

**Environmental
Protection Agency**

T. J. G. ... Governor
Lee Fisher, Lt. Governor
Chris Komiski, Director

April 29, 2010

RE: ELKEM METALS COMPANY
NPDES PERMIT NO. 3IN00036
ASHTABULA TWP, ASHTABULA COUNTY
COMPLIANCE INSPECTION EVALUATION

NOTICE OF VIOLATION

CERTIFIED MAIL

Mr. David Renfew, Director
Human and Environmental Resources
Elkem Metals Company – Ashtabula LP
P.O. Box 266
Pittsburgh, Ohio 15230-0266

Dear Mr. Renfew:

On April 1, 2010, 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 and Erm Gomes of Ohio EPA's Division of Surface Water (DSW), and John Hujar and Colum McKenna represented Ohio EPA's Division of Solid and Infectious Waste Management (DSIWM). Michael Mearini represented the city of Ashtabula. You represented Elkem Metals Company – Ashtabula LP (Elkem). 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 March 26, 2007.

The system consists of the following industrial processes and discharges (see attached figure):

Tailings Waste (Elkem Industrial WWTP)

The Elkem Waste Water Treatment Plant (WWTP) consists of a series of settling ponds and processes to adjust the pH for cyanide removal when the facility manufactured calcium carbide. Settling Ponds 1 and 2 have been inactive for many years, with Ponds 3 and 3a last operating. Ohio EPA DSW acknowledges that Ponds 3 and 3a are subject to solid waste closure obligations pursuant to January 7, 2005 Director's Final Findings and Orders (DFFOs).

When the plant was operating, tailings waste from the production of calcium carbide and other plant wastes were placed into Settling Ponds 1, 2, 3, and 3a. Drainage from these ponds flows through perimeter ditches around each pond, terminating at an impounded section of ditch along Russel Rd. (Russel Rd. Ditch). Here waste water enters a pump station and is pumped into a series of three ponds (Ponds 5c, 4a, and 4b) for additional

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settling. Following settling, the waste water flows through a now inoperable pH adjustment for cyanide removal, where chlorine, acids and caustics were used in rapid mix tanks to raise the pH to 9.3. Following pH-chlorine adjustment, waste water was pumped to a series of two additional ponds (Ponds 4c and 4d), where the waste underwent now inoperable pH neutralization to lower the pH to acceptable levels again through the use of chlorine, acids, and caustics in rapid mix tanks. Discharged waste water flows through a channel and piping to Lake Erie through Outfall 001.

Sanitary Waste water (Elkem Sanitary WWTP)

Sanitary wastes from Elkem, Praxair, U.S. Aluminate, ASHTA Chemicals, and ESAB Welding flow to a pump station, where wastes are pumped to Elkem's waste water treatment facility. Preliminary treatment consists of digestion and primary settling through an Imhoff tank, secondary treatment consists of a dosing siphon/chamber and trickling filter, pump house, disinfection is accomplished through chlorine and post-chlorination aeration, with disinfection through sulfur dioxide. Monitoring is conducted at a manhole (Outfall 601). Treated sanitary waste water joins storm water and Manhole 002 for discharge through Outfall 002 at the First Energy Ashtabula Plant north of the Elkem facility. Sludge is removed from the Imhoff tanks on a semi-annual basis and dewatered on sludge drying beds. Dewatered sludge is transported to an off-site landfill for disposal.

Future Operations of the Elkem Sanitary WWTP

While conducting the inspection of the Elkem Sanitary WWTP, we discussed a proposal between Elkem and the city of Ashtabula to acquire and operate the Elkem Sanitary WWTP. Ashtabula intends to operate the existing WWTP until they construct a sanitary pump station and decommission the WWTP. Waste water flows from the Elkem Sanitary WWTP would then be treated by the City of Ashtabula WWTP. You discussed plans to construct a sewer to separate the under drains from Ponds 3 and 3a from the balance of the storm water currently being treated through the Elkem Industrial WWTP and divert this waste water to the Elkem Sanitary WWTP. Elkem may divert the under drains from Ponds 3 and 3a only after the city of Ashtabula has abandoned the Elkem Sanitary WWTP and constructed a pump station connecting to the Ashtabula City WWTP. Any tie-in of the under drains from Ponds 3 and 3a should be treated as an industrial discharge to the Ashtabula City WWTP collection system.

