 pounds per hour, and exhausting to pipe vent 6001-V.
- (h) One (1) thin film condensate receiver (designated as Unit 6008), constructed in 1973, with a maximum volume of 10,500 gallons, a maximum process weight capacity of 298 pounds per hour, and exhausting to pipe vent 6008-V.
- (i) One (1) wash water oxidation vessel (designated as Unit 6009), constructed in 1973, having a maximum volume of 18,500 gallons, a maximum process weight capacity of 3521 pounds per hour, and exhausting to pipe vent 6009-V.
- (j) One (1) water neutralization process vessel (designated as Unit 6010), constructed in 1973, modified in April 2005, with a maximum volume of 11,000 gallons, a maximum process weight capacity of 38 pounds per hour, and exhausting to pipe vent 6010-V.
- (k) One (1) wash water separation vessel (designated as Unit 6011), constructed in 1973, having a maximum volume of 18,000 gallons, a maximum process weight capacity of 3522 pounds per hour, and exhausting to pipe vent 6011-V.
- (l) One (1) process separation vessel (designated as Unit 6013), constructed in 1973, having a maximum volume of 6,300 gallons, a maximum process weight capacity of 47 pounds per hour, and exhausting to pipe vent 6013-V.
- (m) One (1) process separation vessel (designated as Unit 6018), constructed in 1981, modified in April 2005, with a maximum volume of 11,000 gallons, a maximum process weight capacity of 47 pounds per hour, and exhausting to pipe vent 6018-V.
- (n) Two (2) wash water neutralization vessels (designated as Units 6023 and 6024), constructed in 1988 and 1973, having a maximum volume of 11,800 gallons each, a maximum process weight capacity of 1719 pounds per hour each, and exhausting to pipe vents 6023-V and 6024-V, respectively.
- (o) One (1) raw material storage tank for storage of 95% formic acid (designated as Unit 6025), constructed in 1999, and having a maximum volume of 6,460 gallons, a maximum process weight capacity of 64 pounds per hour, and exhausting to pipe vent 6025-V.
- (p) One (1) EVO recycle vessel (designated as Unit 6027), constructed in 1973, having a maximum volume of 1,500 gallons, a maximum process weight capacity of 40 pounds per hour, and exhausting to pipe vent 6027-V.
- (q) One (1) wash water draining tank (designated as Unit 6028), constructed in 1973, having a maximum volume of 18,000 gallons, a maximum process weight capacity of 3521 pounds per hour, and exhausting to pipe vent 6028-V.
- (r) One (1) storage tank for storage of EVO (designated as Unit 6029), constructed in 1998, with a maximum volume of 34,825 gallons, a maximum process weight capacity of 720 pounds per hour, and exhausting to pipe vent 6029-V.
- (s) One (1) EVO recycle vessel (designated as Unit 6031), constructed in 1972, modified in April 2005, with a maximum volume of 2,450 gallons, a maximum process weight capacity of 40 pounds per hour, and exhausting to pipe vent 6031-V.

- (t) One (1) fractionation column (designated as Unit 7000), constructed in 1973, having a maximum volume of 5,500 gallons, a maximum process weight capacity of 12 pounds per hour, and exhausting to pipe vent 7000-V. Unit 7000 is also utilized in the BVO process at a maximum process weight capacity of 23 pounds per hour.
- (u) Two (2) EVO process wash vessels (designated as Units C-1 and C-3X), constructed in 1988 and 1973, having a maximum volume of 5,610 and 4,860 gallons, a maximum process weight capacity of 3581 pounds per hour each, and exhausting to pipe vents C-1-V and C-3X-V, respectively.
- (v) One (1) reactor charge vessel for storage of 95% formic acid (designated as Unit C-2), constructed in 1973, and having a maximum volume of 58 gallons, a maximum process weight capacity of 73 pounds per hour, and exhausting to pipe vent C-2-V.
- (w) Two (2) process mix vessels (designated as Units C-4 and C-19), constructed in 1973, having a maximum volume of 600 and 310 gallons, a maximum process weight capacity of 323 and 12 pounds per hour, and exhausting to pipe vents C-4-V and C-19-V, respectively.
- (x) Two (2) thin film feed vessels (designated as Units C-5 and C-55), both constructed in 1973, having a maximum volume of 3,650 gallons, a maximum process weight capacity of 1828 pounds per hour, and exhausting to pipe vents C-5-V and C-55-V, respectively.
- (y) Two (2) thin film receivers (designated as Units C-6 and C-11), both constructed in 1973, having a maximum volume of 3,650 and 2,650 gallons, a maximum process weight capacity of 1297 and 865 pounds per hour, and exhausting to pipe vents C-6-V and C-11-V, respectively.
- (z) One (1) safety water deluge tank (designated as Unit C-12), constructed in 1973, having a maximum volume of 1,275 gallons, and exhausting to pipe vent C-12-V.
- (aa) One (1) secondary separation vessel (designated as Unit C-13), constructed in 1973, having a maximum volume of 1,000 gallons, a maximum process weight capacity of 277 pounds per hour, and exhausting to pipe vent C-13-V.
- (bb) Two (2) batch reactors (designated as Units C-17 and C-18), constructed in 1973 and 1988, having a maximum volume of 5,000 gallons each, a maximum process weight capacity of 4497 and 4549 pounds per hour, and exhausting to pipe vents C-17-V and C-18-V, respectively.
- (cc) One (1) reactor charge vessel for storage of 70% hydrogen peroxide (designated as Unit C-20), constructed in 1973, having a maximum volume of 750 gallons, a maximum process weight capacity of 928 pounds per hour, and exhausting to pipe vent C-20-V.
- (dd) Two (2) thin film evaporators (designated as Units E-1 and E-2), constructed in 1973 and 1999, having a maximum process weight capacity of 3656 and 1379 pounds per hour, and exhausting to pipe vents E-1-V and E-2-V, respectively. Unit E-1 is also utilized in the BVO process at a maximum process weight capacity of 254 pounds per hour.

