



State of Ohio Environmental Protection Agency

Northeast District Office

2110 East Aurora Rd.  
Twinsburg, Ohio 44087

TELE: (330) 963-1200 FAX: (330) 487-0769  
www.epa.state.oh.us

Ted Strickland, Governor  
Lee Fisher, Lieutenant Governor  
Chris Korleski, Director

May 29, 2009

NOV AT TITLE V HIGH PRIORITY FACILITY - GC7 - CERTIFIED MAIL

Mr. John Reese  
Vice President  
Technical, Environmental, Safety & Health  
Ashta Chemicals, Inc.  
3509 Middle Road  
Ashtabula, OH 44004

RE: Division of Air Pollution Control Compliance Evaluation for the operations located at 3509 Middle Rd., Ashtabula, Ohio - DAPC Facility ID No. (02-04-01-0056)

Dear Mr. Reese:

On 4/02/09, Ohio EPA representative Christine McPhee visited the above-named site to determine compliance with the permits issued by the Division of Air Pollution Control (DAPC), and other applicable requirements. The time and courtesy given by Mr. Tyce Workman, Environmental Coordinator, and you was greatly appreciated. An electronic copy of the inspection report will be e-mailed to you.

The purpose of this letter is to provide a follow-up to the inspection. We found violations of the reporting requirements within the Permit-to-Install (PTI) for the natural gas/hydrogen south boiler (B002) and the Permit-to-Operate (PTO) for the chlor-alkali operations (P001). Submittal of reports and additional information is requested as discussed below.

P001 - Mercury Cell Chlor-Alkali Plant

The PTO, which expired on 2/15/93, still has effective record keeping, monitoring and reporting requirements. PTO term 4 requires a semiannual report of air pollution control equipment (APCE) operating parameter deviations to identify when the wash box vent (air) stream chiller (second condenser) exceeds 32°C and when the hydrogen (H<sub>2</sub>) stream chiller (second condenser) exceeds 20°C. Deviation reports for the 3/01/08 – 8/31/09 period and the 9/01/09 – 2/28/09 period were not received at the Northeast District Office, which is a violation of PTO term 4. Our review of your records for the

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1/01/08 – 3/17/09 period found no deviations with the maximum temperature requirements for each exhaust stream. Since the 12/05 installation of additional APCE after the second condenser on each exhaust stream did decrease mercury emissions, and no deviations with emissions limits were reported in the semiannual deviation reports, we acknowledge that this is an administrative violation of a reporting requirement.

1. Please submit reports, via e-Business, that state whether there were any temperature deviations with the chiller (second condenser) exhaust at the wash box vent (air) stream and at the hydrogen stream at P001 for the 3/01/08 – 8/31/09 period and the 9/01/09 – 2/28/09 period.

A 11/18/04 Consent Order, which was revised on 3/30/05, required an early compliance deadline of 12/05, rather than the 12/19/06 deadline mandated by the National Emission Standards for Hazardous Air Pollutants (HAPs) for Mercury Emissions from Mercury Cell Chlor-Alkali Plants in 40 Code of Federal Regulations (CFR) Part 63, Subpart IIII. Our review of your records and the submitted semiannual reports finds that significant efforts have been made to comply with the monitoring, record keeping and reporting requirements of the aforementioned Maximum Achievement Control Technology (MACT) rule requirements for the mercury cell chlor-alkali industry. Some records, required by the chlor-alkali MACT rule, were not requested during our 4/02/09 inspection. Submittal of these records is requested to document compliance with the chlor-alkali MACT rule and to gain an understanding of procedures, which will be useful when we begin writing the terms for the Title V operating permit.

2. Please submit an electronic or a hard copy of "Cells Walkaround Checklist," the electronic file previously sent may have been corrupted because we saw no data. We recall that documentation of some of the work practices, inspections and other requirements in Tables 1 – 4 of 40 CFR Part 63, Subpart IIII are included.

40 CFR 63.8526(b)(4) requires a rolling 52-week average mercury emissions estimate to be performed in accordance with equation 1 in 40 CFR 63.8243(a)(3). These rolling 52-week estimates were not included in the electronic file excerpt, MACT Record Keeping – Cell End Box & Hydrogen Stack Mercury Emissions.xls for each week in 1/09, that was submitted on 4/03/09.

3. Please submit an electronic copy of your records that shows:
  - a. the weekly chlorine ( $\text{Cl}_2$ ) production for the same periods, in Megagrams  $\text{Cl}_2$  (Mg  $\text{Cl}_2$ /week), as specified in 40 CFR 63.8243(a)(2); and
  - b. the facility-wide mercury emissions rate, in grams Hg/Megagrams  $\text{Cl}_2$ , as a rolling 52-week average, for each week in 1/09 or another recent month in 2009.