Per the above preliminary discussions within Ohio EPA, if Ashtabula desires to assume operations and ownership of the Elkem Sanitary WWTP, the City would need to apply for and obtain a new NPDES permit for the Elkem Sanitary WWTP. In addition to the new Ashtabula City permit, Elkem's existing NPDES Permit will need to be modified to reflect the removal of the Elkem Sanitary WWTP monitoring stations from its permit. Elkem and the City of Ashtabula should keep Ohio EPA informed as discussions develop.

Observations

Following are observations made during the inspection.

Elkem Sanitary WWTP

1. Outfall 601 (Elkem Sanitary WWTP) was observed to be producing a clear effluent.
2. Examination of the Imhoff tank indicated a growth of algae and significant clumps of grass were observed within the tank. WWTP components must be inspected and maintained. Effluent weirs were dirty and it was apparent that they had not been cleaned in some time.
3. The chlorination system mixing pump was not operational, and attempts to start the pump indicated that there was likely no power to the control panel. You indicated that the mixing pump has not been in operation in the 12 years he has overseen this facility. Post-disinfection aeration was also not operational and again you indicated that the equipment has not been operational in the 12 years you has overseen this facility.
4. Waste water was observed leaking out of the hill from a cracked sewer pipe between the disinfection tank and Outfall 601.
5. None of the equipment in the post-settling pH adjustment building was operational or was destroyed or removed. It was apparent that remaining equipment has not been used in many years. Several process tanks were observed as containing calcified caustic and acids both inside and outside the equipment building. All pH adjustment process equipment, tanks and their contents should be inventoried and removed for appropriate offsite disposal. The site may be subject to Ohio EPA's Cessation of Regulated Operations (CRO) program. Elkem should contact Ohio EPA's CRO program at 330-963-1200 regarding its obligations.
6. None of the equipment in the pre-settling pH adjustment building (Building 163) was operational, and some equipment has been destroyed or removed. Again, it was apparent that remaining equipment has not been used in many years. Several process tanks were observed as containing calcified caustic and acids. All pH adjustment process equipment, tanks and their contents should be inventoried and removed for appropriate offsite disposal.
7. Both pumps at the Russell Rd. Ditch pump house were observed as out of service. You indicated that the equipment was being repaired, and the pump station has been out of service for approximately 6 weeks. There was no

timeframe given for when the pump station would again be operational. Two overflow pipes had been constructed through the berm at the pump house intake to allow waste water to bypass Ponds 5c, 4a, 4b, 4c, and 4d for discharge directly to Lake Erie. You further indicated that this bypass has been in place at the Elkem facility for at least the past 10 years. The bypass was observed as discharging. You also indicated that Elkem was monitoring the discharge for the same parameters as Outfall 001 and reporting the discharge in the eDMR as Outfall 602.

NPDES Permit Compliance Review

A review of the electronic discharge self-monitoring reports (eDMRs) received by Ohio EPA for the period March 1, 2007 through March 30, 2010 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
601	31616	Fecal Coliform	30D Conc	200	200.	6/1/2007

Please provide an explanation as to why the WWTP was unable to achieve this limit.

Reporting Violations

The following code/reporting violations were noted for the period reviewed:

Station	Reporting Code	Parameter	Limit Type	Limit	Reported Value	Violation Date
601	00530	Total Suspended Solids			AB	3/14/2008
601	00610	Nitrogen, Ammonia (NH3)			AB	6/6/2008

Please provide an explanation as to why flow rates were not recorded in the eDMR for these dates.

