BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY

In the Matter of:

Republic Steel
2633 8th Street, NE
Canton, Ohio 44704

Respondent

Director's Final Findings and Orders

PREAMBLE

It is agreed by the Parties hereto as follows:

I. JURISDICTION

These Modified Director's Final Findings and Orders ("Orders") are issued to Republic Steel ("Respondent") pursuant to the authority vested in the Director of the Ohio Environmental Protection Agency ("Ohio EPA") under Ohio Revised Code ("ORC") §§ 6111.03 and 3745.01, and supercede the Director's Final Findings and Orders issued to Respondent on August 16, 2019.

II. PARTIES BOUND

These Orders shall apply to and be binding upon Respondent and successors in interest liable under Ohio law. No change in the composition of Respondent shall in any way alter Respondent's obligations under these Orders.

III. DEFINITIONS

Unless otherwise stated, all terms used in these Orders shall have the same meaning as defined in ORC Chapters 6111 and 3745, and the rules promulgated thereunder.

IV. FINDINGS

The Director has made the following findings:

1. Respondent owns and operates a steel manufacturing facility located at 1807 E. 28th Street, Lorain, Ohio ("the Facility"). Currently, the Facility is idle and groundwater/stormwater has been accumulating in basements, cellars and pits throughout the Facility. Certain equipment is either under water or is in imminent threat of being submerged as water levels continue to rise at the Facility. Respondent has identified the following equipment at risk, with potentially more equipment still needing to be inventoried:
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Bar Mill

- Water coming into basements in the Bar Mill threatens to destroy the following equipment:

- 4 2300-volt motors feeding process water pumps for the Bar Mill;

- 6 2300-volt breakers that feed power into the cellar;

- 4 480-volt 5 horsepower motors for the hydraulic pumps;

- 3 480-volt 10 horsepower motors for the precipitron room fans;

- 4 total 480-volt 5 horsepower motors for the two lube systems in the adjoining pile systems.

Rolling Mill

In the Rolling Mill, the oil clears are already underwater. The substation basement is now flooding and has about 2 feet of water in this location.

- 3 different rotating MG sets and regulator contractor boards are located in this cellar. This equipment is no longer manufactured and would be costly to replace;

- Approximately four 5-horsepower and three 10-horsepower fans are located in this cellar;

- There are a number of buss connections located in this cellar that will have to be dried out before it can be determined if they are a total loss.

2. On February 5, 2019, Respondent reported to the Emergency Response Spill Hotline an oil sheen to Ohio EPA. Remedial measures were taken, and it was determined that the source of the oil was most likely the Rolling Mill area of the Facility. An NOV was issued on February 5, 2019 for the illegal discharge of oil to waters of the state.

3. Respondent has notified Ohio EPA that is was pumping groundwater and stormwater from basements, cellars and pits located in the Bar Mill and Rolling Mill. Respondent submitted analytical data to Ohio EPA via eDMRs during the time period Republic Steel was pumping water from the basements, cellars and pits at the Facility. Monitoring data from Outfall 005 did not show significant issues. Monitoring data form Outfall 005 did show an occasional
chlorine residual exceedance which Respondent was actively working with Ohio EPA to address. Ohio EPA raised concern that the monitoring at Outfall 005 where the discharge was being directed did not include a full suite of parameters, including metals, SVOCs or VOCs (although such sampling is not required under the current NPDES permit). Ohio EPA and Respondent are currently negotiating language in Respondent’s renewal National Pollutant Discharge Elimination System (“NPDES”) permit regarding discharges of groundwater and stormwater from basements, cellars and pits at the Facility.

4. On June 26, 2019, Respondent reported to the Emergency Response Spill Hotline that an oil sheen was being discharged from the Facility to the Black River. Ohio EPA discovered that a pump from the Bar Mill scale pit was causing the release of oil to a storm sewer and then to the Black River. Ohio EPA, Respondent, and Respondent’s consultant took remedial measures to contain the oil spill. Ohio EPA issued a Notice of Violation letter on June 26, 2019 for the illegal discharge of oil to waters of the state.

5. Currently, Respondent has been pumping the water to four 21,000-gallon frac tanks in the Bar Mill. Respondent is currently hauling the water from the tanks to a facility in Youngstown for disposal at significant cost. Respondent continues to experience issues with day-to-day management of water levels that threatens to damage equipment.

