



Environmental
Protection Agency

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

June 20, 2011

RE: MILLENNIUM CHEMICALS PLANT NO. 1
NPDES PERMIT NO. 3IE00013*ID
ASHTABULA TWP, ASHTABULA COUNTY
COMPLIANCE EVALUATION INSPECTION

Mr. Richard D. Hughes, Environmental Superintendent
Cristal Global - Millennium Inorganic Chemicals
2900 Middle Road
Ashtabula, Ohio 44004

Dear Mr. Hughes:

On June 14, 2011, a site inspection was conducted at the above referenced facility at 2900 Middle Road. The facility also includes the adjacent Millennium Landfill. The inspection was conducted by John Schmidt and Chris Moody of Ohio EPA's Division of Surface Water (DSW), with Mathew Narducci representing Cristal Global, Millennium Inorganic Chemicals (Millennium). At the conclusion of the inspection we also spoke with you. 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 May 27, 2010.

1. Industrial Waste Water Treatment

Process waste water is generated from the following: $TiCl_4$ gas scrubbers, oxidation process, flue pond cooling, finishing, $TiCl_4$ cooling tower, oxide cooling tower, and landfill contact water. Leachate from the landfill is collected in clay-lined channels and double-walled piping and collected in a lined surface impoundment near the front entrance. Floor drains from the WWTP buildings flow to an oil/water separator prior to discharge to the leachate impoundment. The leachate impoundment flows to a sump located at Plant 1 near the filter building WWTP, where it enters the industrial wastewater treatment plant for pH adjustment, thickening, and settling. Finishing waste waters are collected to a settling tank prior to neutralization, and scrubber wastes are sent to the neutralization plant. All other plant wastes discharge to a junction chamber between the south settling pond and the middle settling pond. Water then flows through a series of additional settling ponds and a pump station prior to discharge. The outfall of all discharges from Plant 1 is Outfall 003.

2. Sanitary Waste Water Treatment Plants (Administration Area Sanitary WWTP, Filter Press Area Sanitary WWTP, and Landfill WWTP)

There are three sanitary waste water treatment plants (WWTPs), one treating sanitary and laboratory wastes from the filter press building, another serving the main plant administration building, and a third system serving the landfill

employees. Wastewater from sanitary and laboratory wastes are treated through an extended aeration facility adjacent to the administration building prior to discharge to a junction chamber between the South Pond and the Middle Pond. The outfall for the Sanitary WWTP is Outfall 601. The WWTP serving the filter building consists of a septic tank that discharges to a Wisconsin-type mound system, and the WWTP serving the landfill consists of a septic tank that discharges to a leach bed; both of which do not require an NPDES permit.

3. Storm Water Treatment

All storm water within the facility is collected via a series of yard drains and drainage channels and conveyed to the two settling ponds in parallel (South Pond and Middle Pond). The North Pond is utilized and an effluent flow equalization in lieu of discharge through Outfall 003.

Observations

Following are observations made during the inspection.

Industrial Wastewater Treatment Plant

1. The general operation and maintenance of the chemical neutralization waste water treatment system appeared to be satisfactory. The settling ponds were dredged about 2 weeks prior to the inspection, and are typically dredged every 6 to 9 months. Sludge from the sludge treatment process is taken to the captive industrial landfill located east of the facility on Middle Road. The composite sampler was found to be maintained at the proper temperature and collecting a flow proportional sample. The sampler should also contain a thermometer in a beaker of water as a check against the composite sampler.

Sanitary Wastewater Treatment Plant

2. The overall condition of the treatment plant during this inspection was satisfactory with the plant well kept. Log books and the operation and maintenance manual are maintained at the site and were available for inspection. The content of the aeration tank had a medium brown color and good mixing. Sludge returns were a medium brown color with moderate foaming. This is an indication of a plant in that may need sludge wasted from the system. The blowers were cycled and found in operating condition. The surface of the clarifier was clear, and effluent channels and weirs were reasonably clean. Surface sand filter dosing pumps could not be cycled due to operating on a float system, but did operate during the inspection. Surface sand filters were clean and operable. Some vegetation was noted in the north bed and should be removed. The inlet dissipation pads need to be leveled and consideration given to adding stone to dissipate flow from the inlet pipes. Sand needs to properly leveled in the sand filters. The effluent discharged to the sand filter during the inspection was clear and free of color and turbidity. The wastewater percolated freely through the

sand indicating that the beds were not clogged. The UV disinfection system was found in operating condition. The effluent pump station pumps were cycled and found in operating condition. All alarms were found in operating condition.

Filter Building Wastewater Treatment Plant

3. The filter building wastewater treatment plant was inspected and found in operating condition. Damage to the mound system noted in the 2010 inspection has been repaired and documented to Ohio EPA. No outbreaks in the mound were noted during the inspection.

