

DOCKET NO. D-1976-097-4

DELAWARE RIVER BASIN COMMISSION

**Exide Technologies
Industrial Wastewater and Stormwater Treatment Plants
Muhlenberg Township, Berks County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) by Exide Technologies (Exide or docket holder) on December 22, 2014 (Application), for renewal of the docket holder's industrial wastewater treatment plant (IWTP), stormwater treatment plant (SWTP), and their related discharges. The Pennsylvania Department of Environmental Protection (PADEP) issued National Pollutant Discharge Elimination System (NPDES) Permit No. PA0014672 for this project on December 17, 2010.

The Application was reviewed for approval under Section 3.8 of the *Delaware River Basin Compact (Compact)*. The Berks County Planning Commission has been notified of pending action. A public hearing on this project was held by the DRBC on May 11, 2016.

A. DESCRIPTION

1. Purpose. The purpose of this docket is to renew the approval of the docket holder's existing 0.7 million gallons per day (mgd) IWTP and 0.4 mgd SWTP, and their associated discharges. This docket also continues the approval of a total dissolved solids (TDS) determination consisting of an average monthly concentration effluent limit of 6,000 mg/l (monthly average) and 7,500 mg/l (daily maximum) for the existing IWTP. No modifications to the facilities are proposed.

2. Location. The IWTP and SWTP are located at and serve the Exide battery manufacturing facility, located on Spring Valley Road and Nolan Street in Muhlenberg Township, Berks County, Pennsylvania. The IWTP and SWTP will continue to discharge to the Schuylkill River at River Mile 92.47 - 78.29 (Delaware River – Schuylkill River) via an existing stormwater conveyance system. The combined IWTP and SWTP effluent discharges to an existing pipe dedicated to Exide, which discharges to an existing City of Reading stormwater pipe, which outfalls to the Schuylkill River. The Exide facility also features a stormwater overflow outfall, which will continue to discharge untreated stormwater runoff to an unnamed tributary to Bernhart Creek during large precipitation events.

The project is located in the Schuylkill River Watershed as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
001 (combined)	40° 22' 44"	75° 54' 51"
002 (stormwater overflow)	40° 22' 44"	75° 54' 51"

NPDES permit No. PA0014672 requires separate effluent monitoring and limits for the treated effluent from the IWTP and the SWTP, prior to combining for discharge via existing Outfall No. 001. The monitoring points are located as follows:

MONITING POINT NO.	LATITUDE (N)	LONGITUDE (W)
101 (IWTP)	40° 21' 43"	75° 56' 20"
201 (SWTP)	40° 22' 53"	75° 54' 42"

3. Area Served. The docket holder's IWTP and SWTP will continue to receive wastewater and stormwater flows from the Exide battery manufacturing facility in Muhlenberg Township, Berks County, Pennsylvania.

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 existing IWTP is designed to treat a maximum of 0.7 mgd of industrial process wastewater generated by the docket holder's battery manufacturing facility. The PADEP and the Commission have based effluent limits for the IWTP discharge on a monthly average discharge of 0.25 mgd. The IWTP formerly treated industrial process flows from three (3) processes: spent battery cracking, secondary lead smelting, and plastics recycling. However, the battery breaker and lead smelter have been idled, and therefore the IWTP only treats process water from the plastics manufacturing process. Along with the plastics manufacturing process water, the IWTP continues to treat stormwater from the lead smelter area, stormwater backwash from the SWTP, leachate from the inactive, on-site landfill, and groundwater. The existing SWTP is hydraulically designed to treat a maximum of 0.75 mgd of stormwater generated at the site. Effluent limits for the SWTP discharge are based on an average monthly flow of 0.4 mgd. The SWTP is designed to remove lead and other heavy metals from contaminated stormwater runoff. Existing storage for the SWTP is 2.38 million gallons.

The treated SWTP effluent and treated IWTP effluent combine prior to discharge to an existing pipe dedicated to Exide, which discharges to an existing City of Reading stormwater pipe, which outfalls to the Schuylkill River, referred to as Outfall 001. Stormwater runoff in excess of the storage and treatment capacity of the SWTP bypasses the SWTP and discharges to the unnamed tributary to Bernhart Creek via existing Outfall No. 002.

b. **Facilities.** The existing facilities and water uses/discharges are described as follows:

IWTP: The IWTP consists of several advanced treatment processes to treat various waste streams, which are necessary to meet the BAT requirements for this industrial classification. The facilities include primary and secondary clarification tanks, equalization tanks, chemical mixing units, primary and secondary neutralization tanks, a sludge holding tank, a sludge thickening tank, sludge plate filter presses, and a sludge decant reaction tank.