6. Respondent had proposed to resume discharging the water onsite after additional treatment was to be provided through portable treatment units while Respondent gathered additional sampling to address Ohio EPA’s concerns that sampling is needed to characterize the condition of water in the basements, cellars and pits, including sampling for VOCs, SVOCs and metals. Respondent was unable to procure the portable treatment units and has proposed an alternative treatment system as set forth in Attachment A to these Orders. The proposed treatment will discharge at a rate of 50 gpm.

7. The Director has given consideration to, and based her determination on, evidence relating to the technical feasibility and economic reasonableness of complying with these Orders and to evidence relating to conditions calculated to result from compliance with these Orders, and its relation to the benefits to the people of the State to be derived from such compliance in accomplishing the purpose of ORC Chapter 6111.

V. ORDERS

Order No. 1 of the August 16, 2019 Orders is hereby modified as follows:

1. Respondent may immediately recommence discharging the accumulated water from the Bar Mill (Outfall 605) and Primary Mill (Outfall 604) scale pits, provided that the water has been treated pursuant to the alternative treatment system described in Attachment A, which is hereby incorporated into and made a part of these Orders.
2. The treated water shall meet the following temporary discharge limits:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Reporting Code</th>
<th>Concentration Limits</th>
<th>Monitoring Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>30-day average</td>
<td>Daily maximum</td>
</tr>
<tr>
<td>Flow estimate (MGD)</td>
<td>50050</td>
<td>24-Hr. Estimate</td>
<td>1/day</td>
</tr>
<tr>
<td>pH (S.U.)</td>
<td>00400</td>
<td>6.5-9.0</td>
<td>2/week</td>
</tr>
<tr>
<td>Total Suspended Solids (mg/L)</td>
<td>00300</td>
<td>--</td>
<td>65</td>
</tr>
<tr>
<td>Oil and Grease (mg/l)</td>
<td>00552</td>
<td>--</td>
<td>10</td>
</tr>
<tr>
<td>Zinc, Total Recoverable (ug/l)</td>
<td>01094</td>
<td>Monitor</td>
<td>1/week</td>
</tr>
<tr>
<td>Chlorine, Total Residual (mg/l)</td>
<td>50060</td>
<td>--</td>
<td>0.019</td>
</tr>
</tbody>
</table>

All sampling set forth in Table 1 shall be grab samples.

(Reports should be submitted after the end of each month during which you have coverage under these Orders, regardless of whether or not a discharge occurred during the month. Instructions for electronic submittal of data can be found on Ohio EPA’s website at:

http://epa.ohio.gov/dsw/edmr/eDMR.aspx

The chlorine limit listed above is less than the Ohio EPA Quantification Level (OEPA QL) for the approved analytical procedure promulgated at 40 CFR 136.

Compliance with an effluent limit that is below the OEPA QL is determined in accordance with ORC Section 6111.13 and OAC Rule 3745-33-07(C). For maximum effluent limits, any value reported below the OEPA QL shall be considered in compliance with the effluent limit.

Respondent must utilize the lowest available detection method currently approved under 40 CFR Part 136 for monitoring total residual chlorine.

All analytical results, even those below the OEPA QL (listed below), shall be reported. Analytical results are to be reported as follows:

- Results above the QL: Report the analytical result for the parameter of concern.
- Results above the MDL, but below the QL: Report the analytical result, even though it is below the QL.
- Results below the MDL: Analytical results below the method detection limit shall be
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reported as "below detection" using the reporting code "AA").

3. The following table of quantification levels will be used to determine compliance with total residual chlorine in these Orders:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>PQL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorine, tot. res.</td>
<td>0.050 mg/l</td>
</tr>
</tbody>
</table>

Order No. 4 of the August 16, 2019 Orders is hereby modified as follows:

4. The discharge of the following treatment additives in the emergency discharge are approved at the following concentrations:

<table>
<thead>
<tr>
<th>Table 2. Approved Treatment Additives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additive</td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td>ChemTreat P8281L</td>
</tr>
<tr>
<td>Sodium Hydroxide caustic</td>
</tr>
<tr>
<td>BL1301</td>
</tr>
<tr>
<td>ChemTreat P817E</td>
</tr>
<tr>
<td>ChemTreat RL 124</td>
</tr>
</tbody>
</table>

5. Respondent shall submit an after the fact Permit to Install ("PTI") for the installation of the alternate treatment unit and an NPDES permit modification for the discharge. Respondent shall operate the alternate treatment system pursuant to the requirements of these Orders until such time as the PTI is approved and a new or modified NPDES permit has been issued which includes the discharge or until a request pursuant to Order number 7 has been granted.