#### **Batch BVO Process**

- (ee) One (1) raw material storage tank for storage of bromine (designated as Unit 6000), constructed in 2004, with a maximum volume of 2,276 gallons, a maximum process weight capacity of 91 pounds per hour, and exhausting to pipe vent 6000-V.

- (ff) One (1) raw material storage tank for storage of vegetable oil (designated as Unit 6007), constructed in 1991, with a maximum volume of 7,200 gallons, a maximum process weight capacity of 46 pounds per hour, and exhausting to pipe vent 6007-V.
- (gg) One (1) raw material storage tank for storage of soybean oil (designated as Unit 6012), constructed in 1976, with a maximum volume of 10,000 gallons, a maximum process weight capacity of 108 pounds per hour, and exhausting to pipe vent 6012-V.
- (hh) One (1) raw material storage tank for storage of hexane (designated as Unit 6016), constructed in 1976, with a maximum volume of 11,200 gallons, a maximum process weight capacity of 23 pounds per hour, and exhausting to pipe vent 6016-V.
- (ii) One (1) thin film condensate receiver (designated as Units 6017), constructed in 1976, having a maximum volume of 11,200 gallons, a maximum process weight capacity of 55 pounds per hour, and exhausting to pipe vent 6017-V.
- (jj) One (1) separation vessel (designated as Units 6019), constructed in 1976, having a maximum volume of 5,500 gallons, a maximum process weight capacity of 316 pounds per hour, and exhausting to pipe vent 6019-V.
- (kk) One (1) open top tank for treatment of hexane-contaminated waste water (designated as Units 6020), constructed in 1976, having a maximum volume of 1,000 gallons, and a maximum process weight capacity of 128 pounds per hour.
- (ll) One (1) bromine scrubber (designated as Unit 6100), constructed in 1983, with a maximum volume of 950 gallons, a maximum process weight capacity of 0.8 pounds per hour, and exhausting to pipe vent 6100-V.
- (mm) One (1) process wash vessel (designated as Units C-3), constructed in 1973, having a maximum volume of 4,860 gallons, a maximum process weight capacity of 289 pounds per hour, and exhausting to pipe vent C-3-V.
- (nn) One (1) batch reactor (designated as Units C-10), constructed in 1976, having a maximum volume of 750 gallons, a maximum process weight capacity of 316 pounds per hour, and exhausting to pipe vent C-10-V.

#### **Batch Polyol Process**

- (oo) One (1) storage tank for storage of methanol-contaminated wastewater (designated as Unit 351), constructed in 1972, having a maximum volume of 14,900 gallons, a maximum process weight capacity of 123 pounds per hour, and exhausting to pipe vent 351-V.
- (pp) One (1) batch pot distillation vessel (designated as Unit V-500), constructed in 1980, modified in 2005, having a maximum volume of 6,450 gallons, a maximum process weight capacity of 2,998 pounds per hour, and exhausting to pipe vents 500-V and 4100-V.
- (qq) Two (2) product storage tanks for storage of polyol (designated as Units 501 and 502), both constructed in 1991, having a maximum volume of 36,720 gallons, a maximum process weight capacity of 2,132 pounds per hour, and exhausting to pipe vents 501-V and 502-V, respectively.
- (rr) One (1) product storage tank for storage of polyol (designated as Unit 805), constructed in 1991, having a maximum volume of 24,000 gallons, a maximum process weight capacity of 2,132 pounds per hour, and exhausting to pipe vent 805-V.

