United States Steel Corporation
Midwest Plant
Portage, Indiana

Wastewater Treatment
O & M Manual and
Preventative Maintenance Program Plan

Effective Date: 12-21-2018

TABLE OF CONTENTS

O & M Manual and Preventative Maintenance Program Plan

Introduction **2**

I. National Pollutant Discharge Elimination System (NPDES) Permit Overview **2**

I.A. NPDES Part I: Limits, Monitoring and Reporting Requirements 2
I.B. NPDES Part II: Standard Conditions 3
I.C. NPDES Part III: Other Requirements 3
I.D. NPDES Part IV: Cooling Water Intake Structures 3

II. Description of Wastewater Treatment and Associated Process Equipment **3**

II.A. Total Treatment Overview 3
II.B. Oil Pretreatment System 4
1. Process Description 4
2. Process Flow Diagrams 5
3. Equipment Description 5
4. Operating Procedure(s) 5
5. Preventive Maintenance Program 6
7. Forms 6
II.C. Chrome Treatment Plant 6
1. Process Description 6
2. Process Flow Diagrams 7
3. Equipment Description 7
4. Operating Procedure(s) 7
5. Preventive Maintenance Program 8
6. Forms 9
II.D. Final Treatment Plant 9
1. Process Description 9
2. Process Flow Diagrams 10
3. Equipment Description 10
4. Operating Procedure(s) 10
5. Preventive Maintenance Program 11
6. Forms 11
II.E. Sludge Dewatering 11
1. Process Description 11
2. Process Flow Diagrams 12
3. Equipment Description 12
4. Operating Procedure(s) 12
5. Preventive Maintenance Program 12
6. Forms 12
II.F. Zebra Mussel Control 13
1. Process Description 13
2. Process Flow Diagrams 13
3. Equipment Description 13
II.G. Job Descriptions - WWT Assigned Personnel 13

TABLE OF CONTENTS

1. Training 13
2. Chrome Plant Operator – (Advanced Position) 14
3. Final Treatment Plant Operator – (Intermediate Position) 14
4. Sludge Dewatering Plant Operator – (Advanced Position) 14
5. Utilities Helper – (Entry Position) 14
6. Instrument Repairman 15
7. Mechanical Repairman 15
8. Electrical Repairman 15
9. Centrifuge Operator – (Contractor) 15
10. Zebra / Quagga Mussel Control Personnel – (Contractor) 15
11. Chemical Supplier – (Contractor) 16
12. Sample Collection and Analysis – (Contractor) 16

III. Laboratory Requirements 16

IV. Recordkeeping Requirements 17

V. Plan for Inspection, Cleaning and Maintenance of Outfall Channels 17

VI. Preventive Maintenance Program Plan 17

VII. Review of O&M Plan and Preventative Maintenance Program Plan 18

VIII. Appendices 18

Appendices

Appendix I.A. NPDES Permit Part I – Effluent Limits, Monitoring, & Conditions
Appendix I.B. NPDES Permit Part II – Standard Permit Conditions
Appendix I.C. NPDES Permit Section Part III – Other Requirements
Appendix I.D. NPDES Permit Section Part IV – Cooling Water Intake Structures
Appendix II Process Flow Diagrams
Appendix III Laboratory Certifications
Appendix IV Job Qualification Records (JQRs)

O & M Manual and Preventative Maintenance Program Plan

Introduction

This Operation and Maintenance Manual and Preventative Maintenance Program Plan (Manual) for the Midwest Plant's Wastewater Treatment Facilities is intended to satisfy the requirements set forth in the Consent Decree dated April 2, 2018. This document also supersedes and replaces the existing Chrome Plant Containment Trench Operating and Maintenance Plan.

I. National Pollutant Discharge Elimination System (NPDES) Permit Overview

Midwest is authorized to discharge into the waters of the State of Indiana under the National Pollutant Discharge Elimination System (NPDES) Permit No. IN0000337 (Permit). The State of Indiana is authorized by the United States Environmental Protection Agency (USEPA) to administer the NPDES program. The Indiana Department of Environmental Management (IDEM) is the state agency responsible for administering and enforcing Midwest's NPDES permit. NPDES permits are issued for a 5-year period but can generally be administratively extended as long as the application for renewal was submitted complete and on time. The Permit is a legal document and all requirements, limits and conditions must be adhered to while the Permit is in effect. Any violation of Permit conditions could result in civil or criminal action.

