

DOCKET NO. D-1970-072-5

DELAWARE RIVER BASIN COMMISSION

**Global Advanced Metals USA, Inc.
Industrial Wastewater Treatment Plant
Colebrookdale Township, Berks County and Douglass Township,
Montgomery County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) by Global Advanced Metals USA, Inc. (GAM or docket holder) on May 5, 2014 (Application), for renewal of the docket holder's existing industrial wastewater treatment plant (IWTP) and its discharge. National Pollutant Discharge Elimination System (NPDES) Permit No. PA0011266 for this facility was issued by the Pennsylvania Department of Environmental Protection (PADEP) on September 2, 2010, amended November 16, 2011, and effective December 1, 2011. The PADEP is expected to renew the Permit shortly.

The Application was reviewed for approval under Section 3.8 of the *Delaware River Basin Compact*. The Berks and Montgomery County Planning Commissions has been notified of pending action. A public hearing on this project was held by the DRBC on September 15, 2015.

A. DESCRIPTION

1. Purpose. The purpose of this docket is to renew approval of the docket holder's existing 0.222 million gallons per day (mgd) IWTP and its comingled discharge with non-contact cooling water (NCCW), lagoon underdrain, steam condensate, and stormwater totaling up to 0.1763 mgd of combined flow from Outfall No. 001. This docket will also continue approval of a discharge of up to 0.0712 mgd of stormwater, steam condensate, reverse osmosis (RO) reject water, and NCCW from Outfall No. 002.

2. Location. Outfalls Nos. 001 and 002 will continue to discharge treated effluent, NCCW, lagoon underdrain, steam condensate, RO reject water, and stormwater to Swamp Creek at River Mile 92.47 – 32.3 – 12.9 – 12.6 (Delaware River – Schuylkill River – Perkiomen Creek – Swamp Creek), on the border of Douglass Township, Montgomery County, Pennsylvania and Colebrookdale Township, Berks County, Pennsylvania as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
001	40° 20' 39"	75° 37' 01"
002	40° 20' 40"	75° 37' 01"

3. **Area Served.** The docket holder's IWTP will continue to serve the on-site, Boyertown Facility. For the purpose of defining the Area Served, Section B (Type of Discharge) and D (Service Area) of the docket holder's Application are incorporated herein by reference, to the extent consistent with all other conditions contained in the DECISION Section of this docket.

4. **Physical Features.**

a. **Design Criteria.** The docket holder will continue to operate its existing 0.222 mgd IWTP that is designed primarily to remove metals. In addition, there are several storage lagoons on-site.

Process wastewater from the IWTP, NCCW, lagoon underdrain (from other on-site lagoons), steam condensate, and stormwater are captured in Lagoon Nos. 005 and 006. The commingled flow discharges to Swamp Creek via Outfall No. 001. Effluent limits for Outfall No. 001 are based upon an average monthly flow of 0.1763 mgd.

Stormwater, steam condensate, RO reject water, and NCCW are captured in Lagoon Nos. 001 and 002. The commingled flow discharges to Swamp Creek via Outfall No. 002. Effluent limits for Outfall No. 002 are based upon an average monthly flow of 0.0712 mgd.

The overall average monthly discharge from both outfalls is 0.2475 mgd.

b. **Facilities.** The existing IWTP consists of chemical/physical operations designed to remove fluoride, metals, and suspended solids. These operations include wastewater collection, chemical treatment with lime, and separation of precipitated solids using filter presses. Effluent from the treatment system is discharged to on-site lagoons for hydraulic equalization, storage, and pH adjustment.

The project facilities are not located in the 100-year floodplain.

Wasted sludge will continue to be hauled off-site by a licensed hauler for disposal at a state-approved facility.

c. **Water withdrawals.** Potable and process water are provided by Boyertown Borough, whose withdrawal and associated system were approved by the Commission on November 7, 1980 via Docket No. D-1980-074 CP-1.

d. **NPDES Permit / DRBC Docket.** NPDES Permit No. PA0011266 was issued by the PADEP on September 2, 2010 (amended November 16, 2011, and made effective December 1, 2011) and includes final effluent limitations for the project discharge of up to 0.1763 mgd and 0.0712 mgd from Outfalls Nos. 001 and 002, respectively, to surface waters classified by the PADEP as trout stocking, migratory fisheries (TSF/MF). The PADEP is expected to renew the Permit shortly. The following average monthly effluent limits are among those listed in the NPDES Permit for Outfall No. 001, are expected to be renewed, and meet or are more stringent than the effluent requirements of the DRBC.

EFFLUENT TABLE A-1: DRBC Parameters Included in NPDES Permit

OUTFALL 001 (Process Wastewater, NCCW, Lagoon Underdrain, Steam Condensate, & Stormwater)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES Permit
Total Suspended Solids	20 mg/l	As required by NPDES Permit
CBOD (5-Day at 20° C)	Monitor & Report	As required by NPDES Permit
Ammonia Nitrogen	8.0 mg/l	As required by NPDES Permit
Total Dissolved Solids*	9,620 mg/l (Average Monthly) 15,000 mg/l (Daily Maximum)	As required by NPDES Permit

* See DECISION Condition II.p.