- (ss) Two (2) raw material storage tanks for storage of EVO (designated as Units 504 and 506), constructed in 1975 and 1992, and having a maximum volume of 33,840 and 36,720 gallons, a maximum process weight capacity of 4,111 pounds per hour each, and exhausting to pipe vents 504-V and 506-V, respectively.
- (tt) One (1) raw material storage tank for storage of methanol (designated as Unit 505), constructed in 1972, modified in April 2005, with a maximum volume of 14,900 gallons, a maximum process weight capacity of 180 pounds per hour, and exhausting to pipe vent 505-V.
- (uu) One (1) distillation receiver, designated as Units R-500, constructed in 1980, having a maximum volume of 1,370 gallons, a maximum process weight capacity of 123 pounds per hour, and exhausting to pipe vent R-500-V;
- (vv) One (1) distillation receiver (designated as Unit R-401), constructed in 1972, modified in April 2005, having a maximum volume of 5,400 gallons, a maximum process weight capacity of 720 pounds per hour, and exhausting to pipe vents R-401-V.
- (ww) One (1) batch polyol reactor (designated as Unit V-600), constructed in 1980, modified in April 2005, with a maximum volume of 8,000 gallons, a maximum process weight capacity of 4,234 pounds per hour, and exhausting to pipe vent 600-V.
- (xx) One (1) catalyst mixing vessel (designated as T-450), constructed in 2006, having a maximum volume of 80 gallons, a maximum process weight capacity of 37 pounds per hour, and exhausting to pipe vent 450-V.
- (yy) One (1) distillation receiver (designated as T-101; formerly designated as R-100), constructed in 1972, modified in April 2006 having a maximum volume of 1,300 gallons, a maximum process weight capacity of 47 pounds per hour, and exhausting to pipe vent 101-V.
- (zz) One (1) recycle vessel (designated as T-5500), constructed in 1972, modified in April 2006, having a maximum volume of 12,000 gallons, a maximum process weight capacity of 1,196 pounds per hour, and exhausting to pipe vent 5500-V.
- (aaa) One (1) polyol reactor (designated as V-400), constructed in 1972, modified in April 2006, having a maximum volume of 6,450 gallons, a maximum process weight capacity of 6,506 pounds per hour, and exhausting to pipe vent 400-V and 4100-V.
- (bbb) One (1) reactor overhead receiver (designated as T-402; formerly designated as R-400), constructed in 1972, modified in April 2006, having a maximum volume of 1,300 gallons, a maximum process weight capacity of 47 pounds per hour, and exhausting to pipe vent 402-V.
- (ccc) One (1) polyol reactor (designated as V-100), constructed in 1972, modified in April 2006, having a maximum volume of 6,450 gallons, a maximum process weight capacity of 3,198 pounds per hour, and exhausting to pipe vent 100-V and 4100-V.
- (ddd) Two (2) product storage tanks (designated as T-301 and T-302), both constructed in 1972, modified in April 2006, having a maximum volume of 33,840 gallons each, a maximum process weight capacity of 2,132 and 2,158 pounds per hour, and exhausting to pipe vent 301-V and 302-V, respectively.

**Combustion Related Sources**

- (eee) Two (2) natural gas-fired steam boilers, designated as Units B-100 and B-200, each respectively installed in 1972 and 1955, and rated at 10 MMBtu/hr and 6 MMBtu/hr. Unit B-100 can also use fuel oil no. 2 as emergency backup.
- (fff) Two (2) natural gas-fired process hot oil heaters for heating of chemicals in reactors, designated as Units H-100 and H-200, each respectively constructed in 1972 and 1980, and rated at 5 MMBtu/hr and 5 MMBtu/hr.
- (ggg) One (1) natural gas fired emergency generator, designated as Unit G-100, constructed in 1979, operated at less than 500 hours per year, rated at 0.81 MMBtu/hr, and exhausting to stack G-100-V.
- (hhh) One (1) fuel oil no. 2 fired emergency generator, designated as Unit G-200, constructed in 1973, operated at less than 500 hours per year, rated at 2.47 MMBtu/hr, and exhausting to stack G-200-V.
- (iii) Two (2) above ground horizontal storage tanks for storage of fuel oil no. 2, designated as Units 405 and 406, each constructed in 1978, with a maximum volume of 9,000 gallons, used to provide an emergency back-up fuel source for steam boiler B-100. Unit 405 is also used to provide fuel oil no. 2 for annual test run purposes. Unit 406 is not currently storing any material, but may potentially store fuel oil no. 2 in the future.