This section of the Manual contains a summary of Permit requirements. This is only a summary and is not intended to substitute for the actual language of the Permit. The actual Permit language should be consulted for compliance (see Appendix I).

Generally speaking, the Permit consists of four parts, as described below in Parts I.A through Part I.D of this Manual.

I.A. NPDES Part I: Limits, Monitoring and Reporting Requirements

Part I of the NPDES permit contains the following subsections that pertain to the limits, monitoring and reporting requirements that apply to Midwest:

- Part I.A – Effluent Limitations and Monitoring Requirements – This subsection contains the numerical limits for the constituents to be monitored at each outfall.
- Part I.B – Narrative Water Quality Standards – This subsection details the narrative water quality standards such as oil sheens, odor, color, etc. that must be monitored.
- Part I.C – Monitoring and Reporting - This subsection further describes the discharge monitoring and reporting requirements within the Permit. The Midwest Facility uses a certified third-party laboratory to collect, analyze and report all required samples. Data is summarized on Daily Monitoring Reports (DMR) as well as Monthly Monitoring Reports (MMR), which are required to be submitted electronically each month. The DMR and MMR are signed by U. S. Steel prior to submittal to IDEM and USEPA.
- Part I.D – Storm Water Monitoring and Non-Numeric Effluent Limits – This subsection contains the non-numeric Permit conditions, including the inspection requirements associated with the Facility's storm water discharges.
- Part I.E – Storm Water Pollution Prevention Plan (SWPPP) – This subsection outlines the required content and implementation of the Facility's SWPPP.
- Part I.F – Chronic Biomonitoring Program Requirements – This subsection outlines the Permit's whole effluent toxicity testing requirements and the components of the subsequent toxicity reduction evaluation schedule of compliance, as needed.
- Part I.G – Pollution Minimization Program – This subsection sets forth the goals and requirements of the pollution minimization program for applicable pollutants
- Part I.H – Toxic Organic Pollutant Management Plan – This subsection identifies the requirement for the Facility to submit a toxic organic management plan and also identifies the components of the plan.

- Part I.I – Reopening Clauses – This subsection outlines the circumstances under which the Permit may be modified or revoked.
- Part I.J – Reporting Requirements for Solvents, Degreasing Agents, Rolling Oils, Water Treatment Chemicals and Biocides – This subsection outlines the Facility's annual requirement to report the quantity of certain chemicals that are used at the Facility and also the amount of those chemicals that may be present in any of the Facility's outfalls.
- Part I.K – Schedule of Compliance – This subsection identifies the schedule of tasks required to achieve compliance with the effluent limitations for Lead and Nickel at Outfall 004.

Refer to Appendix I.A. for NPDES Permit Section Part I – Effluent Limits, Monitoring, & Conditions.

I.B. NPDES Part II: Standard Conditions

Part II contains the following standard conditions that apply to all NPDES permits, including the Facility's Permit:

- Part II.A – General Conditions – This subsection includes descriptions of the duties to comply, mitigate adverse effects on the environmental and reapply for the Permit. It also covers civil penalties, causes for modifying, revoking or terminating a permit, toxic pollutant obligations, wastewater treatment plant operator certification requirements, and Facility inspections by IDEM.
- Part II.B – Management Requirements – This subsection pertains to the requirements for operating and maintaining treatment systems and also the procedures and conditions under which bypasses and upsets are permitted,
- Part II.C – Reporting Requirements – This subsection pertains to reporting requirements associated with planned changes to the Facility or its discharges, as well as other requirements regarding compliance/noncompliance reporting, signatory requirements and changes in the discharge of toxic substances.

Refer to Appendix I.B. for NPDES Permit Section Part II – Standard Permit Conditions.

I.C. NPDES Part III: Other Requirements

Part III of the Permit contains requirements regarding the discharges of thermal effluent and polychlorinated biphenyls (PCBs)

Refer to Appendix I.C. for NPDES Permit Section Part III – Other Requirements.

I.D. NPDES Part IV: Cooling Water Intake Structures

Part IV of the Permit contains requirements that are associated with the cooling water intake structures located at the Midwest Facility. These requirements are primarily related to the Best Technology Available (BTA) determination and the associated requirements to submit certain reports and information to IDEM.

Refer to Appendix I.C. for NPDES Permit Section Part IV – Cooling Water Intake Structures.

