



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

June 24, 2013

RE: EMC ASHTABULA (FKA ELKEM METALS)
NPDES PERMIT NO. 3IN00036
ASHTABULA TWP, ASHTABULA COUNTY
COMPLIANCE EVALUATION INSPECTION

NOTICE OF VIOLATION

CERTIFIED MAIL

Mr. David Renfrew, Vice President
EMC Metals Company – Ashtabula LP
P.O. Box 266
Pittsburgh, Pennsylvania 15230-0266

Dear Mr. Renfrew:

On June 18 and 20, 2013, a site inspection was conducted at the above referenced facility at 2700 Lake Road East (State Route 531), Ashtabula Township, Ashtabula County. The inspection was conducted by John Schmidt of Ohio EPA's Division of Surface Water (DSW). You represented EMC Metals Inc. / EMC Ashtabula LP (EMC), formerly Elkem Metals Company – Ashtabula LP (Elkem) and Michael Mearini represented your contract operator. The purpose of the inspection was to evaluate the facility's compliance status with respect to the terms and conditions of the facility's National Pollutant Discharge Elimination System (NPDES) permit. The last compliance inspection was conducted on June 14, 2013.

The system consists of a sanitary treatment system (EMC Sanitary WWTP) and an industrial treatment system (EMC Industrial WWTP). Calcium carbide stored in Building C1P is currently being staged outdoors awaiting shipment to Carbide Industries of Calvert City, TN via railcar. The staging area is incorporated into the revised stormwater pollution prevention plan (SWPPP). Commencing in October 2012, EMC is currently conducting closure of Pond 5C in conjunction with the USACE. Initial activities included rerouting treatment around Pond 5C and placing dredged sediments from the Ashtabula River into Pond 5C. Currently, leachate from the closure of Ponds 3 and 3A are collected in the Russell Road ditch along with stormwater, and is intercepted by the Russell Road pump station, then pumped to ponds 4C and 4D for setting, then to Outfall 001. Sediment placement in Pond 5C occurred between October and December 2012, is currently suspended, and is anticipated to commence again in July 2013. No other process changes in treatment are noted from the 2012 inspection; hence, they will not be repeated here. A figure provided by EMC is included for reference.

A process change being requested by the USACE is to treat elevated levels of cyanide as well as PCBs authorized by USACE's 401 Water Quality Certification. Ohio EPA is awaiting a permit-to-install (PTI) for changes to the filtering system associated with water generated from the Closure of Pond 5C.

Observations

Following are observations and notations made during the inspection:

Elkem Sanitary WWTP

1. The sanitary wastewater treatment plant, rated at 50,000 gallons per day, is currently accepting about 6,000 gallons per day. The drop in flow is attributed to ESAB ceasing operations at their Ashtabula facility. The wastewater plant also receives domestic sanitary flow from the adjacent USALCO, Praxair, ESAB, and ASHTA facilities on a daily basis.
2. Although the EMC (Elkem) facility is now used primarily for warehousing, Frontier remains as a tenant that currently is dismantling and recycling light rail cars at the property.
3. The plant is operated by Michael Mearini on behalf of EMC, with assistance provided by Wayne Linn and Dave Renfrew. Mr. Mearini inspects the facility three times weekly.
4. Log books, a copy of NPDES permit, a copy of the ORC contract, and operation/maintenance manual are maintained at the site and were available for inspection. The inspection and observation sheets of the sanitary treatment system should be maintained in a bound book instead of loose-leaf sheets. The information maintained in the log book was compliant with OAC 3745-7-09.
5. The south Imhoff tank receives flow from the former ESAB facility, ASHTA, Praxair, and USALCO. The tank was noted as full of duckweed. A small amount of vegetation was also noted in the tank that needs to be removed. The north Imhoff tank receives flow from EMC only. This tank has a smaller accumulation of duckweed that needs to be removed.
6. Sludge is removed from the Imhoff tanks by gravity lines to sludge drying beds. Sludge is removed from the sludge drying beds for disposal at a licensed solid waste disposal facility. Sludge was last removed from the beds on June 11, 2011 and is currently stockpiled adjacent to the 4-series sedimentation ponds. As noted in the 2012 inspection, this is not an authorized location to stockpile sludge per your NPDES permit, this is considered open dumping under Ohio Revised Code (ORC) 3734. Per your NPDES permit, this sludge must be immediately removed and taken to a licensed solid waste disposal facility.
7. The trickling filter dosing siphon has recently been repaired and is functioning as designed.
8. The trickling filter was observed to be free of vegetation. The spray arm has recently been repaired; however, only two of the four spray arms are functional. All arms of the trickling filter must be made functional.
9. The pump from the trickling filter to the chlorine contact tank was observed as functioning properly. A spare pump maintained at the site for immediate replacement. Chlorine is injected at the pump for mixing.
10. Chlorine is added to the waste stream prior to the contact tank to provide disinfection. Sulfur dioxide is added to the outlet of the tank to provide de-chlorination. The post-disinfection aeration and original chlorine mixing systems are inoperable. Mr. Renfrew indicated that the chlorine mixing system and post-disinfection equipment have not been operational in the 13 years he has overseen this facility; however, adequate mixing appears to be occurring for the current flow received.
11. The final effluent at Outfall 601 between the Elkem WWTP and the final outfall (Outfall 002) was observed. The EMC final discharge at the Ashtabula Power Plant (Outfall 002) was submerged at