**Idle Process Equipment**

The source also includes the following emission units that are not currently used (denoted as “idle equipment”). The source has stated that there are no plans for using these units and that the potential VOC and HAP emissions from these units are equal to zero. The source has agreed to a restriction on the use of this idle equipment, such that any change or modification to the idle equipment that may increase the potential to emit of Volatile Organic Compounds (VOCs) or hazardous air pollutants (HAPs) shall require prior approval from the Office of Air Quality.

Unit ID	Previous Process	Previous Function	Construction Date	Maximum Volume (gallons)
H-5200	Additive Manufacturing	Fume Incinerator	1978	NA
V-202	Additive Manufacturing	Raw Material Storage	1972	13,350
V-300	Additive Manufacturing	Recycle Vessel	1972	13,052
305	Additive Manufacturing	Raw Material Storage	1972	18,630
350	Additive Manufacturing	Waste Water Storage	1972	17,060
352	Additive Manufacturing	Raw Material Storage	1972	14,900
353	Additive Manufacturing	Product or Intermediate Storage	1972	20,200
354	Additive Manufacturing	Product or Intermediate Storage	1972	24,530
355	Additive Manufacturing	Product or Intermediate Storage	1972	24,530
503	Additive Manufacturing	Product Storage	1975	33,840
5505	Additive Manufacturing	Raw Material Storage	1972	10,000
5506	Additive Manufacturing	Raw Material Storage	1972	13,000
102	Additive Blending	Raw Material Storage	1975 est.	5,000
103	Additive Blending	Raw Material Storage	1975 est.	5,000
801	Additive Blending	Blend Vessel	1971	8,675
802	Additive Blending	Blend Vessel	1971	17,880
803	Additive Blending	Blend Vessel	1971	8,675

<b>Unit ID</b>	<b>Previous Process</b>	<b>Previous Function</b>	<b>Construction Date</b>	<b>Maximum Volume (gallons)</b>
804	Additive Blending	Blend Vessel	1971	12,166
847	Additive Blending	Product Storage	1980	36,720
848	Additive Blending	Raw Material Storage	1980	36,720
850	Additive Blending	Raw Material Storage	1989	18,009
851	Additive Blending	Raw Material Storage	1972	18,009
852	Additive Blending	Product Storage	1971 est.	18,000
853	Additive Blending	Raw Material Storage	1980	36,720
854	Additive Blending	Product Storage	1980	36,720
856	Additive Blending	Product Storage	1994	22,173
859	Additive Blending	Product Storage	1975 est.	13,465
861	Additive Blending	Product Storage	1975 est.	13,465
V-11	Other	Batch Reactor	1975 est.	1,500
V-24	Other	Batch Reactor	1975 est.	3,000
6006	Batch EVO	Product Storage	1973	17,000

## SECTION B

## GENERAL CONDITIONS

### B.1 Definitions [326 IAC 2-1.1-1]

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Terms in this registration 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 2-1.1-1) shall prevail.

### B.2 Effective Date of Registration [IC 13-15-5-3]

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Pursuant to IC 13-15-5-3, this registration is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

### B.3 Registration Revocation [326 IAC 2-1.1-9]

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Pursuant to 326 IAC 2-1.1-9 (Revocation), this registration to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this registration.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this registration.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this registration shall not require revocation of this registration.
- (d) For any cause which establishes in the judgment of IDEM, the fact that continuance of this registration is not consistent with purposes of this article.

### B.4 Prior Permits Superseded [326 IAC 2-1.1-9.5]

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- (a) All terms and conditions of permits established prior to Registration No. 089-20338-00020 and issued pursuant to permitting programs approved into the state implementation plan have been either:
  - (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deleted.
- (b) All previous registrations and permits are superseded by this registration.

### B.5 Annual Notification [326 IAC 2-5.1-2(f)(3)] [326 IAC 2-5.5-4(a)(3)]

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Pursuant to 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3):

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this registration.
- (b) The annual notice shall be submitted in the format attached no later than March 1 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, IN 46204-2251

- (c) The notification 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.

**B.6 Source Modification Requirement [326 IAC 2-5.5-6(a)]**

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Pursuant to 326 IAC 2-5.5-6(a), an application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

**B.7 Registrations [326 IAC 2-5.1-2(i)]**

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Pursuant to 326 IAC 2-5.1-2(i), this registration does not limit the source's potential to emit.

## SECTION C

## SOURCE OPERATION CONDITIONS

Entire Source

### Emission Limitations and Standards [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

#### C.1 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 registration:

- (a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

#### C.2 Fugitive Dust Emissions [326 IAC 6-4]

The Registrant 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).