6. Within thirty (30) days, Respondent will also obtain two more rounds of sampling from the scale pits associated with the Bar Mill and Rolling Mill where water is pumped to, and will analyze for the full set of parameters (i.e. Form 2C sampling) as was previously done with the Bar Mill sampling.

7. Once sufficient data has been obtained demonstrating that the alternate treatment unit is consistently meeting the proposed discharge limits, Respondent may request to reduce monitoring. In addition, if sampling of the water prior to treatment shows the condition of the water does not warrant treatment with the portable treatment unit, Respondent may request that treatment with the alternate treatment unit or portions thereof may be discontinued.
VI. TERMINATION

These Orders shall terminate automatically when both the after-the-fact PTI has been approved by Ohio EPA and a new or modified NPDES permit has been issued which includes the discharge from the pits or a request pursuant to Order 7 has been granted. Otherwise, Respondent's obligation under these Orders shall terminate when Respondent certifies in writing and demonstrates to the satisfaction of Ohio EPA that Respondent has performed all obligations under these Orders and the Chief of Ohio EPA's Division of Surface Water acknowledges, in writing, the termination of these Orders. If Ohio EPA does not agree that all obligations have been performed, then Ohio EPA will notify Respondent of the obligations that have not been performed, in which case Respondent shall have an opportunity to address any such deficiencies and seek termination as described above.

The certification shall contain the following attestation: "I certify that the information contained in or accompanying this certification is true, accurate and complete." This certification shall be submitted by Respondent to Ohio EPA.

VII. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to these Orders shall be undertaken in accordance with the requirements of all applicable local, state and federal laws and regulations. These Orders do not waive or compromise the applicability and enforcement of any other statutes or regulations applicable to Respondent.

VIII. MODIFICATIONS

These Orders may be modified by agreement of the parties hereto. Modifications shall be in writing and shall be effective on the date entered in the journal of the Director of Ohio EPA.

IX. RESERVATION OF RIGHTS

Ohio EPA and Respondent each reserve all rights, privileges, defenses and causes of action, except as specifically waived in Section XI of these Orders. Without admission of law, fact, violation or liability, Respondent consents to the issuance of these Orders and agrees to comply with these Orders.

X. NOTICE

Unless otherwise specified, all documents required to be submitted by Respondent pursuant to these Orders shall be addressed to:
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Ohio Environmental Protection Agency
Northeast District Office
2110 East Aurora Road
Twinsburg, Ohio 44087
Division of Surface Water

XI. WAIVER

Respondent hereby waives the right to appeal the issuance, terms and conditions, and service of these Orders, and Respondent hereby waives any and all rights Respondent may have to seek administrative or judicial review of these Orders either in law or equity.

Notwithstanding the preceding, Ohio EPA and Respondent agree that if these Orders are appealed by any other party to the Environmental Review Appeals Commission, or any court, Respondent retains the right to intervene and participate in such appeal. In such an event, Respondent shall continue to comply with these Orders notwithstanding such appeal and intervention unless these Orders are stayed, vacated or modified.

XII. EFFECTIVE DATE

The effective date of these Orders is the date these Orders are entered into the Ohio EPA Director’s journal.
XIII. SIGNATORY AUTHORITY

Each undersigned representative of a party to these Orders certifies that he or she is fully authorized to enter into these Orders and to legally bind such party to these Orders.