the outlet to Lake Erie as observed on May 16, 2013. Outfall 601 (EMC Sanitary WWTP) was observed to be producing an effluent of acceptable visual quality.

12. Samples are collected by Mr. Linn, Mr. Renfrew, and Mr. Mearini, who perform on-site analysis of pH, chlorine residual, as well as observations of flow, color, odor, and turbidity. Mr. Linn inputs data into the eDMR system on behalf of EMC, with the pinning of the reports done by Mr. Linn.

Elkem Industrial WWTP

13. The pump at the Russell Road Ditch pump house was observed in operating condition with one pump in the station. Mr. Renfrew indicated that a second pump is maintained at the facility to replace the operating pump in the event of a pump failure. The pump station appears to be operating as designed. The pump station serves a drainage area of approximately 100 acres of the EMC property.
14. Two overflow pipes had been constructed through the berm at the pump house intake to allow wastewater to bypass Ponds 4C and 4D for discharge directly to Lake Erie. As indicated during the April 2011 inspection, this bypass has apparently been in place at the EMC facility for at least the past 13 years. The bypass was observed as not discharging.
15. The ponds used for settling the industrial wastewater (Ponds 4C and 4D) appeared in acceptable condition. A former industrial process discharge line to the Pond 5C from No. 4 pump station has been removed as the pump station is no longer in operation.
16. Some of the equipment in the post-settling pH adjustment building was not operational and had been destroyed or removed. None of the equipment in the pre-settling pH adjustment building (Building 163) appears operational, with some equipment destroyed or removed.
17. Pond 5C commenced closure in November 2012 and was suspended in December 2012 due to USACE's dredging schedule. Dredging is anticipated to commence in July 2013. The discharge from Pond 5C is filtered through a treatment system consisting of a sump, frac tank, 50 micron filter, and a sand filter prior to discharge downstream of Outfall 001. The USACE discharge was observed as not flowing during the inspection.
18. The compliance schedule of your NPDES permit requires EMC to submit quarterly reports on the closure of Ponds 4A, 4B, 4C, 4D, 5C, and Ponds 1 and 2. EMC submitted a quarterly reports on February 1, 2013, but has not submitted quarterly reports since. The 2013 Quarter 1 Report was due on May 1, 2013.
19. On December 18, 2012, Ohio EPA issues Director's Final Findings and Orders (DFFOs) which require EMC to submit a management plan for treatment of leachate from Ponds 3 and 3a no later than October 1, 2012.