## SECTION D.1

## OPERATION CONDITIONS

### Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

#### Batch EVO Process

- (a) Two (2) thin film condensate receivers (designated as Units 6001 and 6022), constructed in 1973 and 1988, respectively. Unit 6001 is not currently being used, while Unit 6022 has a maximum volume of 5,500 gallons, a maximum process weight capacity of 1553 pounds per hour, and exhausts to pipe vent 6022-V.
- (b) One (1) raw material storage tank for storage of soybean oil (designated as Unit 6002), constructed in 1993, with a maximum volume of 36,720 gallons, a maximum process weight capacity of 999 pounds per hour, and exhausting to pipe vent 6002-V. Unit 6002 is also utilized in the BVO process at maximum process weight capacity of 46 pounds per hour.
- (c) Two (2) raw material storage tanks for storage of 70% hydrogen peroxide (designated as Units 6003A and 6003B), each constructed in 1973, and each having a maximum volume of 8,000 gallons, a maximum process weight capacity of 464 pounds per hour, and exhausting to pipe vents 6003A-V and 6003B-V, respectively.
- (d) One (1) raw material storage tank for storage of 50% sodium hydroxide (designated as Unit 6004), constructed in 1973, and having a maximum volume of 5,964 gallons, a maximum process weight capacity of 50 pounds per hour, and exhausting to pipe vent 6004-V.
- (e) One (1) raw material storage tank for storage of toluene (designated as Unit 6005), constructed in 1973, and having a maximum volume of 8,460 gallons, a maximum process weight capacity of 1497 pounds per hour, and exhausting to pipe vent 6005-V;
- (f) Two (2) EVO storage tanks (designated as Units 6032 and 6026), each constructed in 1998, having a maximum volume of 35,000 and 34,825 gallons, a maximum process weight capacity of 720 pounds per hour, and exhausting to pipe vents 6032-V and 6026-V, respectively.
- (g) One (1) raw material storage tank for storage of vegetable oil (designated as Unit 6001), constructed in 1992, having a maximum volume of 36,720 gallons, a maximum process weight capacity of 999 pounds per hour, and exhausting to pipe vent 6001-V.
- (h) One (1) thin film condensate receiver (designated as Unit 6008), constructed in 1973, with a maximum volume of 10,500 gallons, a maximum process weight capacity of 298 pounds per hour, and exhausting to pipe vent 6008-V.
- (i) One (1) wash water oxidation vessel (designated as Unit 6009), constructed in 1973, having a maximum volume of 18,500 gallons, a maximum process weight capacity of 3521 pounds per hour, and exhausting to pipe vent 6009-V.
- (j) One (1) water neutralization process vessel (designated as Unit 6010), constructed in 1973, modified in April 2005, with a maximum volume of 11,000 gallons, a maximum process weight capacity of 38 pounds per hour, and exhausting to pipe vent 6010-V.
- (k) One (1) wash water separation vessel (designated as Unit 6011), constructed in 1973, having a maximum volume of 18,000 gallons, a maximum process weight capacity of 3522 pounds per hour, and exhausting to pipe vent 6011-V.
- (l) One (1) process separation vessel (designated as Unit 6013), constructed in 1973, having a

