TRANSMITTED HEREWITH is the issued Industrial Discharge Permit for the above referenced facility. This Permit has been issued by Metropolitan Council Environmental Services for the period specified, and it supersedes the draft Permit. The discharge of Industrial Waste into the Metropolitan Disposal System is hereby allowed, subject to any and all provisions of the Waste Discharge Rules for the Metropolitan Disposal System, and this Permit.

THE INDUSTRIAL DISCHARGE PERMIT contains Discharge Limitations, Self-Monitoring and Reporting Requirements, General Permit Conditions, Specific Permit Conditions, and a Compliance Schedule (if necessary). Any failure to submit the required Self-Monitoring Reports (SMRs), or any reports required by a Compliance Schedule, is a violation of this Permit. The Permit Number shall be included on all correspondence regarding this Permit.

THE PERMITTEE is reminded that reissuance of this Permit is not automatic; the Permittee must apply for reissuance at least 60 days prior to the Permit expiration date. If questions arise, contact Karalynn Marr at (651) 602-4727 or via email at karalynn.marr@metc.state.mn.us.

Sincerely,

Robert Nordquist, P.E.
Industrial Waste Manager
MCES Industrial Waste & Pollution Prevention Section
Pursuant to the provisions of Minnesota Statutes Chapter 473 as amended and the Waste Discharge Rules for the Metropolitan Disposal System (MDS) permission is hereby granted to

U of M - Engineering and Fisheries Lab
1995 Fitch Ave
Falcon Heights, MN 55108

for the discharge of Industrial Waste into public sewers within the community of Falcon Heights tributary to the Metropolitan Council's Metropolitan Wastewater Treatment Plant.

This Permit is granted in accordance with the application previously submitted and in consideration of the plans, specifications and data contained in the application.

Discharge Limitations, Self-Monitoring and Reporting Requirements, Compliance Schedules, General Permit Conditions, and Specific Permit Conditions are contained in following sections of this Permit.

EFFECTIVE DATE: November 01, 2016
EXPIRATION DATE: October 31, 2019

Issued by METROPOLITAN COUNCIL ENVIRONMENTAL SERVICES

Larry Rogacki, Assistant General Manager
Support Services Business Unit

Dec 13, 2016
METROPOLITAN COUNCIL ENVIRONMENTAL SERVICES (MCES)

A. Discharge Limitations

1. Discharge Limits at Sample Location(s):

The following Discharge Limits are based on the listed Rule(s) for the specified sampling location(s):

**SP-01: Disinfection tanks discharge**

<table>
<thead>
<tr>
<th>Applicable Rule</th>
<th>Rule Description</th>
<th>Regulated Pollutant</th>
<th>Standard (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>pH Minimum (Standard Units)</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pH Maximum (Standard Units)</td>
<td>11.0</td>
</tr>
</tbody>
</table>

Local pretreatment standards for metals and cyanide are the maximum for any 24 hour period.

pH standards are continuous and apply at all times.

MCES Local Pretreatment Standards are listed in Attachment B.

A. Discharge Limitations

1. Discharge Limits at Sample Location(s):

The following Discharge Limits are based on the listed Rule(s) for the specified sampling location(s):

**SP-02: Iron filters backflush**

<table>
<thead>
<tr>
<th>Applicable Rule</th>
<th>Rule Description</th>
<th>Regulated Pollutant</th>
<th>Standard (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>pH Minimum (Standard Units)</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pH Maximum (Standard Units)</td>
<td>11.0</td>
</tr>
</tbody>
</table>

Local pretreatment standards for metals and cyanide are the maximum for any 24 hour period.

pH standards are continuous and apply at all times.

MCES Local Pretreatment Standards are listed in Attachment B.
A. Discharge Limitations (continued)

1. Discharge Limits at Sample Location(s):

The following Discharge Limits are based on the listed Rule(s) for the specified sampling location(s):

SP-03: Mathematical combination of SP-01 and SP-02.

<table>
<thead>
<tr>
<th>Applicable Rule</th>
<th>Rule Description</th>
<th>Regulated Pollutant</th>
<th>Standard (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Discharge Rule 401.00</td>
<td>MCES Local Pretreatment Standards</td>
<td>Cadmium</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chromium</td>
<td>6.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Copper</td>
<td>4.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cyanide, total</td>
<td>4.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lead</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mercury</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nickel</td>
<td>6.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Zinc</td>
<td>6.1</td>
</tr>
</tbody>
</table>

Local pretreatment standards for metals and cyanide are the maximum for any 24 hour period.

pH standards are continuous and apply at all times.