IT IS SO ORDERED AND AGREED:
Ohio Environmental Protection Agency

Laurie A. Stevenson
Director

Signature

Date

8-29-2019

John R. Wilkinson
Printed or Typed Name
Attachment A
Treatment System Overview

This application submittal is for a proposed temporary wastewater treatment system that will provide continuous treatment of water from the bar mill and rolling mill scale pits located at Republic Steel, 1807 E. 28th St., Lorain, OH 44055. Water from the scale pits has total suspended solids and O&G that will be treated with this system. The total continuous flow to treatment will approximate 50 gal./min. The proposed treatment system will employ conventional treatment strategies and be rated for up to 72,000 gal/day. Chemtreat has bench tested samples of the scale pit water, and it was determined that the proposed treatment scheme is the best approach for clarification of this waste stream. Dosages based on treatability are listed at the end of the report.

Process Narrative

The process begins with the transfer of water located in the scale pit to an oil/water separator, then will gravity flow to the first stage neutralizer, N-1. Pump P-1 is a submersible pump with a float switch that will operate as long as the water level is above the float level.

1<sup>st</sup> Stage pH Adjustment

Wastewater from the scale pit will be pumped to the 1<sup>st</sup> stage pH adjustment tank (N-1) at a projected flow rate of 50 gal./min. The 1,850 gallon tank capacity of N-1 will provide an initial reaction time of approximately 37 minutes based on this flow rate. An iron based coagulant (P8281L) will be added to N-1 via chemical metering pump CP-1 as long as P-1 is running. The tank is fitted with a 2 HP mixer, MX-1, to ensure proper solution blending. Flow from N-1 will flow via gravity to the 2<sup>nd</sup> stage pH adjustment tank (N-2).

2<sup>nd</sup> Stage pH Adjustment

The 2<sup>nd</sup> stage pH adjustment tank (N-2) will receive the flow from the 1<sup>st</sup> stage for final pH adjustment and chemical addition prior to the flocculation and clarification stage of treatment. The 1,850 gallon tank capacity of N-2 will provide an additional reaction time of approximately 37 minutes based on the flow rate of 50 gal/min. The pH will be adjusted to 8.5-9 via the automatic addition of sodium hydroxide with chemical metering pump CP-2. The pump utilizes a 4-20mA proportional signals. pH instrumentation (pH-2) located in the 2<sup>nd</sup> stage adjustment tank will control the chemical metering pump activity. The tank is fitted with a 2 HP mixer, MX-2, to ensure proper solution blending. Flow from N-2 will flow via gravity to the inclined plate clarifier.
Clarification and sludge holding

Flow from N-2 will flow into the flash mix chamber, located on the inclined plate clarifier, CL-1. Anionic polymer (P817E) is added via metering pump CP-3 into the flash mix chamber as long as P-1 is running. The flow exits the flash mix chamber into the flocculation chamber, prior to gravity flowing into the clarifier influent launder assembly.

CL-1 will have a projected settling area of 900 square feet. Based on the projected flow rate of 50 gal/min, the projected settling area will provide a hydraulic loading of 0.06 gpm/ft². Clarifier supernatant will overflow to the final pH sampling tank. Sodium metabisulfite will be added to the final pH sampling tank via chemical metering pump CP-4 as long as P-1 is running, in case of potential elevated total chlorine levels. Grab samples will be taken to periodically monitor for pH and oil & grease. Effluent from the final pH sampling tank will be discharged to the permitted outfall.

Clarifier underflow, expected to be 1%-2% solids will be transferred to a frac tank (or other customer supplied container) by air diaphragm pump, through the use of an adjustable frequency/duration timer for the automatic blowdown valve. The blowdown can also be manually operated as required. Sludge will be hauled away as required.

Treatment scheme

1.) Addition of 100 ppm of the ChemTreat P8281L coagulant
2.) Addition of 100 ppm of 50% Sodium Hydroxide caustic BL1301 to raise raw water pH level from 6.00 to 8.50-9.00
3.) Addition of 15 ppm of the ChemTreat P817E emulsion polymer
4.) Addition of 10 ppm of the ChemTreat RL124 dechlorination product as the water leaves the portable treatment system and heads to outfall

Based on a treatment rate of 50 gpm or 72,000 gallons per day, the associated amounts of chemicals are as follows:

1.) 7.2 gallons per day of the ChemTreat P8281L coagulant
2.) 7.2 gallons per day of the Sodium Hydroxide caustic - this is a commodity that Republic Steel should purchase directly from a commodity vendor
3.) 1 gallon per day of the ChemTreat P817E emulsion polymer
4.) 0.75 gallons per day of the ChemTreat RL124 dechlor product