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DOCKET NO. D-1989-053-4

DELAWARE RIVER BASIN COMMISSION

NGK Metals Corporation

**Groundwater Treatment Plant Discharge and Groundwater Withdrawal
Muhlenberg Township, Berks County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted by Roux Associates, Inc. on behalf of NGK Metals Corporation (NGK) to the Delaware River Basin Commission (DRBC or Commission) on March 31, 2016 (Application) for renewal of a groundwater treatment plant (GWTP) and its related discharge and the renewal of an allocation of groundwater and review of a groundwater water withdrawal project. This docket was previously approved by the Commission on May 8, 2013. The project discharge was most recently approved by the Pennsylvania Department of Environmental Protection (PADEP) National Pollutant Discharge Elimination System (NPDES) Permit No. PA0261637 on March 30, 2012, effective on April 1, 2012.

The Application was reviewed for approval under Section 3.8 of the Delaware River Basin Compact. The Berks County Planning Commission has been notified of pending action. A public hearing on this project was held by the DRBC on February 15, 2017.

A. DESCRIPTION

1. Purpose. The purpose of this project is to approve a groundwater withdrawal associated with the remediation of groundwater contaminated with certain metals and volatile organic compounds (VOCs) and fluoride of up to 5.27 million gallons per month (mgm) from existing Wells DW-12, DW-13 and DW-32. The approval will also renew the discharge of the remediated groundwater and its associated treatment. The United States Environmental Protection Agency (EPA) has required reactivation of the facility and the GWTP is at the end of the startup/troubleshooting phase. The GWTP is expected to become fully operational within the next month.

2. **Location.** The groundwater remediation project is located in the Laurel Run Watershed in Muhlenberg Township, Berks County, Pennsylvania. The groundwater recovery wells are completed in the Allentown Formation. The Laurel Run near the project site is designated by the PADEP as supporting Warm Water Fishes (WWF) and Migratory Fishes (MF).

Treated groundwater will continue to be discharged to Laurel Run at River Mile 92.47 – 80.4 – 2.3 (Delaware River – Schuylkill River – Laurel Run) via Outfall No. 002 located, in Muhlenberg Township, Berks County, Pennsylvania as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
002	40° 24' 06"	75° 55' 50"

3. **Area Served.** The existing project withdrawals will be used only to accomplish the groundwater remediation at the former NGK metal production facility as delineated on various figures included in the application. The groundwater treatment system will continue to only serve the docket holder's groundwater remediation project.

For the purpose of defining Area Served, the Application is incorporated herein by reference consistent with conditions contained in the DECISION section of this docket.

4. **Physical features.**

a. **Design criteria.** The docket holder's groundwater treatment facility processes up to 0.17 mgd of groundwater containing metals and VOCs prior to discharging to Laurel Run through the industrial site's existing Outfall No. 2.

Wells DW-12, DW-13 and DW-32 will be pumped constantly at a combine rate of approximately 0.17 mgd in order to induce a capture zone for the groundwater purge system. Treated groundwater will continue to be discharged to Laurel Run through existing Outfall No. 002.

The GWTP consists of an equalization tank, a reaction tank, one (1) clarifier, a sand filter, two (2) activated alumina vessels, a sludge holding tank, and a filter press. Additionally, anionic polyacrylamide, aluminum chlorohydrate, ferrous chloride, sulfuric acid, and sodium hydroxide will be added throughout the treatment process for pH control, coagulation, regeneration of the activated alumina vessels, and metals precipitation as needed.

The average and maximum demand is 0.17 million gallons per day (mgd) and 0.17 mgd, respectively. The docket holder does not expect an increase in the average or maximum daily demand over the next 10 years. The allocation of 5.27 mgm should be sufficient to meet the future demands of the NGK system.

b. **Facilities.** The existing project recovery wells have the following characteristics:

WELL NO.	DEPTH (FEET)	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY (GPM)	YEAR DRILLED
DW-12	160	100'6"	175	1989
DW-13	105	105'6"	100	1989
DW-32	150	59'8"	16	1994

All existing wells are metered.

The groundwater treatment system and project recovery wells are outside of the 100-year flood hazard area.

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

c. **NPDES Permit / DRBC Docket.** NPDES Permit No. PA0261637 was approved by the PADEP on March 30, 2012, and includes final effluent limitations for the groundwater remediation system discharge of 0.17 mgd to surface waters classified by the PADEP as Warm Water Fishes (WWF) and Migratory Fishes (MF). The following average monthly effluent limits are among those listed in the NPDES Permit and meet or are more stringent than the effluent requirements of the DRBC.

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

Outfall No. 002 (Discharge to Laurel Run)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6.0 to 9.0 at all times	As required in the NPDES permit
Total Suspended Solids	30 mg/l	As required in the NPDES permit
Total Dissolved Solids	1,000 mg/l*	As required in the NPDES permit

* See DECISION Condition C.II.s.

d. **Cost.** There is no associated cost with this project.

B. FINDINGS

The purpose of this docket is renew the existing 0.17 mgd NGK GWTP. In addition to the discharge of treated groundwater, the docket holder seeks approval to withdraw up to 5.27 mgm of groundwater from the three existing on-site remediation wells (Wells Nos. DW-12, DW-13, and DW-32). The EPA has required reactivation of the facility and the GWTP is currently at the end of the startup/troubleshooting phase. The GWTP is expected to become fully operational within the next month.