MCES Local Pretreatment Standards are listed in Attachment B.

2. Prohibited Waste Discharges

Prohibited wastes are specific in Waste Discharge Rule 406 and include, but are not limited to the following: (a) Flammable, explosive and corrosive wastes, gasoline, fuel oil, lubricating oil, hydraulic oil, motor oil, or grease; (b) Wastes that are likely to obstruct the flow within public sewers: grease, fat or oil of animal or vegetable origin, solid wastes, garbage, guts, bones, ash, sand, rags, lime, metal, wood, plastic, glass, or yard wastes; (c) Wastes that are likely to cause interference, pass-through, or operational problems: slug discharges, toxic chemicals, poisons, dyes, or inks; (d) Wastes that are likely to cause a public nuisance: noxious, malodorous, or foam producing substances; (e) Hazardous wastes, as defined by Minnesota Statutes; and (f) Waste generated outside of the Metropolitan Area.
B. Self-Monitoring and Reporting Requirements

1. Following are the specific monitoring point location(s), sample collection frequency, volume determination, sample compositing, and (if necessary) the calculation methods required by this Industrial Discharge Permit. Representative wastewater samples shall be collected at each sampling point (SP) by the Permittee in accordance with these requirements and Waste Discharge Rules 212, 213, and 215. These samples shall be collected on normal operating days based on the corresponding frequency listed in Attachment A.

   i) Monitoring Point:

      SP-01: Disinfection tanks discharge

      Samples shall be collected from the sampling port on the backwash line from the disinfection tanks.

      SP-02: Iron filters backflush

      Samples shall be collected from the sampling port immediately downstream of the four iron filters.

      SP-03: Mathematical combination of SP-01 and SP-02.

      The samples collected at SP-01 and SP-02 shall be analyzed separately for the parameters listed in Attachment A of this permit. The flow-weighted average of these results, based on daily discharge volumes from the two sampling points, shall be compared to the limits in section A of this permit.

   ii) Collection Frequency:

      SP-01: A series of four grab samples shall be collected during each discharge event in an operating day.

      SP-02: A series of four grab samples shall be collected during the course of one discharge event from one iron filter.

   iii) Typical Operating Days:

      Each calendar day with typical or greater than typical discharge activities, as allowed under this Permit, shall be considered one operating day. All other days shall be calculated as an appropriate fraction of one operating day.

   iv) Volume Determination:

      Sampling day and reporting period industrial wastewater volumes shall be determined by readings of the meters immediately downstream of each of the two sampling points. The volume of domestic wastewater at the facility shall be assumed to be 20 gallons per employee per operating day. The volume of water discharged to the storm sewer shall be recorded by a water meter. Incoming water volumes shall be calculated as the sum of the water discharged through the sampling points, the domestic estimate and the stormsewer discharge
B. Self-Monitoring and Reporting Requirements (continued)

v) Compositing Method:

For each of the two sampling points, samples shall be composited by equal volume into one daily sample composite. The daily composite samples shall be analyzed separately.

vi) MCES Strength Charge:

The MCES Strength Charge is based on total facility concentrations for Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS), and the total facility discharge volume for each reporting period. MCES Strength Charges are determined in accordance with Waste Discharge Rule 302.
METROPOLITAN COUNCIL ENVIRONMENTAL SERVICES (MCES)

B. Self-Monitoring and Reporting Requirements (continued)

2. Parameters

Chemical analysis, in accordance with Waste Discharge Rule 216, of the sample(s) representing the waste discharged through the specific monitoring point(s), shall be performed for the following parameters:

See Attachment A

3. Reporting Requirements

The Permittee shall submit a complete report 1 time per year, according to the following schedule:

<table>
<thead>
<tr>
<th>Reporting Period</th>
<th>Report Due in MCES office by</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 1 - December 31</td>
<td>January 31</td>
</tr>
</tbody>
</table>

A complete report consists of a Reporting Period Summary SMR with the operations and water volume summary data for the reporting period, as well as all required attachments listed in Section F of this Permit. All certification questions shall be answered and other pertinent information shall be included, such as significant problems or process changes that have occurred each reporting period.

b. Sampling Results SMR

The Permittee shall submit a complete report by the last day of the month following the month in which the sample was collected. See Attachment A for the sampling frequency required for each listed parameter.