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

Station	Reporting Code	Parameter	Sample Frequency	Expected	Reported	Violation Date
002	00010	Water Temperature	1/Week	1	0	06/15/2007
002	00530	Total Suspended Solids	1/Week	1	0	06/15/2007
002	00400	pH	1/Week	1	0	06/15/2007
002	00720	Cyanide, Total	1/Week	1	0	06/15/2007
601	00530	Total Suspended Solids	1/Week	1	0	06/15/2007

Station	Reporting Code	Parameter	Sample Frequency	Expected	Reported	Violation Date
601	80082	CBOD 5 day	1/Week	1	0	06/15/2007
601	50060	Chlorine, Total Residu	1/Week	1	0	06/15/2007
601	00400	pH	1/Week	1	0	06/15/2007
601	00300	Dissolved Oxygen	1/Week	1	0	06/15/2007
002	00010	Water Temperature	1/Week	1	0	11/22/2007
002	00530	Total Suspended Solids	1/Week	1	0	11/22/2007
002	00400	pH	1/Week	1	0	11/22/2007
002	00720	Cyanide, Total	1/Week	1	0	11/22/2007
601	00530	Total Suspended Solids	1/Week	1	0	11/22/2007
601	80082	CBOD 5 day	1/Week	1	0	11/22/2007
601	00400	pH	1/Week	1	0	11/22/2007
601	00300	Dissolved Oxygen	1/Week	1	0	11/22/2007
601	00610	Nitrogen, Ammonia (NH3	1/2Weeks	1	0	04/15/2008
002	00010	Water Temperature	1/Week	1	0	01/01/2009
002	00530	Total Suspended Solids	1/Week	1	0	01/01/2009
002	00400	pH	1/Week	1	0	01/01/2009
002	00720	Cyanide, Total	1/Week	1	0	01/01/2009
601	00530	Total Suspended Solids	1/Week	1	0	01/01/2009
601	00610	Nitrogen, Ammonia (NH3	1/2Weeks	1	0	01/01/2009
601	80082	CBOD 5 day	1/Week	1	0	01/01/2009
601	00400	pH	1/Week	1	0	01/01/2009
601	00300	Dissolved Oxygen	1/Week	1	0	01/01/2009
601	00010	Water Temperature	1/Day	1	0	02/01/2009
601	00010	Water Temperature	1/Day	1	0	02/02/2009
601	00010	Water Temperature	1/Day	1	0	02/03/2009
601	00010	Water Temperature	1/Day	1	0	02/04/2009
601	00010	Water Temperature	1/Day	1	0	02/06/2009
601	00010	Water Temperature	1/Day	1	0	02/07/2009
601	00010	Water Temperature	1/Day	1	0	02/09/2009
601	00010	Water Temperature	1/Day	1	0	02/10/2009
601	00010	Water Temperature	1/Day	1	0	02/14/2009
601	00010	Water Temperature	1/Day	1	0	02/15/2009
601	00010	Water Temperature	1/Day	1	0	02/16/2009
601	00010	Water Temperature	1/Day	1	0	02/17/2009
601	00010	Water Temperature	1/Day	1	0	02/21/2009
601	00010	Water Temperature	1/Day	1	0	02/22/2009
601	00010	Water Temperature	1/Day	1	0	02/23/2009
601	00010	Water Temperature	1/Day	1	0	02/24/2009
601	00010	Water Temperature	1/Day	1	0	02/28/2009

Please provide an explanation as to why these parameters were not recorded in the eDMR for these dates.

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Compliance Schedule Violations

The following compliance schedule violations were noted for the period reviewed.

Permit Effective Date	Permit Expiration Date	Schedule Due Date	Completion Date	Event Code	Schedule Type	Schedule Milestone
6/1/2006	5/31/2013	6/1/2009	Not Complete	95999	Other	Status Report
6/1/2006	5/31/2013	6/1/2007	Not Complete	None	Other	E.Coli Status Report

Ohio EPA could not locate any record of submission of these status reports pursuant to your NPDES permit. Please provide this status report to Ohio EPA Northeast District as soon as possible.