- maximum volume of 6,300 gallons, a maximum process weight capacity of 47 pounds per hour, and exhausting to pipe vent 6013-V.
- (m) One (1) process separation vessel (designated as Unit 6018), constructed in 1981, modified in April 2005, with a maximum volume of 11,000 gallons, a maximum process weight capacity of 47 pounds per hour, and exhausting to pipe vent 6018-V.
  - (n) Two (2) wash water neutralization vessels (designated as Units 6023 and 6024), constructed in 1988 and 1973, having a maximum volume of 11,800 gallons each, a maximum process weight capacity of 1719 pounds per hour each, and exhausting to pipe vents 6023-V and 6024-V, respectively.
  - (o) One (1) raw material storage tank for storage of 95% formic acid (designated as Unit 6025), constructed in 1999, and having a maximum volume of 6,460 gallons, a maximum process weight capacity of 64 pounds per hour, and exhausting to pipe vent 6025-V.
  - (p) One (1) EVO recycle vessel (designated as Unit 6027), constructed in 1973, having a maximum volume of 1,500 gallons, a maximum process weight capacity of 40 pounds per hour, and exhausting to pipe vent 6027-V.
  - (q) One (1) wash water draining tank (designated as Unit 6028), constructed in 1973, having a maximum volume of 18,000 gallons, a maximum process weight capacity of 3521 pounds per hour, and exhausting to pipe vent 6028-V.
  - (r) One (1) storage tank for storage of EVO (designated as Unit 6029), constructed in 1998, with a maximum volume of 34,825 gallons, a maximum process weight capacity of 720 pounds per hour, and exhausting to pipe vent 6029-V.
  - (s) One (1) EVO recycle vessel (designated as Unit 6031), constructed in 1972, modified in April 2005, with a maximum volume of 2,450 gallons, a maximum process weight capacity of 40 pounds per hour, and exhausting to pipe vent 6031-V.
  - (t) One (1) fractionation column (designated as Unit 7000), constructed in 1973, having a maximum volume of 5,500 gallons, a maximum process weight capacity of 12 pounds per hour, and exhausting to pipe vent 7000-V. Unit 7000 is also utilized in the BVO process at a maximum process weight capacity of 23 pounds per hour.
  - (u) Two (2) EVO process wash vessels (designated as Units C-1 and C-3X), constructed in 1988 and 1973, having a maximum volume of 5,610 and 4,860 gallons, a maximum process weight capacity of 3581 pounds per hour each, and exhausting to pipe vents C-1-V and C-3X-V, respectively.
  - (v) One (1) reactor charge vessel for storage of 95% formic acid (designated as Unit C-2), constructed in 1973, and having a maximum volume of 58 gallons, a maximum process weight capacity of 73 pounds per hour, and exhausting to pipe vent C-2-V.
  - (w) Two (2) process mix vessels (designated as Units C-4 and C-19), constructed in 1973, having a maximum volume of 600 and 310 gallons, a maximum process weight capacity of 323 and 12 pounds per hour, and exhausting to pipe vents C-4-V and C-19-V, respectively.
  - (x) Two (2) thin film feed vessels (designated as Units C-5 and C-55), both constructed in 1973, having a maximum volume of 3,650 gallons, a maximum process weight capacity of 1828 pounds per hour, and exhausting to pipe vents C-5-V and C-55-V, respectively.
  - (y) Two (2) thin film receivers (designated as Units C-6 and C-11), both constructed in 1973,

having a maximum volume of 3,650 and 2,650 gallons, a maximum process weight capacity of 1297 and 865 pounds per hour, and exhausting to pipe vents C-6-V and C-11-V, respectively.

- (z) One (1) safety water deluge tank (designated as Unit C-12), constructed in 1973, having a maximum volume of 1,275 gallons, and exhausting to pipe vent C-12-V.
- (aa) One (1) secondary separation vessel (designated as Unit C-13), constructed in 1973, having a maximum volume of 1,000 gallons, a maximum process weight capacity of 277 pounds per hour, and exhausting to pipe vent C-13-V.
- (bb) Two (2) batch reactors (designated as Units C-17 and C-18), constructed in 1973 and 1988, having a maximum volume of 5,000 gallons each, a maximum process weight capacity of 4497 and 4549 pounds per hour, and exhausting to pipe vents C-17-V and C-18-V, respectively.
- (cc) One (1) reactor charge vessel for storage of 70% hydrogen peroxide (designated as Unit C-20), constructed in 1973, having a maximum volume of 750 gallons, a maximum process weight capacity of 928 pounds per hour, and exhausting to pipe vent C-20-V.
- (dd) Two (2) thin film evaporators (designated as Units E-1 and E-2), constructed in 1973 and 1999, having a maximum process weight capacity of 3656 and 1379 pounds per hour, and exhausting to pipe vents E-1-V and E-2-V, respectively. Unit E-1 is also utilized in the BVO process at a maximum process weight capacity of 254 pounds per hour.

#### **Batch BVO Process**

- (ee) One (1) raw material storage tank for storage of bromine (designated as Unit 6000), constructed in 2004, with a maximum volume of 2,276 gallons, a maximum process weight capacity of 91 pounds per hour, and exhausting to pipe vent 6000-V.
- (ff) One (1) raw material storage tank for storage of vegetable oil (designated as Unit 6007), constructed in 1991, with a maximum volume of 7,200 gallons, a maximum process weight capacity of 46 pounds per hour, and exhausting to pipe vent 6007-V.
- (gg) One (1) raw material storage tank for storage of soybean oil (designated as Unit 6012), constructed in 1976, with a maximum volume of 10,000 gallons, a maximum process weight capacity of 108 pounds per hour, and exhausting to pipe vent 6012-V.
- (hh) One (1) raw material storage tank for storage of hexane (designated as Unit 6016), constructed in 1976, with a maximum volume of 11,200 gallons, a maximum process weight capacity of 23 pounds per hour, and exhausting to pipe vent 6016-V.
- (ii) One (1) thin film condensate receiver (designated as Units 6017), constructed in 1976, having a maximum volume of 11,200 gallons, a maximum process weight capacity of 55 pounds per hour, and exhausting to pipe vent 6017-V.
- (jj) One (1) separation vessel (designated as Units 6019), constructed in 1976, having a maximum volume of 5,500 gallons, a maximum process weight capacity of 316 pounds per hour, and exhausting to pipe vent 6019-V.
- (kk) One (1) open top tank for treatment of hexane-contaminated waste water (designated as Units 6020), constructed in 1976, having a maximum volume of 1,000 gallons, and a maximum process weight capacity of 128 pounds per hour.
- (ll) One (1) bromine scrubber (designated as Unit 6100), constructed in 1983, with a maximum

volume of 950 gallons, a maximum process weight capacity of 0.8 pounds per hour, and exhausting to pipe vent 6100-V.