A complete report consists of a Sampling Results SMR and a copy of all laboratory data sheets for all samples reported on the SMR. The Permittee shall also submit all required attachments listed in Section F of this Permit. All certification questions shall be answered and any pertinent information shall be included.

C. Compliance Schedule

The Permittee shall install additional pretreatment equipment and/or conduct necessary operation and maintenance to comply with the Discharge Limitations in accordance with the schedule set forth in:

Not Applicable
D. General Permit Conditions

1. All discharges into public sewers by the Permittee shall be in accordance with applicable provisions of the Waste Discharge Rules for the MDS and this Permit.

2. The Permittee shall not knowingly make any false statement, representation or certification in any record, report, plan or other document submitted to MCES.

3. This Permit shall not release the Permittee from any liability, duty or penalty imposed by local, state or federal statutes, regulations, ordinances or license requirements regarding waste disposal.

4. This Permittee shall take all reasonable precautions to minimize all accidental discharges including prohibited slugs, spills, and bypasses. Plans for the prevention and control of accidental discharges shall be submitted to the Industrial Waste & Pollution Prevention Section for approval within a specific period of time when required by MCES. In the event of any significant accidental discharge, spill, or bypass, the Permittee shall IMMEDIATELY notify the Minnesota State Duty Officer at (651) 649-5451 and report the facility address, and other pertinent information.

   In accordance with Waste Discharge Rule 412, the Permittee shall post a permanent notice on an employee bulletin board or other prominent place advising employees how to notify the Minnesota State Duty Officer in the event of an accidental or prohibited slug discharge.

5. The Permittee shall notify the Industrial Waste & Pollution Prevention Section within 24 hours of becoming aware of any violation of the Discharge Limitations in Section A. of this Permit.

6. The Permittee shall pay applicable Permit fees, Strength Charges, Load Charges, self-monitoring report late fees, and other cost recovery fees assessed by MCES.

7. In accordance with Waste Discharge Rule 211, the Permittee shall not assign or transfer an Industrial Discharge Permit to a new owner, or a new location, without the written approval of MCES.

8. In accordance with Waste Discharge Rule 214, the Permittee shall unconditionally allow MCES personnel to enter the Permittee's premises for the purposes of inspection, monitoring, records review or any other actions, needed to verify information received by MCES or determine compliance with the Waste Discharge Rules and this Permit. The Permittee shall not place conditions upon entry of MCES personnel to the Permittee’s premises. In the event that an employee of MCES signs any document agreeing to conditions of entry, including, but not limited to confidentiality of information, this Permit supersedes any such agreement.

9. The Permittee shall retain its waste disposal records, in accordance with Waste Discharge Rule 214, for a period of not less than three years.
D. General Permit Conditions (continued)

10. The analytical results for all wastewater monitoring conducted during each reporting period, at the monitoring points(s) specified in this Permit or at points representing the industrial discharge through the monitoring point(s), including in-house sampling and analysis, shall be submitted with each Sampling Results SMR. All analytical results shall include the operating day discharge volume. Permittees conducting more than one sampling event, in accordance with Permit requirements in Section B, during a reporting period, shall compute an arithmetic average for all parameters subject to EPA Categorical Pretreatment Standards. The average operating day discharge volume shall also be included. All instantaneous field pH results taken during sampling events shall be submitted with the Sampling Results SMR. Unless otherwise noted, only the in-house continuous pH charts corresponding to sampling events are required to be submitted. For all cases where a pH range is required, the minimum and maximum value in the range of measured values shall be listed.

11. If applicable, the Permittee shall install, operate, and maintain sampling and monitoring devices in proper working order at the Permittee's expense.

12. The Permittee shall notify the Industrial Waste & Pollution Prevention Section at least 60 days prior to making changes, such as:
   - moving, adding, or replacing processes or equipment, or
   - modification of the wastewater monitoring point, or
   - installation or modification of wastewater pretreatment equipment, or
   - any other operational changes that would significantly affect the volume or characteristics of the wastewater discharged.

   This Permit shall then be subject to modification or reissuance in accordance with Waste Discharge Rules 206-209.

13. The Permittee shall be subject to civil liability as a result of discharges which violate the Waste Discharge Rules, applicable federal pretreatment standards or requirements, or any requirement or condition contained in this Permit. Further, any violation may also result in the Permittee being subject to civil and/or criminal penalties in the amount of $1,000 per day, 90 days imprisonment, or both.