Other Violations

1. Failure to Maintain - Elkem Sanitary WWTP [OAC 3745-7-09, Permit Part III, Item 3]: Elkem has failed to maintain its Sanitary WWTP. Elkem must make immediate repairs to the sanitary effluent line from the chlorine tank outfall to monitoring station 601. Effluent weirs in the Imhoff tank and chlorine contact tank must be periodically scraped and the effluent channels cleaned. Mixing pumps and post aeration systems must be repaired.
2. Failure to Maintain - Elkem Industrial WWTP [OAC 3745-7-09, Permit Part III, Item 3]: Elkem has failed to maintain its Industrial WWTP since the pump station has been out of service for at least 6 weeks allowing a total bypass of the treatment works.
 - a. During the site inspection, you disclosed that Elkem was collecting data on the Industrial WWTP pump station bypass and reporting this station as Outfall 602 for the past six weeks. A review of Permit 3IN00036*LD indicates that there is no permitted outfall 3IN00036602. A review of the eDMR data from March 1, 2007 to March 1, 2010 indicates that flow has been reported at Station 602 since June 1, 2008. It is unclear to Ohio EPA if Elkem has been bypassing the pump station since June 1, 2008, February 15, 2010, or sometime in between. **Please provide the specific date that bypasses at the Industrial WWTP actually commenced.**
 - b. From examination of the eDMR information, it appears that Ekem has been reporting a discharge at Outfall 602 since at least February 15, 2010, and possibly as early as June 1, 2008. The purpose of the minimum of two pumps in a pump station is to facilitate the immediate repair of one pump while the second pump remains in service. Elkem must immediately secure a temporary pump to place the pump station back in operation

while the two permanent pumps are being repaired and are placed back in operation.

- c. Per discussions with Virginia Wilson of this office, Elkem was instructed to monitor the bypass as Station 602 and monitor for the same parameters at the same frequency as Outfall 001 in your current permit. A review of the eDMR data from March 1, 2007 through March 1, 2010 for reported Outfall 602 in comparison to the limits for Outfall 001 indicated the following in excess of Outfall 001 limits:

Station	Reporting Code	Parameter	Limit Type	Outfall 001 Limit	602 Reported Value	Violation Date
602	00400	pH	1D Max	9.0	9.41	1/27/2009
602	00400	pH	1D Max	9.0	9.11	2/19/2009
602	00400	pH	1D Max	9.0	9.78	2/20/2009
602	00400	pH	1D Max	9.0	9.21	2/26/2009
602	00400	pH	1D Max	9.0	9.26	2/27/2009
602	00400	pH	1D Max	9.0	9.89	3/04/2009
602	00400	pH	1D Max	9.0	10.28	3/06/2009
602	00400	pH	1D Max	9.0	9.69	3/13/2009
602	00400	pH	1D Max	9.0	9.42	3/18/2009
602	00400	pH	1D Max	9.0	9.81	3/19/2009
602	00400	pH	1D Max	9.0	9.86	3/20/2009
602	00400	pH	1D Max	9.0	9.85	3/25/2009
602	00400	pH	1D Max	9.0	9.46	3/26/2009
602	00400	pH	1D Max	9.0	9.28	3/27/2009
602	00400	pH	1D Max	9.0	9.92	4/01/2009
602	00400	pH	1D Max	9.0	10.31	4/03/2009
602	00400	pH	1D Max	9.0	9.21	4/15/2009
602	00400	pH	1D Max	9.0	9.02	4/16/2009
602	00400	pH	1D Max	9.0	9.04	4/17/2009
602	00400	pH	1D Max	9.0	9.12	5/06/2009
602	00530	Total Suspended Solids	30D Max	7	7	7/18/2008
602	00530	Total Suspended Solids	30D Max	7	13	8/08/2008
602	00530	Total Suspended Solids	30D Max	7	7	8/15/2008
602	00530	Total Suspended Solids	30D Max	7	100	8/22/2008
602	00530	Total Suspended Solids	30D Max	7	10	8/29/2008
602	00530	Total Suspended Solids	30D Max	7	10	9/05/2008
602	00530	Total Suspended Solids	30D Max	7	10	9/12/2008
602	00530	Total Suspended Solids	30D Max	7	12	10/03/2008
602	00530	Total Suspended Solids	30D Max	7	8	10/31/2008
602	00530	Total Suspended Solids	30D Max	7	8	12/27/2008
602	00530	Total Suspended Solids	30D Max	7	8	1/14/2009
602	00530	Total Suspended Solids	30D Max	7	13	2/13/2009
602	00530	Total Suspended Solids	30D Max	7	16	2/20/2009