Landfill Wastewater Treatment Plant

4. The landfill wastewater treatment plant was inspected and found in operating condition.

Storm Water Treatment System

5. Storm water is collected through a series of channels and sumps and conveyed to the various settling ponds (South Pond, Middle Pond, North Pond). The storm water pond discharges to the outfall weir, pump station, and the FirstEnergy discharge channel for ultimate discharge through Outfall 003. The emergency storm water overflow (landfill northeast storm water pond) outfall is Outfall 004. The sedimentation ponds were cleaned out in late May 2011, and are dredged every 6 to 9 months. The sedimentation pond at the landfill is examined annually and has not needed dredged to-date.
6. Outfall 004 was observed as not discharging during the inspection. Outfall 003 is noted as discharging an effluent of acceptable visual quality.
7. The storm water pollution prevention plan (SWPPP) for Plant 1 was updated on April 30, 2005. The annual site certification inspection for Plant 1 was completed on October 6, 2010. Employee training for Plant 1 is conducted throughout the year, with the latest training conducted on several dates in May, 2010. With the current SWPPP under revision, training is scheduled for the fall of 2010. The storm water pollution prevention plan (SWPPP) for the landfill was updated on November 12, 2009. The annual site certification inspection for the landfill was completed on July 9, 2010. Employee training for the landfill is conducted throughout the year, with the latest training conducted on January 12, 2011.

NPDES Permit Compliance Review

A review of the electronic discharge self-monitoring reports (eDMRs) received by Ohio EPA for the period May 1, 2010 through May 1, 2011 indicates apparent noncompliance of the terms and conditions of your NPDES permit. Specific instances of noncompliance are as follows:

Limit Violations

The following apparent limit violations were noted for the period reviewed:

Station	Reporting Code	Parameter	Limit Type	Limit	Reported Value	Violation Date
003	61942	pH, Minimum	1D Conc	6.5	6.4	11/4/2010
003	61942	pH, Minimum	1D Conc	6.5	6.4	11/22/2010
003	61942	pH, Minimum	1D Conc	6.5	6.4	12/2/2010
003	61942	pH, Minimum	1D Conc	6.5	5.8	12/9/2010

The November 2010 apparent violations were responded to by Millennium on December 13, 2010 and indicated that the duration of the reading was compliant with Part II, Item G of the NPDES permit and therefore not a violation. Ohio EPA concurs with the assessment. The November 2010 eDMR should be amended to reflect the minimum pH value lasting longer than the specified duration in Part II, Item G of the permit. The December 2010 violations were responded to on January 25, 2011 and indicated that the duration of the reading was compliant with Part II, Item G of the NPDES permit and therefore not a violation. Ohio EPA concurs with the assessment. The December 2010 eDMR should be amended to reflect the minimum pH value lasting longer than the specified duration in Part II, Item G of the permit.

Reporting Violations

No reporting code violations were noted for the period reviewed, however the following reporting frequency violations were noted for the period reviewed:

Station	Reporting Code	Parameter	Sample Frequency	Expected	Reported	Violation Date
003	00530	Total Suspended Solids	1/Week	1	0	07/22/2010
003	01074	Nickel, Total Recoverable	1/Week	1	0	07/22/2010
003	01094	Zinc, Total Recoverable	1/Week	1	0	07/22/2010
003	01118	Chromium, Tot Recoverable	1/Week	1	0	07/22/2010
003	01119	Copper, Total Recoverable	1/Week	1	0	07/22/2010
003	70300	Residue, Total Filterable	1/Week	1	0	07/22/2010

A response provided to Ohio EPA on August 26, 2011 indicates that the plant was not operating on the day of the scheduled sample, and a sample was collected when the plant resumed operations. No additional information is needed to respond to the violation.

Other NPDES Violations

1. Storm Water Pollution Prevention Plan(s): A review of your SWPPP for both Plant 1 and the landfill indicate that these documents have not been updated in several years. These documents should be reviewed at least annually and

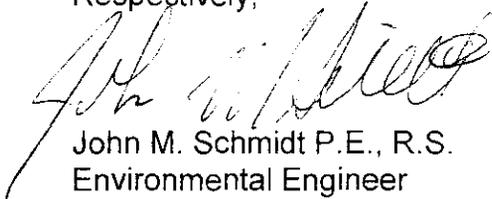
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revised accordingly. The SWPPP documents must also reflect specific contacts and telephone numbers, and your annual inspections indicate that the inspection forms should be revised and ensure that employees properly document inspections. The plant SWPPP also contained references to appendices which are not in the document and the numbering of the appendices was not consistent between the main plan and its appendices. Please provide a schedule of when you expect to have the SWPPP documents updated and provide this office with a copy of the revised SWPPP documents for review.

Based upon the inspection findings and the overall compliance record of the facility, Millennium Inorganic Chemicals is considered to be in substantial compliance with the terms and conditions of its NPDES permit for its Plant 1 Facility in Ashtabula, Ohio.

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/mt

pc: Chis Moody, Ohio EPA, NEDO, DSW

File: Industrial/Millennium Plant 1/PC