Stormwater Management

20. All stormwater exits the facility through Outfall 001 or 002 only. No other point discharge points are located at the EMC facility.
21. The Russell Road ditch along the west sides of Ponds 3 and 3A was observed as dredged, and was confirmed by Mr. Renfrew as dredged in the fall of 2012. Dredgings were being dewatered adjacent to the ditch. As dredged materials are likely to contain mercury, materials must be properly disposed of either in a licensed solid waste disposal facility or incorporated into the closure of the existing surface impoundments (Pond Nos. 1, 2, or 5C).

22. The influent line from the leachate from Ponds 3 and 3A was observed as broken at the Russell Road pump station. This line must be repaired as soon as possible.
23. The composite sampler at Outfall 001 was observed at the proper temperature, but needs a manual thermometer placed in the sampling area to verify that the correct temperature (no more than 4° C) is being maintained.
24. The sampling location for Outfall 001 was observed as crusted with algae in the effluent sampling channel. This sampling port must be maintained free of vegetation and cleaned on a regular basis.
25. The stormwater pollution prevention plan (SWPPP) was available for inspection. The plan was last revised on January 19, 2012; but was not revised to reflect the pending NPDES modification and pond closure activities. The annual inspection was completed in December 2011, and the annual certification was conducted on January 19, 2012.
26. EMC could not produce any records of any employee training on the SWPPP, and acknowledged that training has not been performed on the plan. This training must be scheduled as soon as possible and must include members of both EMC and Frontier.
27. During the site visit, Ohio EPA and EMC noted that there are several piles of materials from both the demolition operations of the former EMC manufacturing operations as well as demolition of outlet structures from the ponds and a mobile home/office. The SWPPP document must reflect treatment of waters in contact with materials other than simply passing through a series of settling ponds.

Pond 5C Closure

28. During the site visit, an inspection on the progress of the closure of Pond 5C was conducted. Bryan Cork, Cisco Arroyo, and Ben Williams represented Frontier, contractor to USACE.
29. A new sump was constructed at the northwest corner of Pond 5C to collect surface water that had accumulated over the winter and to intercept any new stormwater that enters the impoundment. The sump was constructed the week of May 27, 2013 and was completed by May 31, 2013. A series of deeper sumps are envisioned for dewatering the existing waste within the pond.
30. Pond 5C was pumped down to the level of existing solids, with some desiccation of the solids noted. Water is accumulating very slowly in the sump presently, approximately 1 gpm. The treatment system is currently operating in a batch-mode as water accumulates in the frac tank to treat.
31. Carbon filtration and resin polymers are expected to arrive the week of July 1, 2013. Carbon filters are expected to arrive June 28, 2013.
32. While the treatment system operates, daily cyanide tests are being conducted by EMC using the colorimetric tests prescribed in the USACE dewatering plan. Every week a split sample is being run to a laboratory.
33. The outfall below EMC's Outfall 001 was observed as dry.

NPDES Permit Compliance Review

A review of the electronic discharge self-monitoring reports (eDMRs) received by Ohio EPA for the period May 1, 2012 through June 1, 2013 indicates apparent noncompliance of the terms and conditions of your NPDES permit. Specific instances of noncompliance are as follows:

Limit Violations

The following limit violations were noted for the period reviewed:

Station	Reporting Code	Parameter	Limit Type	Limit	Reported Value	Violation Date
001	00720	Cyanide, Total	1D Conc	0.104	.12	5/3/2012
001	00720	Cyanide, Total	1D Conc	0.104	.134	5/10/2012
001	00720	Cyanide, Total	1D Conc	0.104	.185	5/17/2012
001	00720	Cyanide, Total	1D Conc	0.104	.235	5/24/2012
001	00720	Cyanide, Total	30D Conc	0.047	.1685	5/1/2012
601	00530	Total Suspended Solids	1D Conc	45	48.	5/24/2012
001	00530	Total Suspended Solids	1D Conc	7.0	32.	9/13/2012
001	00530	Total Suspended Solids	1D Conc	7.0	28.	9/27/2012
001	00530	Total Suspended Solids	30D Conc	3.2	15.5	9/1/2012
001	50092	Mercury, Total (Low Level)	30D Conc	1.3	2.34	9/1/2012
601	00530	Total Suspended Solids	1D Conc	45	52.	9/20/2012
001	00530	Total Suspended Solids	1D Conc	7.0	10.	11/1/2012
001	50092	Mercury, Total (Low Level)	30D Conc	1.3	9.02	11/1/2012
001	00530	Total Suspended Solids	1D Conc	7.0	10.	12/6/2012
001	00530	Total Suspended Solids	30D Conc	3.2	3.75	12/1/2012
001	50092	Mercury, Total (Low Level)	30D Conc	1.3	24.	12/1/2012
001	50092	Mercury, Total (Low Level)	30D Conc	1.3	22.7	1/1/2013
001	00530	Total Suspended Solids	1D Conc	7.0	13.	2/28/2013
001	00530	Total Suspended Solids	30D Conc	3.2	7.35	2/1/2013
001	50092	Mercury, Total (Low Level)	30D Conc	1.3	78.7	2/1/2013
001	50092	Mercury, Total (Low Level)	30D Qty	0.0000	.00004	2/1/2013
001	00530	Total Suspended Solids	30D Conc	3.2	3.35	3/1/2013
001	50092	Mercury, Total (Low Level)	30D Conc	1.3	23.8	3/1/2013
001	50092	Mercury, Total (Low Level)	30D Conc	1.3	16.2	4/1/2013
001	00530	Total Suspended Solids	1D Conc	7.0	11.	10/4/2012
001	00530	Total Suspended Solids	1D Conc	7.0	14.	10/11/2012
001	00530	Total Suspended Solids	30D Conc	3.2	6.25	10/1/2012
001	50092	Mercury, Total (Low Level)	30D Conc	1.3	7.02	10/1/2012
001	50092	Mercury, Total (Low Level)	30D Conc	1.3	11.5	5/1/2013

Part III, Item 12 of your NPDES permit requires you to notify Ohio EPA of any violations, along with measures taken to ensure that they are not repeated. A fact sheet on this requirement may be found online at http://epa.ohio.gov/portals/35/permits/24-hour_Report_FactSheet.pdf. Noncompliance notification forms may be found online at <http://epa.ohio.gov/dsw/permits/individuals.aspx>. Based upon the above information, EMC remains in **significant noncompliance** for both mercury and total suspended solids (TSS). EMC responded to the May 2012, October 2012, November 2012, December 2012, January 2013, February 2013, March 2013, and April 2013 violations with written responses dated July 6, 2012, December 13, 2012, January 10, 2013, February 14, 2013, March 13, 2013, April 11, 2013, and June 4, 2013. No responses were received to for the September 2012 or March 2013 violations. The noncompliance of TSS, both daily and monthly, has been attributed to improper sampling techniques or a low flow through a very shallow discharge ditch, with water picking up surface debris and ending up in the sample. EMC should consider the installation of a boom immediately upstream of the sample location and keep vegetation trimmed in vicinity of the sampling location to control floating debris. EMC must immediately make necessary changes to its monitoring station to control TSS. Mercury, even from offsite sources, requires EMC to submit a mercury variance application and a pollutant minimization plan. EMC must locate any sources of mercury on its property. EMC indicated that they have retained the services of a consultant who is preparing the mercury variance application. **Limit violations continue to occur**

monthly. EMC must take appropriate measures to ensure that these violations do not continue and submit a mercury variance application, along with an NPDES permit modification request.