14. Information and data that Permittees submit to MCES shall be available to the public as required by Waste Discharge Rule 221, the Minnesota Government Data Practices Act, Minnesota Statutes, chapter 13, 40 CFR part 403.14 or any other applicable law. The Permittee may make a written request that certain submitted information remain confidential by submitting the Confidential Business Information Request Form. If MCES determines that this information is eligible for classification as confidential, then the information will not be made available to the public. Information determined to be confidential will remain available only to MCES or any other public agency with the authority to view such information. Information that MCES needs to determine applicable regulations, compliance with the Waste Discharge Rules, or characteristics of the wastewater discharge cannot be deemed confidential.
E. Specific Permit Conditions

1. Sewer Availability Charge (SAC) is a "connection" fee levied by MCES since 1973 for new connections or increased volume discharged to the Metropolitan Disposal System (MDS). For industrial purposes, one SAC unit equals 274 gallons of maximum normal daily wastewater flow volume for process areas and maximum potential flow volume for commercial areas. MCES will be evaluating the SAC history for this facility in the near future to determine SAC liability, if any.

2. For both SP-01 and SP-02, the Permittee shall collect a grab sample for pH analysis according to Standard Method 4500-H+ on sampling days and submit these pH readings with each Sampling Results SMR.

3. The Permittee is not required to submit a self-monitoring report (SMR) for the 2016 reporting period. The first Reporting Period Information SMR for this Permit is due January 31st, 2018 covering the January - December, 2017 reporting period.

4. On days that there is no discharge from SP-02, the discharge from SP-01 shall fully represent SP-03.
F. Required SMR Submittals

Sampling Results SMR

The following items shall be submitted as an attachment to each submitted Sampling Results SMR:

1. The analytical results for all wastewater monitoring conducted during each reporting period, at the monitoring points(s) specified in this Permit or at points representing the industrial discharge through the monitoring point(s), including in-house sampling and analysis, shall be submitted with each Sampling Results SMR.
Sampling Requirements from Section B.2.

**Sampling Location: SP-01 - Disinfection tanks discharge**

<table>
<thead>
<tr>
<th>Analytical Method (1)</th>
<th>Analyte Description</th>
<th>Minimum Sample Collection Frequency (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM 4500-H+</td>
<td>Instantaneous Field pH</td>
<td>One Sample per Year</td>
</tr>
<tr>
<td>SM 2540D</td>
<td>Total Suspended Solids</td>
<td>One Sample per Year</td>
</tr>
<tr>
<td>EPA 410.4</td>
<td>Chemical Oxygen Demand</td>
<td>One Sample per Year</td>
</tr>
</tbody>
</table>

**Sampling Location: SP-02 - Iron filters backflush**

<table>
<thead>
<tr>
<th>Analytical Method (1)</th>
<th>Analyte Description</th>
<th>Minimum Sample Collection Frequency (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM 4500-H+</td>
<td>Instantaneous Field pH</td>
<td>One Sample per Year</td>
</tr>
<tr>
<td>SM 2540D</td>
<td>Total Suspended Solids</td>
<td>One Sample per Year</td>
</tr>
<tr>
<td>EPA 410.4</td>
<td>Chemical Oxygen Demand</td>
<td>One Sample per Year</td>
</tr>
</tbody>
</table>

(1) All samples shall be collected, preserved and analyzed in accordance with the procedures and methods established above and/or in 40 Code of Federal Regulations Part 136 and amendments.

(2) Sampling and/or analysis is not required during reporting periods when there is no discharge to the Metropolitan Disposal System.
### Attachment B

**MDS Limitations on Discharges**

1. **Local Pretreatment Standards - Waste Discharge Rule 401.00**
   (Applicable to the total facility discharge)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Standard (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium (Cd)</td>
<td>1.0</td>
</tr>
<tr>
<td>Chromium - total (Cr)</td>
<td>6.0</td>
</tr>
<tr>
<td>Copper (Cu)</td>
<td>4.0</td>
</tr>
<tr>
<td>Cyanide - total (CN)</td>
<td>4.0</td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>1.0</td>
</tr>
<tr>
<td>Mercury (Hg)</td>
<td>0.002</td>
</tr>
<tr>
<td>Nickel (Ni)</td>
<td>6.0</td>
</tr>
<tr>
<td>Zinc (Zn)</td>
<td>6.0</td>
</tr>
<tr>
<td>pH - maximum (Std Units)</td>
<td>11.0</td>
</tr>
<tr>
<td>pH - minimum (Std Units)</td>
<td>5.0</td>
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