The requirements in EFFLUENT TABLE A-2 are listed in the NPDES Permit for Outfall No. 002, are expected to be renewed, and meet or are more stringent than the effluent requirements of the DRBC.

EFFLUENT TABLE A-2: DRBC Parameters Included in NPDES Permit

OUTFALL 002 (Stormwater, Steam Condensate, RO Reject Water, and NCCW)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES Permit
Total Suspended Solids	20 mg/l	As required by NPDES Permit
CBOD (5-Day at 20° C)	Monitor & Report	As required by NPDES Permit
Ammonia Nitrogen	4.0 mg/l	As required by NPDES Permit
Total Dissolved Solids*	750 mg/l (Average Monthly) 1,170 mg/l (Daily Maximum)	As required by NPDES Permit
Temperature	110 °F (Instantaneous Maximum)	As required by NPDES Permit

* See DECISION Condition II.p.

- e. **Cost.** There are no construction costs associated with this IWTP renewal.

B. FINDINGS

The purpose of this docket is to renew approval of the docket holder's existing 0.222 mgd IWTP and its comingled discharge with NCCW, lagoon underdrain, steam condensate, and stormwater totaling up to 0.1763 mgd of combined flow from Outfall No. 001. This docket will also continue approval of a discharge of up to 0.0712 mgd of stormwater, steam condensate, RO reject water, and NCCW from Outfall No. 002.

Total Dissolved Solids (TDS)

The Commission's basin-wide TDS effluent limit is 1,000 mg/l [Section 3.10.4D.2. of the Commission's *Water Quality Regulations (WQR)*]. The Commission's basin-wide in-stream TDS criteria is that 1) the receiving stream's resultant TDS concentration be less than 133% of the background (Section 3.10.3B.1.b. of the Commission's *WQR*), and 2) the receiving stream's

resultant TDS concentration be less than 500 mg/l (Section 3.10.3B.2. of the Commission's *WQR*).

The 133% of the background TDS requirement is for the protection of aquatic life. The 500 mg/l TDS requirement is to protect the use of the receiving stream as a drinking water source. The EPA's Safe Drinking Water Act's secondary standard for TDS is 500 mg/l.

By letter dated November 14, 2002, the Executive Director of the DRBC issued a determination, subject to PADEP concurrence, that reads "[t]he permittee shall discharge its TDS loading in proportion to the streamflow of the Swamp Creek in such a manner that the concentration of TDS will not exceed 1,500 mg/l after complete mixing at all times". The Executive Director noted that during Q₇₋₁₀ flows, the national secondary drinking water limit of 500 mg/l would be met 3.9 miles downstream of the discharge, and that the nearest public drinking water intake was located approximately 25 river miles downstream. In addition, monitoring during the July 2002 drought conditions concluded that there was no statistical difference in the aquatic community between the sampling locations that were upstream and downstream of the docket holder's outfalls.

Included with the Application for Docket No. D-1970-072-3 (2004) was an analysis to support requested adjustments to the requirements contained in the existing Commission Docket for TDS. That analysis was acceptable by staff at that time. Q₇₋₁₀ flow for Swamp Creek was estimated to be 1.4 mgd (2.12 cfs) and background TDS at Q₇₋₁₀ flows was estimated to be 190 mg/l (September 11, 2002 TDS Questionnaire).

Docket No. D-1970-072-4 required the docket holder to perform biological assessments of Swamp Creek at multiple sites to determine if the docket holder's discharge was having an adverse effect on the aquatic community. The assessments submitted support the 2002 conclusion that no correlation could be determined from the results that indicate the discharge is having an adverse effect on the aquatic community as a result of the high TDS discharge.

Therefore, Commission staff recommend continued approval of the 2002 Executive Director approval of the current TDS effluent limits. However, the docket holder is required to continue to perform ecological studies (macro-invertebrate study) that include the same three sampling locations on Swamp Creek (Site 1, 2, and 3) in accordance with PADEP Instream Comprehensive Evaluation (ICE) methods in 2016 and 2018 and are due in April 2017 and 2019, respectively (See DECISION Condition II.j.). Sampling shall occur once per year in the late Summer/early Fall when flows in Swamp Creek are low. During the macroinvertebrate sampling, the docket holder shall also monitor for conductivity and osmotic pressure in-stream. The ecological assessments will be evaluated by Commission and PADEP staff to confirm that the discharges from the docket holder's IWTP will continue to not result in an adverse impact to the aquatic life of the receiving stream. The docket holder is also required to submit this assessment to the Pennsylvania Fish and Boat Commission (PFBC). Upon docket renewal, Commission staff will evaluate the results of the ecological studies as part of the determination to continue the TDS variance.