Reporting Violations

The following reporting frequency violations were noted for the time period reviewed:

Station	Reporting Code	Parameter	Sample Frequency	Expected	Reported	Violation Date
001	61425	Acute Toxicity, Ceriodaphnia	1/Year	1	0	09/01/2012
001	01094	Zinc, Total Recoverable	1/2Weeks	1	0	09/15/2012
001	01119	Copper, Total Recoverable	1/2Weeks	1	0	09/15/2012

Part III, Item 12 of your NPDES permit requires you to notify Ohio EPA of any violations, along with measures taken to ensure that they are not repeated. No response was received for the September 2012 violations, although during the inspection EMC stated that zinc and copper were collected as prescribed by the NPDES permit, and the annual toxicity test was conducted in December 2012 and appears in the December 2012 eDMR. The missed pH samples were attributed to nobody being on the premises to sample on those days and revised the May 2012 eDMR report to reflect the code "AN" **Note that the AN code may only be used on weekends and federally recognized holidays for parameters that require daily monitoring. Ohio EPA expects that sampling schedules be adjusted to account for collection of any parameters that require collection other than daily. Copper, zinc, and acute toxicity samples should have been collected on days when the plant is normally staffed during the months as prescribed in the eDMR.**

The following reporting code violations are noted for the time period reviewed:

Station	Reporting Code	Parameter	Limit Type	Limit	Reported Value	Violation Date
001	00400	pH			AD	12/1/2012
001	00400	pH			AD	12/2/2012
001	00400	pH			AD	12/3/2012
001	00400	pH			AD	12/4/2012
001	00400	pH			AD	4/1/2013
001	00400	pH			AD	4/2/2013
001	00400	pH			AD	4/8/2013
001	00400	pH			AD	4/9/2013
001	00400	pH			AD	4/24/2013
001	00400	pH			AD	4/26/2013
001	00400	pH			AD	4/29/2013
001	00400	pH			AD	4/30/2013
001	00400	pH			AD	10/29/2012
001	00400	pH			AD	10/30/2012
001	00400	pH			AD	10/31/2012

Part III, Item 12 of your NPDES permit requires you to notify Ohio EPA of any violations, along with measures taken to ensure that they are not repeated. EMC responded to the October 2012, December 2012, and April 2013 violations with written responses dated December 13, 2012, February 14, 2013, and June 4, 2013. The October 2012 and December 2012 violations were attributed to a failed pH probe. The April 2013 violations were attributed to a battery failure of the sampler. **Equipment should be checked more frequently to ensure that equipment failure does not result in multiple days of missing data.**

Compliance Schedule Violations

The following compliance schedule violations and upcoming milestones were noted for the period reviewed:

Permit Effective Date	Permit Expiration Date	Schedule Due Date	Completion Date	Event Code	Schedule Type	Schedule Milestone
7/1/2012	5/31/2013	10/1/2012	Not Complete	None	Other	Hg Compliance Letter
7/1/2012	5/31/2013	10/1/2012	Not Complete	None	Other	Hg NPDES Mod if need
7/1/2012	5/31/2013	10/1/2012	Not Complete	None	Other	Apply Hg Variance
7/1/2012	5/31/2013	12/31/2013	Not Complete	None	Construction	Closure of Pond 5C
7/1/2012	5/31/2013	12/31/2014	Not Complete	None	Construction	Closure of Ponds 1,2
7/1/2012	5/31/2013	12/31/2014	Not Complete	None	Construction	Closure of 4A-B-C-D,1A
7/1/2012	5/31/2013	10/01/2013	Not Complete	None	Construction	Leachate Mgmt Plan
7/1/2012	5/31/2013	01/31/2013	02/01/2013	None	Construction	4Q12 Closure Status Rpt
7/1/2012	5/31/2013	04/30/2013	Not Complete	None	Construction	1Q13 Closure status Rpt
7/1/2012	5/31/2013	07/30/2013	Not Complete	None	Construction	2Q13 Closure Status Rpt
7/1/2012	5/31/2013	10/31/2013	Not Complete	None	Construction	3Q13 Closure Status Rpt

Given the time that has elapsed since missed milestones were due, EMC remains in **significant noncompliance** with its NPDES permit for the mercury variance request. Based upon the reported values of mercury, a mercury variance and NPDES permit modification are required. EMC acknowledged that they are aware of the NPDES modification requirements and mercury variance request, which is currently under preparation. **Please provide these status reports to Ohio EPA Northeast District as soon as possible.**

Other Violations

1. NPDES Permit Renewal: Your current NPDES permit expired on May 31, 2013; therefore the NPDES renewal application was due to Ohio EPA no later than November 30, 2012. To-date, no NPDES renewal has been received. EMC is in violation of OAC 3745-33-03(B) for failure to submit a timely NPDES renewal application.