The DRBC estimates that the project withdrawals, used for the purpose of groundwater remediation, result in negligible consumptive use. The DRBC definition of consumptive use is

defined in Article 5.5.1.D of the *Administrative Manual – Part III – Basin Regulations – Water Supply Charges*.

At the project site, Laurel Run has an estimated seven-day low flow with a recurrence interval of ten years (Q_{7-10}) of 0.633 mgd (0.98 cfs). The flow was calculated using U.S. Geological Survey, 2012, The StreamStats Program for Pennsylvania, online at <http://water.usgs.gov/osw/streamstats/pennsylvania.html>. The ratio of this low flow to the hydraulic design of the existing 0.17 mgd GWTP is 3.72 to 1.

The nearest surface water intake of record for public water supply downstream of the project discharge is operated by Borough of Pottstown on the Schuylkill River approximately 26.5 river miles away.

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

The project is designed to produce a discharge meeting the effluent requirements as set forth in the *Water Quality Regulations* of the DRBC.

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.

C. DECISION

I. Effective on the approval date for Docket No. D-1989-053-4 below, Docket No. D-1989-053-3 is terminated and replaced by Docket No. D-1989-053-4.

II. The project and appurtenant facilities as described in the Section A “Physical features” 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 docket holder shall continue to report to the PADEP all groundwater withdrawals described in this docket in accordance with the Pennsylvania Regulations (Title 25 - Environmental Protection, [25 PA. CODE CH. 110], Water Resources Planning).

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

d. The facility and wells shall be operated at all times to comply with the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

e. 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.

f. 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.

g. 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.

h. 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.

i. During any month, the combined withdrawal from all well sources shall not exceed 5.27 million gallons. No well shall be pumped above the maximum instantaneous rate and monthly allocation as indicated below:

WELL NO.	MAXIMUM INSTANTANEOUS RATE (GPM)	MONTHLY ALLOCATION (MILLION GALLONS)
DW-12	175	3.348
DW-13	100	2.678
DW-32	16	0.446

j. The wells shall be equipped with readily accessible capped ports and minimum ½ inch inner diameter (ID) drop pipes so that water levels may be measured under all conditions. Existing wells are to be similarly equipped, where possible, with readily accessible ports and ½ inch ID drop pipes as repairs or modifications are made at each existing well.

k. The project withdrawals shall be metered with an automatic continuous recording device that measures to within 5 percent of actual flow. An exception to the 5 percent performance standard, but no greater than 10 percent, may be granted if maintenance of the 5 percent performance is not technically feasible or economically practicable. A record of daily

withdrawals shall be maintained, and monthly totals shall be reported to the PADEP annually and shall be available at any time to the Commission if requested by the Executive Director.

l. 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.

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 issuance of this docket approval shall not create any private or proprietary rights in the water of the Basin, and the Commission reserves the rights to amend, alter or rescind any actions taken hereunder in order to insure the proper control, use and management of the water resources of the Basin.

o. If the monitoring required herein or any other relevant data or information demonstrates that the operation of this project is interfering with or otherwise impairing existing uses of ground or surface water, or if the docket holder receives a complaint from an existing ground or surface water user within the zone of influence of the withdrawal alleging such interference or impairment, the docket holder shall immediately notify the Executive Director, and unless excused by the Executive Director, shall investigate the demonstrated or alleged impacts. For purposes of this condition, notification shall mean either (a) electronic transmittal of written notice to the Executive Director via certified mail or email (using addresses posted on the DRBC website); or (b) written notice in accordance with the preceding clause and a telephone call to the Project Review Section at 609-883-9500, ext. 216. (Oral notification must always be accompanied by immediate written notification directed to the Executive Director.) In addition, the docket holder shall provide written notice to all potentially affected water users of the docket holder's responsibilities under this condition. **Any well or surface water supply that is impaired as a result of the docket holder's project withdrawal shall be repaired, replaced or mitigated at the docket holder's expense.** The scope of the options to consider for repair, replacement and/or mitigation shall not be limited solely to those that are owned, operated, or controlled by the project sponsor. An investigation report and/or mitigation plan prepared and certified by a licensed professional engineer and/or a licensed professional geologist shall be submitted to the Executive Director as soon as practicable following notice of the demonstrated or alleged impairment consistent with this paragraph. The Executive Director shall make the

final determination regarding the scope and sufficiency of the investigation and the extent of any mitigation measures that may be required. Where ground and surface waters are rendered unavailable, unusable, or unsuitable for the pre-existing use, the Executive Director may direct the docket holder to take interim actions to mitigate such impacts, pending completion of the investigative report and any long-term repair, replacement or mitigation.

p. 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.

q. For the duration of any drought emergency declared by either Pennsylvania or the Commission, water service or use by the docket holder pursuant to this approval shall be subject to the prohibition of those nonessential uses specified by the Governor of Pennsylvania, the Pennsylvania Emergency Management Council, PADEP, or the Commonwealth Drought Coordinator to the extent that they may be applicable, and to any other emergency resolutions or orders adopted hereafter by the Commission.

r. 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.

s. 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.

t. 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

APPROVAL DATE:

EXPIRATION DATE: March 15, 2027