Station	Reporting Code	Parameter	Limit Type	Outfall 001 Limit	602 Reported Value	Violation Date
602	00530	Total Suspended Solids	30D Max	7	11	2/27/2009
602	00530	Total Suspended Solids	30D Max	7	9	3/6/2009
602	00530	Total Suspended Solids	30D Max	7	12	2/13/2009
602	00530	Total Suspended Solids	30D Max	7	15	2/20/2009
602	00530	Total Suspended Solids	30D Max	7	12	3/27/2009
602	00530	Total Suspended Solids	Max	7	AA	4/03/2009
602	00530	Total Suspended Solids	Max	7	7	4/24/2009
602	00530	Total Suspended Solids	Max	7	13	7/1/2009
602	00530	Total Suspended Solids	Max	7	9	7/10/2009
602	00530	Total Suspended Solids	Max	7	7	8/14/2009
602	00530	Total Suspended Solids	Max	7	9	8/21/2009
602	00530	Total Suspended Solids	Max	7	9	1/07/2010
602	00530	Total Suspended Solids	Max	7	7	2/04/2010
602	00530	Total Suspended Solids	Max	7	8	2/18/2010

Please provide an explanation of these exceedences. The exceedences demonstrate that it is imperative that the Elkem Industrial WWTP pump station along Russell Rd. Ditch become operational as soon as possible.

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. 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. Elkem should contact Kim Gallagher of Ohio EPA's CRO program at 330-963-1200 regarding these obligations.
2. Chlorine and Sulfur Dioxide Storage: During the site inspection, it was noted that both chlorine and sulfur dioxide gas cylinders were stored and utilized adjacent to one another. Typically, these gasses are not stored in the same building due to chemical mixing hazards. Elkem is advised to check with the Occupational Safety and Health Administration (OSHA) regarding this chemical storage.
3. Implementation of Impoundment Closure – Ponds 1, 1a, and 2: Ohio EPA notes that Elkem received a permit-to-install (PTI) to close setting ponds 1, 1a, and 2. Elkem requested and received an extension to complete closure, but to date has not implemented the closure. **Elkem must submit a new PTI application for closure of Ponds 1, 1a, and 2 within 60 days of the date of this letter. If**

Ohio EPA does not receive a new PTI Application along with accompanying fees within 60 days of the date of this letter, the Ohio EPA Northeast District Office will refer this matter for enforcement.

4. Impoundment Closure – Ponds 4a, 4b, 4c, 4d, and 5c: Ohio EPA notes that we have never received a permit-to-install (PTI) to close setting ponds 4a, 4b, 4c, 4d, and 5c. **Elkem must submit a new PTI application for closure of Ponds 4a, 4b, 4c, 4d, and 5c within 60 days of the date of this letter. If Ohio EPA does not receive a PTI Application along with accompanying fees within 60 days of the date of this letter, the Ohio EPA Northeast District Office will refer this matter for enforcement.**

5. Storm Water Pollution Prevention Plan: Ohio EPA notes that we do not have a copy of the storm water pollution prevention plan (SWPPP) for this facility, and it is unclear if a document has been prepared or updated. An SWPPP is a living document and must be revised to reflect current operations of the facility, including provisions for both permanent storm water treatment (typically through sedimentation basins) and temporary storm water control through specific activities (construction and/or demolition). **Elkem must provide to a new or revised SWPPP within 60 days of the date of this letter. If Ohio EPA does not receive a new/revised SWPPP document within 60 days of the date of this letter, the Ohio EPA Northeast District Office will refer this matter for enforcement.**

Frequency violations continue to occur monthly. The current permit must be reviewed by Elkem and its contract operator so that all parameters are monitored and reported at the proper frequency.

Please be advised that failure to submit complete and accurate eDMRs, failure to comply with the compliance schedule in your NPDES permit, failure to adequately operate and maintain your waste water treatment plant, failure to update your SWPPP, and failure to obtain PTIs for your Pond closures is each cause for an enforcement action pursuant to chapter 6111 of the Ohio Revised Code. Based on the above information, Elkem 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.

Please inform this office, in writing, within 14 days from the date of this letter as to the actions that have been or will be taken to correct the above violations, and submit the renewal application for your NPDES permit. 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

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future enforcement actions by Ohio EPA. If Ohio EPA does not hear from you in writing within 14 days of the date of this letter, the Ohio EPA Northeast District Office will refer this matter for enforcement.