Comments

Ohio EPA offers the following comments:

1. Cessation of Regulated Operations: Process areas no longer used and not a part of the treatment system in the Industrial WWTP (pH adjustment areas) must have the systems decommissioned. EMC did note that acid was removed from the bulk tank. All pH adjustment process equipment, tanks and their contents should be inventoried and removed for appropriate offsite disposal. These areas are subject to Ohio EPA's Cessation of Regulated Operations (CRO) program, as notified by Ohio EPA in August, 2006 and again in April 2010. EMC should confirm its CRFO status with Frank Popotnik of Ohio EPA's CRO program at 330-963-1198. **Ohio EPA will expect that the process areas of the EMC Industrial WWTP no longer being used to be decommissioned, inventoried, and removed for appropriate offsite disposal.**
2. Construction of Pump Station to replace Elkem Sanitary WWTP and Elkem Industrial WWTP: During the 2011 and 2012 inspections, EMC disclosed that it has contracted with William Boyle Engineering to prepare a PTI application to construct a pump station to replace the EMC Sanitary WWTP and to tie under drains from Ponds 3 and 3a into this system. Please provide Ohio EPA a schedule as to when we can expect this PTI. EMC must also apply for a mercury variance and include a pollutant minimization plan to address treatment of stormwater containing mercury. **EMC must provide a schedule for either a PTI for the pump station to replace the sanitary WWTP or a schedule to make improvements to the sanitary WWTP.**

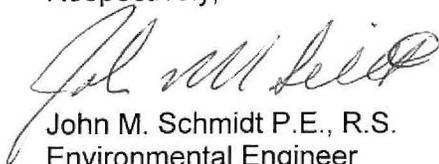
3. Modifications to NPDES permit and Closure Plan: Ohio EPA notes that due to the USACE dredging schedule, EMC may not be able to meet the compliance milestones specified in the NPDES permit compliance schedule and the approved closure plan. If the dates are envisioned to change, EMC must apply to modify the dates specified in the closure plan and NPDES compliance schedule through a PTI application and NPDES modification request included within the renewal application.

Please be advised that failure to comply with effluent limits and compliance schedule in your NPDES permit, failure to adequately operate and maintain your waste water treatment plant, and failure to update your SWPPP **is each cause for an enforcement action pursuant to chapter 6111 of the Ohio Revised Code**. Based on the above information, EMC is considered to be in **significant noncompliance** with the terms and conditions of the NPDES permit and, therefore, subject to enforcement actions pursuant to Chapter 6111 of the Ohio Revised Code. Such actions can result in fines of up to \$10,000 per day of violation.

You must inform this office, in writing, by July 15, 2013 as to the actions that have been or will be taken to correct the above violations. Your response should include the dates that the actions have been or will be completed. Please be advised that past or present issues of noncompliance can continue as subjects of future enforcement actions by Ohio EPA. If Ohio EPA does not hear from you, in writing, by July 15, 2013, the Ohio EPA Northeast District Office will refer this matter for enforcement.

If you have any questions or comments regarding this inspection, please feel free to contact me at (330) 963-1175.

Respectively,



John M. Schmidt P.E., R.S.
Environmental Engineer
Division of Surface Water

JMS/cs

Attachment Process flow Diagram, Permit 31B00012 from 2007 Permit Application

ec: Ted Conlin, Ohio EPA, DSW, NEDO
Scott Winkler, Ohio EPA, DSW, NEDO

cc: Frank Popotnik, Ohio EPA, NEDO, DHWM
Colum McKenna, Ohio EPA, NEDO, DSWIM
Bill Fishbein, Ohio EPA, CO, Legal
Michael Mearini, Supt, Ashtabula City WWTP

Elkem Metals Company - Ashtabula LP

OH000027

Figure 2C-1 Jan 31, 2007 *rev. 05/2013*