SWTP: The SWTP consists of a collection sump/pump station, three (3) above-ground storage/equalization tanks with a combined capacity of 2.38 million gallons, and a multi-media filter system consisting of five (5) vessels of multi-media filter units designed to operate in parallel. The SWTP is designed to capture and store the stormwater runoff volume generated by the Exide site during the design ten-year frequency rainfall event,

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

Prior facilities and processes for the IWTP and SWTP have been described in DRBC Docket Nos. D-1976-097-1, D-1976-097-2, and D-1976-097-3, approved by the DRBC on February 23, 1977, December 8, 2010, and March 6, 2013, respectively.

IWTP sludge filter press cake will continue to be hauled off-site by a licensed hauler for deposit at a state-approved facility.

c. **Water withdrawals.** The potable and process water supply at the battery manufacturing plant is from Muhlenberg Township Authority wells, as described in detail in Docket No. D-2001-30 CP, which was approved on February 6, 2002. Process water supply was once obtained from Bernhart Creek and a nearby unnamed spring, as described in DRBC Docket No. D-1976-097-1, approved by DRBC on February 23, 1977, but these sources are no longer utilized. This docket does not approve any withdrawal from Bernhart Creek or the unnamed spring.

d. **NPDES Permit / DRBC Docket.** NPDES Permit No. PA0014672 was issued by the PADEP on December 17, 2010 and includes final effluent limitations for the IWTP discharge of 0.25 mgd to surface waters classified by the PADEP as warm water fishery (WWF) and migratory fishery (MF). The following average monthly effluent limits and monitoring requirements are for DRBC parameters.

EFFLUENT TABLE A-1: DRBC Parameters Included in NPDES Permit for the IWTP discharge

MONITORING POINT 101 (IWTP)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES Permit
Total Suspended Solids	30 mg/l	As required by NPDES Permit
CBOD (5-Day at 20° C)	25 mg/l	As required by NPDES Permit

MONITORING POINT 101 (IWTP)		
PARAMETER	LIMIT	MONITORING
Ammonia Nitrogen	5.0 mg/l	As required by NPDES Permit
Total Dissolved Solids*	6,000 mg/l (monthly average) 7,500 mg/l (daily maximum)	As required by NPDES Permit

* See DECISION Condition II.p.

The following average monthly effluent limits, based on an average monthly flow of 0.4 mgd, are among those listed in the NPDES Permit for Monitoring Point No. 201 (SWTP) and meet or are more stringent than the effluent requirements of the DRBC.

EFFLUENT TABLE A-2: DRBC Parameters Included in NPDES Permit for the SWTP discharge

MONITORING POINT NO. 201 (SWTP)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES Permit
Total Suspended Solids	30 mg/l	As required by NPDES Permit
Total Dissolved Solids	*See EFFLUENT TABLE A-3 below	*

* PADEP requires the SWTP discharge to meet TDS effluent limits of 6,000 mg/l (monthly average) and 7,000 mg/l (daily maximum). DRBC requires an average monthly TDS effluent limit of 1,000 mg/l, as included by the DRBC in Docket No. D-1976-097-3 and continued via this docket (See EFFLUENT TABLE A-3 below)

The following average monthly effluent limit for Monitoring Point No. 201 (SWTP) is not listed in the NPDES Permit.

EFFLUENT TABLE A-3: DRBC Parameters Not Included in NPDES Permit for the SWTP discharge

MONITORING POINT NO. 201 (SWTP)		
PARAMETER	LIMIT	MONITORING
Total Dissolved Solids*	1,000 mg/l	Monthly

* See DECISION Condition II.p.

The following average monthly effluent limits and monitoring requirements are among those listed in the NPDES Permit for Outfall 002 (untreated stormwater overflow) and meet or are more stringent than the effluent requirements of the DRBC.

EFFLUENT TABLE A-4: DRBC Parameters Included in NPDES Permit for the stormwater overflow to the unnamed tributary to Bernhart Creek

OUTFALL NO. 002 (Stormwater overflow discharge to UNT Bernhart Creek)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES Permit
Total Suspended Solids	Monitor & Report	As required by NPDES Permit
Total Dissolved Solids*	Monitor & Report	As required by NPDES Permit

* See DECISION Condition II.p.