- (mm) One (1) process wash vessel (designated as Units C-3), constructed in 1973, having a maximum volume of 4,860 gallons, a maximum process weight capacity of 289 pounds per hour, and exhausting to pipe vent C-3-V.
- (nn) One (1) batch reactor (designated as Units C-10), constructed in 1976, having a maximum volume of 750 gallons, a maximum process weight capacity of 316 pounds per hour, and exhausting to pipe vent C-10-V.

**Batch Polyol Process**

- (oo) One (1) storage tank for storage of methanol-contaminated wastewater (designated as Unit 351), constructed in 1972, having a maximum volume of 14,900 gallons, a maximum process weight capacity of 123 pounds per hour, and exhausting to pipe vent 351-V.
- (pp) One (1) batch pot distillation vessel (designated as Unit V-500), constructed in 1980, modified in 2005, having a maximum volume of 6,450 gallons, a maximum process weight capacity of 2,998 pounds per hour, and exhausting to pipe vents 500-V and 4100-V.
- (qq) Two (2) product storage tanks for storage of polyol (designated as Units 501 and 502), both constructed in 1991, having a maximum volume of 36,720 gallons, a maximum process weight capacity of 2,132 pounds per hour, and exhausting to pipe vents 501-V and 502-V, respectively.
- (rr) One (1) product storage tank for storage of polyol (designated as Unit 805), constructed in 1991, having a maximum volume of 24,000 gallons, a maximum process weight capacity of 2,132 pounds per hour, and exhausting to pipe vent 805-V.
- (ss) Two (2) raw material storage tanks for storage of EVO (designated as Units 504 and 506), constructed in 1975 and 1992, and having a maximum volume of 33,840 and 36,720 gallons, a maximum process weight capacity of 4,111 pounds per hour each, and exhausting to pipe vents 504-V and 506-V, respectively.
- (tt) One (1) raw material storage tank for storage of methanol (designated as Unit 505), constructed in 1972, modified in April 2005, with a maximum volume of 14,900 gallons, a maximum process weight capacity of 180 pounds per hour, and exhausting to pipe vent 505-V.
- (uu) One (1) distillation receiver, designated as Units R-500, constructed in 1980, having a maximum volume of 1,370 gallons, a maximum process weight capacity of 123 pounds per hour, and exhausting to pipe vent R-500-V;
- (vv) One (1) distillation receiver (designated as Unit R-401), constructed in 1972, modified in April 2005, having a maximum volume of 5,400 gallons, a maximum process weight capacity of 720 pounds per hour, and exhausting to pipe vents R-401-V.
- (ww) One (1) batch polyol reactor (designated as Unit V-600), constructed in 1980, modified in April 2005, with a maximum volume of 8,000 gallons, a maximum process weight capacity of 4,234 pounds per hour, and exhausting to pipe vent 600-V.
- (xx) One (1) catalyst mixing vessel (designated as T-450), constructed in 2006, having a maximum volume of 80 gallons, a maximum process weight capacity of 37 pounds per hour, and exhausting to pipe vent 450-V.

- (yy) One (1) distillation receiver (designated as T-101; formerly designated as R-100), constructed in 1972, modified in April 2006 having a maximum volume of 1,300 gallons, a maximum process weight capacity of 47 pounds per hour, and exhausting to pipe vent 101-V.
- (zz) One (1) recycle vessel (designated as T-5500), constructed in 1972, modified in April 2006, having a maximum volume of 12,000 gallons, a maximum process weight capacity of 1,196 pounds per hour, and exhausting to pipe vent 5500-V.
- (aaa) One (1) polyol reactor (designated as V-400), constructed in 1972, modified in April 2006, having a maximum volume of 6,450 gallons, a maximum process weight capacity of 6,506 pounds per hour, and exhausting to pipe vent 400-V and 4100-V.
- (bbb) One (1) reactor overhead receiver (designated as T-402; formerly designated as R-400), constructed in 1972, modified in April 2006, having a maximum volume of 1,300 gallons, a maximum process weight capacity of 47 pounds per hour, and exhausting to pipe vent 402-V.
- (ccc) One (1) polyol reactor (designated as V-100), constructed in 1972, modified in April 2006, having a maximum volume of 6,450 gallons, a maximum process weight capacity of 3,198 pounds per hour, and exhausting to pipe vent 100-V and 4100-V.
- (ddd) Two (2) product storage tanks (designated as T-301 and T-302), both constructed in 1972, modified in April 2006, having a maximum volume of 33,840 gallons each, a maximum process weight capacity of 2,132 and 2,158 pounds per hour, and exhausting to pipe vent 301-V and 302-V, respectively.