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(B001) 9.7 mmBTU/hr natural gas & hydrogen boiler, North Boiler

(B002) 8.4 mmBTU/hr natural gas & hydrogen boiler, South Boiler

The annual emissions report for B002 was not submitted for calendar years 2007 & 2008, as required by the Permit-to-Install, PTI# 02-09680 term D.2. It is acknowledged that the quarterly reports show that estimated mercury emissions are less than 1.0 gram Hg/day, which comply with the 100 grams Hg/day limit and would not exceed the annual limit of 0.040 ton Hg/yr.

4. Please submit reports, via e-Business, that note the mercury emissions, in tons/yr, for each of calendar years 2007 and 2008 for B002.

(P004) Chloropicrin (aka trichloromethane) Process

We have re-evaluated the applicability of the old Ohio Administrative Control (OAC) rule 3745-21-07(B) that was cited in PTI 02-5971 and which is still in the State Implementation Plan (SIP). The Northeast District Office of Ohio EPA currently believes that trichloronitromethane product (CAS no. 76-06-2,  $\text{CCl}_3\text{NO}_2$ ) is not a photochemically material as defined in OAC rule 3745-21-01(C)(5), and therefore OAC rule 3745-21-07(B) is not applicable and should not have been cited in PTI 02-5971.

Amended OAC rule 3745-21-07(M)(2) would be an applicable rule that requires use of capture/control equipment that reduces the organic compound (OC) emissions from the EU by an overall control efficiency of at least 85%, by weight. The requirements of amended OAC rule 3745-21-07(M)(2) are not applicable if an exemption in OAC rule 3745-21-07(M)(5) is applicable.

5. In order to determine the requirements of amended rule OAC rule 3745-21-07(M) requirements to P004, please respond to the following items:
  - a. Is any liquid organic material exposed to temperature(s) greater than 220°F?
  - b. Do any of the liquid organic materials exhibit a boiling point greater than 200° F at 0.5 mm Hg absolute pressure, or have an equivalent vapor pressure?
  - c. If there is a "yes" response to either item 5.a. or 5.b., then provide a discussion with accompanying calculations to estimate the overall OC emissions reduction efficiency.

(P005) Cooling Tower

A second request for a determination of 40 CFR 63 Subpart IIIII applicability to P005 was sent to U.S. EPA, Region V in mid April 2009. According to a 5/28/09 telephone conversation with Mr. Tyce Workman, we understand that Ashta Chemicals has been requested to provide additional information to U.S. EPA. Please do copy OEPA on any correspondence with U.S. EPA regarding P005.

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The following mercury emissions calculation was presented in a 4/20/09 Ashta letter:  
 $7,500 \text{ gal}_{\text{FLOW}}/\text{min} \times 1,440 \text{ min}/\text{day} \times 0.005 \text{ gal}_{\text{DRIFT LOSS}}/100 \text{ gal}_{\text{FLOW}}$   
 $\times 0.25 \text{ mg Hg}/\text{l.} \times 3.745 \text{ l.}/\text{gal} \times \text{gram Hg}/1,000 \text{ mg Hg} = 0.506 \text{ gram Hg}/\text{day}.$

6. In order to assure that the most representative emissions estimates are employed, please provide the following information for P005:
  - a. Does the concentration of 0.25 mg Hg/l. represent the typical or the maximum mercury concentration in the cooling water stream?
  - b. What is the specific information reference for the drift loss factor of 0.005 gal<sub>DRIFT LOSS</sub> /100 gal<sub>FLOW</sub>?

(P006) Anhydrous Potassium Carbonate (APC) Process

According to estimates made in the report for a DAPC inspection, conducted on 12/19/06, the pre-controlled (uncontrolled) particulate emissions (PE) rate is more than 100 tons PE/yr for P006. This unit is subject to the Compliance Assurance Monitoring (CAM) rule requirements in 40 CFR Part 64. Ashta submitted a CAM plan for the venturi scrubber on 3/05/07. The CAM plan must also include the pulse jet dust collector, that handles the PE rate from the vibrator/crusher and from product transfer to the storage silos and truck load-out operations.

Please submit a revised CAM plan for P006 that includes monitoring plans for both the venturi scrubber and the pulse jet dust collector.

(P008) Chloropicrin - Tellone II Blending Process

We believe that Tellone II (1,3 dichloropropene) (CAS no. 542-75-6, CICC=CCI) is a photochemically material as defined in OAC rule 3745-21-01(C)(5), and therefore, OAC rule 3745-21-07(E) is still applicable.

Amended OAC rule 3745-21-07(M)(2) would be an applicable rule that requires use of a capture/control equipment that reduces the OC emissions from the EU by an overall control efficiency of at least 85%, by weight, unless it meets an exemption requirement in OAC rule 3745-21-07(M)(5).

7. In order to determine the requirements of amended rule OAC rule 3745-21-07(M) requirements to P004, please respond to the following items:
  - a. Is any liquid organic material exposed to temperature(s) greater than 220°F?
  - b. Do any of the liquid organic materials exhibit a boiling point greater than 200° F at 0.5 mm Hg absolute pressure, or have an equivalent vapor pressure?