B. FINDINGS

This docket renews approval of the docket holder's existing 0.7 mgd IWTP and 0.4 mgd SWTP and their associated discharges. No modifications to the facilities are proposed.

Total Dissolved Solids (TDS) Effluent Limit Determination

The DRBC Executive Director approved a TDS determination for the docket holder's IWTP consisting of effluent limits of 6,000 mg/l (monthly average) and 7,500 mg/l (daily maximum), in a letter dated September 12, 1997. The TDS determination was continued in Docket Nos. D-1976-097-2 and D-1976-097-3, approved by the DRBC on December 8, 2010 and March 6, 2013, respectively. TDS is generated from the battery manufacturing process. The docket holder requested the continuance of this TDS determination.

Section 3.10.4.D.2 of the DRBC's *Water Quality Regulations (WQR)* states:

“Total dissolved solids shall not exceed 1000 mg/l, or a concentration established by the Commission which is compatible with designated water uses and stream quality objectives, and recognizes the need for reserve capacity to serve future dischargers.”

The Commission's basin-wide in-stream TDS criteria is that the receiving stream's resultant TDS concentration be less than 133% of the background (WQR Section 3.10.3.B.1.b.) and the receiving stream's resultant TDS concentration be less than 500 mg/l (WQR Section 3.10.3.B. 2.). The discharge is required to comply with the more stringent of the above in-stream criteria.

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 secondary standard for TDS is 500 mg/l.

The estimated seven-day low flow with a recurrence interval of ten years (Q_{7-10} flow) of the Schuylkill River immediately upstream of the Outfall 001 discharge is 198 cfs (128 mgd). Using data collected from 2000 to 2006, the Schuylkill River in-stream TDS concentration immediately upstream of the Reading stormwater conduit discharge (combined IWTP and SWTP discharge) is estimated to be 387 mg/. 133% of 387 mg/l is 514 mg/l; therefore, the DRBC in-stream requirement of 500 mg/l remains the more stringent of the two (2) Commission in-stream requirements.

Based on the estimated background TDS concentration in the Schuylkill River of 387 mg/l, the Q_{7-10} flow of the Schuylkill River of 128 mgd, a discharge flow of 0.25 mgd from the IWTP (Monitoring Point No. 101) at a maximum daily TDS concentration of 7,500 mg/l plus a flow of 0.4 mgd from the SWTP (Monitoring Point No. 201) at a TDS concentration of 1,000 mg/, the TDS in the Schuylkill River would be raised to 403 mg/l during Q_{7-10} flows. The resultant in-stream TDS in the Schuylkill River is approximately 104% of background, and

satisfies both the 500 mg/l in-stream EPA drinking water standard and 133% of background for the protection of aquatic life.

Although the IWTP discharge exceeds DRBC's basin-wide TDS effluent limit of 1,000 mg/l, DRBC staff determined the discharge to be compatible with the Commission's designated water uses and water quality objectives in conformance with DRBC Water Quality Regulations since the in-stream concentrations in the Schuylkill River are not expected to exceed the US EPA's Safe Drinking Water Act's secondary standard for TDS is 500 mg/l nor exceed the Commission's criteria of 133% of background as a result of the facility discharge. Therefore, the TDS determination of effluent limitations for the IWTP discharge (Monitoring Point No. 101) of 6,000 mg/l (monthly average) and 7,500 mg/l (daily maximum) is continued via this docket.

At the project site, the Schuylkill River has a seven-day low flow with a recurrence interval of ten years of 128 mgd (198 cfs). The ratio of this low flow to the NPDES-permitted IWTP and SWTP discharges (0.65 mgd) is approximately 197 to 1.

The nearest downstream public water supply intake of record is operated by the Pottstown Water Authority, located on the Schuylkill River approximately 22 river miles downstream from the project discharge.

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 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-1976-097-4 below, Docket No. D-1976-097-3 is terminated and replaced by Docket D-1976-097-4.

II. The project and appurtenant facilities as described in the 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* and Flood Plain Regulations (*FPR*).

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/pr/info.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 make wastewater discharge in such a manner as to avoid injury or damage to fish, wildlife, and/or other aquatic life and shall avoid any injury to public or private property.

j. No sewer service connections shall be made to newly constructed premises with plumbing fixtures and fittings that do not comply with water conservation performance standards contained in Resolution No. 88-2 (Revision 2).

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: June 15, 2016

EXPIRATION DATE: December 31, 2020