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

## **Record Keeping and Reporting Requirements [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]**

### **D.1.1 Record Keeping Requirements [326 IAC 8-9-6]**

Pursuant to 326 IAC 8-9-6 (Volatile Organic Compounds; Volatile Organic Liquid Storage Vessels), the owner or operator shall maintain the following records for the life of the vessels (Units T-301, T-302, 351, 405, 406, 501, 502, 504, 505, 506, 805, 6001, 6002, 6005, 6006, 6007, 6012, 6016, 6025, 6026, 6029, and 6032) as follows:

- (1) The vessel identification number;
- (2) The vessel dimensions;
- (3) The vessel capacity; and
- (4) A description of the emission control equipment for each vessel described in 326 IAC 8-9-4(a) and 4(b), if applicable, or a schedule for installation of emission control equipment on vessels described in 326 IAC 8-9-4(a) and 4(b), if applicable, with a certification that the emission control equipment meets the applicable standards.

## SECTION D.2

## OPERATION CONDITIONS

### Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

#### Combustion Related Sources

- (eee) Two (2) natural gas-fired steam boilers, designated as Units B-100 and B-200, each respectively installed in 1972 and 1955, and rated at 10 MMBtu/hr and 6 MMBtu/hr. Unit B-100 can also use fuel oil no. 2 as emergency backup.
- (fff) Two (2) natural gas-fired process hot oil heaters for heating of chemicals in reactors, designated as Units H-100 and H-200, each respectively constructed in 1972 and 1980, and rated at 5 MMBtu/hr and 5 MMBtu/hr.
- (ggg) One (1) natural gas fired emergency generator, designated as Unit G-100, constructed in 1979, operated at less than 500 hours per year, rated at 0.81 MMBtu/hr, and exhausting to stack G-100-V.
- (hhh) One (1) fuel oil no. 2 fired emergency generator, designated as Unit G-200, constructed in 1973, operated at less than 500 hours per year, rated at 2.47 MMBtu/hr, and exhausting to stack G-200-V.
- (iii) Two (2) above ground horizontal storage tanks for storage of fuel oil no. 2, designated as Units 405 and 406, each constructed in 1978, with a maximum volume of 9,000 gallons, used to provide an emergency back-up fuel source for steam boiler B-100. Unit 405 is also used to provide fuel oil no. 2 for annual test run purposes. Unit 406 is not currently storing any material, but may potentially store fuel oil no. 2 in the future.

(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 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

#### D.2.1 Particulate [326 IAC 6-2-2]

- (a) Pursuant to 326 IAC 6-2-2(b) (Particulate Limitations for Sources of Indirect Heating), the PM emissions from the two (2) natural gas-fired steam boilers (identified as B-100 and B-200) shall be limited to 0.56 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$P_t = \frac{0.87}{Q^{0.16}}$$

Where:

- Pt = Allowable Particulate Emission Limitation in pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input; and
- Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input. (16 MMBtu/hr)

- (b) Pursuant to 326 IAC 6-2-2(c) (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from the two (2) natural gas-fired process hot oil heaters (identified as H-100 and H-200) shall not exceed 0.52 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = \frac{0.87}{Q^{0.16}}$$

Where:

- Pt = Allowable Particulate Emission Limitation in pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input; and  
Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input. (26 MMBtu/hr)

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH**

**REGISTRATION  
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3).

<b>Company Name:</b>	American Chemical Service, Inc.
<b>Address:</b>	420 South Colfax Avenue
<b>City:</b>	Griffith, Indiana 46319
<b>Phone Number:</b>	(219) 924-4370
<b>Registration No.:</b>	089-20338-00020

- I hereby certify that American Chemical Service, Inc. is :  still in operation.  
 no longer in operation.
- I hereby certify that American Chemical Service, Inc. is :  in compliance with the requirements of Registration No. 089-20338-00020.  
 not in compliance with the requirements of Registration No. 089-20338-00020.

<b>Authorized Individual (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Phone Number:</b>
<b>Date:</b>

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

<b>Noncompliance:</b>