Other

The nearest surface water intake of record for public water supply is located on Perkiomen Creek approximately 24.6 River Miles downstream of the docket holder's IWTP, and is operated by Aqua Pennsylvania.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

The effluent limits in the NPDES Permit are in compliance with Commission effluent quality requirements, where applicable.

Not considering TDS, the project is designed to produce a discharge meeting the effluent requirements as set forth in the Commission's *WQR*.

C. DECISION

I. Effective on the approval date for Docket No. D-1970-072-5 below, Docket No. D-1970-072-4 is terminated and replaced by Docket No. D-1970-072-5.

II. The project and appurtenant facilities as described in Section A "Physical Features" of this docket are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by the PADEP in its NPDES Permit, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission's.

b. The facility and operational records shall be available at all times for inspection by the DRBC.

c. The facility shall be operated at all times to comply with the requirements of the Commission's *WQR*.

d. The docket holder shall comply with the requirements contained in the EFFLUENT TABLES in Section A.4.d. of this docket. The docket holder shall submit the required monitoring results electronically to the DRBC Project Review Section via email aemr@drbc.state.nj.us on the **Annual Effluent Monitoring Report Form** located at this web address: <http://www.state.nj.us/drbc/programs/project/application/index.html>. The monitoring results shall be submitted annually, absent any observed limit violations, by January 31. If a DRBC effluent limit is violated, the docket holder shall submit the result(s) to the DRBC within 30 days of the violation(s) and provide a written explanation that states the action(s) the docket holder has taken to correct the violation(s) and protect against any future violations.

e. Except as otherwise authorized by this docket, if the docket holder seeks relief from any limitation based upon a DRBC water quality standard or minimum treatment requirement, the docket holder shall apply for approval from the Executive Director or for a docket revision in accordance with Section 3.8 of the *Compact* and the *Rules of Practice and Procedure*.

f. If at any time the receiving treatment plant proves unable to produce an effluent that is consistent with the requirements of this docket approval, no further connections shall be permitted until the deficiency is remedied.

g. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

h. The docket holder is permitted to treat and discharge wastewaters as set forth in the Area Served Section of this docket, which incorporates by reference Sections B (Type of Discharge) and D (Service Area) of the docket holder's Application to the extent consistent with all other conditions of this DECISION Section.

i. The docket holder shall discharge wastewater in such a manner as to avoid injury or damage to fish or wildlife and shall avoid any injury to public or private property.

j. An ecological study shall be performed for Sites 1, 2, and 3 on Swamp Creek in accordance with the FINDINGS Section of this docket in the late Summer/early Fall of 2016 and 2018. The results of the study shall be submitted to the DRBC, PFBC, and PADEP by April 1, 2017 and 2019, respectively.

k. Nothing in this docket approval shall be construed as limiting the authority of DRBC to adopt and apply charges or other fees to this discharge or project.

l. The issuance of this docket approval shall not create any private or proprietary rights in the waters of the Basin, and the Commission reserves the right to amend, suspend or rescind the docket for cause, in order to ensure proper control, use and management of the water resources of the Basin.

m. Unless an extension is requested and approved by the Commission in advance, in accordance with paragraph 11 of the Commission's Project Review Fee schedule (Resolution No. 2009-2), the docket holder is responsible for timely submittal of a docket renewal application on the appropriate DRBC application form at least 12 months in advance of the docket expiration date set forth below. The docket holder will be subject to late charges in the event of untimely submittal of its renewal application, whether or not DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below (or the later date established by an extension that has been timely requested and approved), the terms and conditions of the current docket will remain fully effective and

enforceable against the docket holder pending the grant or denial of the application for docket approval.

n. The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director's judgment such modification or suspension is required to protect the water resources of the Basin.

o. Any person who objects to a docket decision by the Commission may request a hearing in accordance with Article 6 of the Rules of Practice and Procedure. In accordance with Section 15.1(p) of the Delaware River Basin Compact, cases and controversies arising under the Compact are reviewable in the United States district courts.

p. The docket holder may request of the Executive Director in writing the substitution of specific conductance for TDS. The request should include information that supports the effluent specific correlation between TDS and specific conductance. Upon review, the Executive Director may modify the docket to allow the substitution of specific conductance for TDS monitoring.

q. The docket holder is prohibited from treating/pre-treating any hydraulic fracturing wastewater from sources in or out of the Basin at this time. Should the docket holder wish to treat/pre-treat hydraulic fracturing wastewater in the future, the docket holder will need to first apply to the Commission to renew this docket and be issued a revised docket allowing such treatment and an expanded service area. Failure to obtain this approval prior to treatment/pre-treatment will result in action by the Commission.

BY THE COMMISSION

DATE APPROVED: September 16, 2015

EXPIRATION DATE: September 30, 2020