If you have any questions or comments regarding this notification, 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/mt

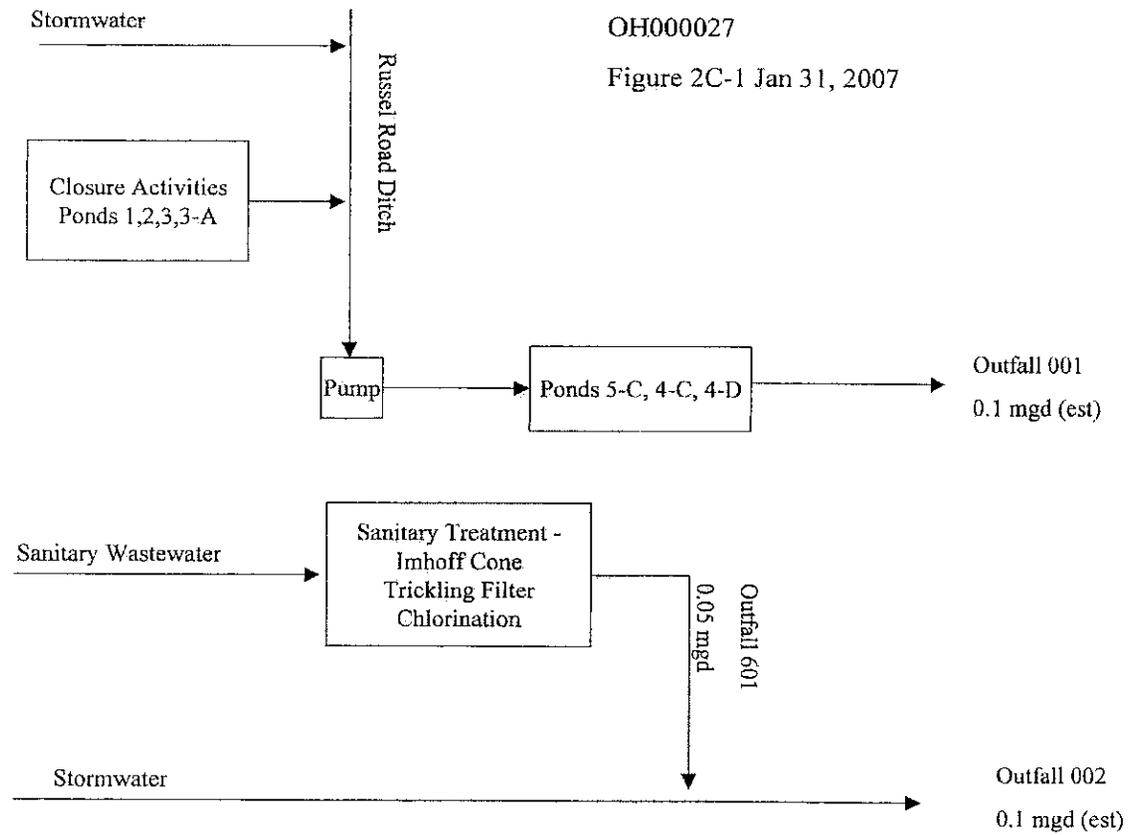
att: Process flow Diagram, Permit 31B00012 (2 pp) from Permit Application

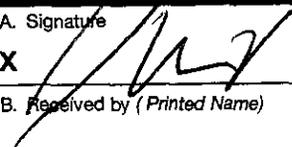
pc: Kim Gallagher, Ohio EPA DHWM NEDO
Colum McKenna, Ohio EPA DSWIM NEDO
Michael Mearini, Superintendent, Ashtabula City WWTP

Elkem Metals Company - Ashtabula LP

OH000027

Figure 2C-1 Jan 31, 2007



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<p>1. Article Addressed to:</p> <p>David Penfew Human & Environmental Resources Elkem Metals Co - Ashtabula LP PO Box 2666 Pittsburgh, PA 15230-0266</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>2. Article Number (Transfer from service label) 7009 1680 0000 6381 4948 (Schmidt 4/30/10)</p>	

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