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- c. If there is a "yes" response to either item 5.a. or 5.b., then provide a discussion with accompanying calculations to estimate the overall OC emissions reduction efficiency.

#### General Reporting Requirements

The fee emissions report for 2008, filed via the e-Business Center, was reviewed and approved. All future reports, permit applications, fee emissions reports and certification of compliance with a Title V operating permit must be electronically filed via the e-Business Center.

Until the requirements of any applicable Maximum Achievable Control Technology (MACT) rule is within a final Title V operating permit, MACT deviation reports must be sent to both Ohio EPA and U.S. EPA, Region V.

#### Status of Application for a Title V Operating Permit (# P0084063)

An application was submitted on 12/21/04 and later updated with a revision received on 5/30/06 for permit# P0084063. We have performed a preliminary review of the revised application and found that some APCE information was not transferred to the STARS2 database or other information is missing.

8. Please make the following changes to the facility profile in e-Business for a complete application for the Title V operating permit:
  - a. (P001) Chlor-alkali process
    - i. Submit a revised process diagram that shows the packed tower scrubbers that control Cl<sub>2</sub> emissions. It may be uploaded as a pdf file or another type of electronic attachment.
    - ii. Another condenser should be included on each of the wash box vent (air) stream and the hydrogen stream.
  - b. (P004) Chloropicrin process
    - i. If there is an egress on the decant drum adsorber, please create it and associate it with the adsorber.
    - ii. The chloropicrin storage tanks (T002 & T003) are considered to be independent operations from the chloropicrin production process (P004). If appropriate, the T002/T003 vent adsorber control may need to be dis-associated from the P004 chloropicrin plant process icon.
  - c. (P006) Anhydrous potassium carbonate process – If there is an egress on the bin vent filter baghouse to capture loading of potassium carbonate product into the storage silo, then create it and associate it with the process icon.

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- d. (P007) Potassium hydroxide concentrator – Please change the classification to insignificant; see p. 24 of the inspection report.
- e. (T002 & T003) chloropicrin storage tanks and (Z001-Z012) other insignificant emissions units (EUs) - Please change the classification to insignificant; see p. 24 of the inspection report.
- f. (F002) Potassium chloride storage piles – Please create this insignificant emissions unit and associate a fugitive egress point. e-Business will generate a temporary EU id (ie. TMPxxxxxx), our office will later re-name it as F002. Use of a tarp or other cover is a control measure to prevent wind erosion and should be mentioned in the unit description, but it is not considered a control device.

Other insignificant EUs (Z001-Z012) will be re-named to conventional Ohio EPA id nos. (i.e. T004, F001, etc.), as indicated on p. 24 of the inspection report, by the Northeast District Office.

There are five Supplementary Environmental Projects (SEPs) required by the 3/30/05 revision of the Consent Order. We will confirm with our Central Office whether the SEPs can just be mentioned in the facility-wide section of the Title V operating permit or whether each one would need to be included as an independent EU in the facility profile of e-Business. The SEPs include a cell basement floor upgrade, a central vacuum system to clean spilled mercury, a cell maintenance lid and three containment rooms to clean/repair equipment from the chlor-alkali process. On 4/02/09 we verified that the mandated equipment was installed, operational and that the monitoring program is performed as proposed.

Please submit the facility profile information, requested in item no. 8, by **6/16/09** via e-Business. Please submit the information requested in item nos. 1 - 7 by **6/29/09**. If you are unable to respond to any part of this request within the time frame(s) discussed above, please inform this Agency. Failure to respond to this request in a timely manner can result in a referral to the Central Office of Ohio EPA for the appropriate enforcement action.

The submission of the requested information does not constitute a waiver of Ohio EPA's authority to seek civil penalties as provided in ORC 3704.06 or for U.S. EPA to seek civil penalties pursuant to federal law. Ohio EPA will decide whether to pursue or decline to pursue penalties regarding this matter at a later date.

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Should you have any comments or questions about this correspondence, please do not hesitate to contact me at (330) 963-1205, or via e-mail at [christine.mcphee@epa.state.oh.us](mailto:christine.mcphee@epa.state.oh.us).

Sincerely,



Christine McPhee  
Environmental Specialist  
Division of Air Pollution Control

CM:bo

cc: Tim Fischer, Ohio EPA, NEDO, DAPC  
Tom Kalman, Ohio EPA, CO, DAPC  
Lisa Holscher, U.S. EPA, Region V

ec: Ed Fasko, Ohio EPA, NEDO, DAPC  
[JReese@AshtaChemicals.com](mailto:JReese@AshtaChemicals.com) with electronic enclosure  
[tworkman@AshtaChemicals.com](mailto:tworkman@AshtaChemicals.com) with electronic enclosure