II. Description of Wastewater Treatment and Associated Process Equipment

II.A. Total Treatment Overview

The Midwest wastewater treatment facilities are designed to handle the wastewater streams generated by the various production lines for flat rolled steel. These lines include:

- Pickle line for removal of oxides with acid;
- Tandem lines to reduce strip thickness;
- Electrolytic cleaning for oil removal;
- Annealing for increased steel ductility;
- Temper lines for increasing coil hardness;
- Galvanizing lines for zinc coating; and,
- Coating lines including tin and chrome plating.

As shown on Figure MWE-04, the Midwest Plant has five wastewater treatment systems: (1) an Oil Pretreatment System, (2) a Chrome Treatment Plant (Chrome Plant), (3) a Final Treatment Plant (Final Treat), (4) sludge dewatering, and (5) zebra mussel control. As explained in greater detail below, oil-containing wastewater streams are discharged primarily to the Oil Pretreatment System where oil is separated through the API's, decanting and centrifuge. The separated oil is sent offsite for recycling to a licensed oil processor. The wastewater flows from the oil separation system to the Final Treatment Plant.

Wastewater systems that contain chromium are collected in dedicated conveyances that becomes the influent to the Chrome Treatment Plant. This facility reduces hexavalent chrome to trivalent chrome so that it can be removed from the wastewater. The effluent from this facility is discharged through NPDES Internal Outfall 204 and ultimately discharges through NPDES Outfall 004 into Burns Waterway.

The remaining wastewater streams (non-chromium) and the discharge from the Oil Pretreatment System and sludge dewatering facilities flow into the Final Treat. Additionally, some backwash and non-contact cooling water is also sent to the Final Treat. Wastewaters entering the Final Treatment Plant are treated through this system to adjust pH, remove solids and remove any remaining oil. The effluent from this facility is discharged through NPDES Internal Outfall 104 and ultimately through NPDES Outfall 004 into Burns Waterway.

The sludge dewatering facility receives underflow solids from the Final Treatment Plant and uses filter presses to dewater the sludge for disposal in the onsite permitted landfill (Greenbelt II). The wastewater from the pressed sludge/solids is returned to the Final Treatment Plant influent.

Midwest also has a Zebra and Quagga Mussel control water treatment program. This treatment program is a process that chlorinates all the service water pumped into the plant beginning in June and ending in October to kill mussel veligers (larvae). The chlorinated service water is dechlorinated prior to discharge from the Midwest NPDES permitted outfalls.

For the purposes of this O&M Manual and Preventative Maintenance Program Plan, all equipment in each specific area was evaluated with respect to the influence it would have on wastewater operations if a failure occurred. Only those with significant influence on operations were considered key equipment and included in this manual. Other equipment, such as pumps, which have redundancy and/or inline back-up units built into the operations do not present a significant risk to the wastewater operations and therefore, were not included in this manual.

II.B. Oil Pretreatment System

1. Process Description

   Wastewaters containing animal fat, vegetable oil, mineral oil and petroleum-based oils are processed through the Oil Pretreatment System (APIs) where oils are removed prior to discharge into the Final Treatment Plant.

Oily wastewaters flow into the Oil Interceptor 75,000-gallon Equalization (EQ) Tank. From here, the wastewater flows into the North Interceptor Mix Tank for additions of polymers and/or tannins to chemically aid oil separation. Effluent from the Mix Tank is split between the North Oil Interceptor's East and West basins where oil is skimmed off and sent to the Oil Holding Tanks. The skimmed effluent wastewaters then flow to either the Final Treatment Plant or to the South Oil Interceptor.

Effluent from the North Oil Interceptor to the South Oil Interceptor flows into the South Mix Tank that feeds the oily wastewaters into the South Oil Interceptor (Monroe) where oil is skimmed off and sent to the Oil Holding Tanks. The skimmed effluent wastewaters then flow into the Dissolved Air Filtration (DAF) units for additional oil removal. The oil removed in the DAF units are sent to the Oil Holding Tanks. DAF effluent wastewaters flow into the Final Treatment Plant.

The Oil Holding Tanks (North and South) are heated to improve oil separation and the decant water is returned to the EQ Tank. The oil is pumped to a centrifuge for final oil separation. The centrifuged oil is collected in an Oil Storage Tank for offsite recycling at a licensed oil processing facility. The clean water discharge from the centrifuge flows back into the EQ Tank.

2. Process Flow Diagrams
   Refer to Appendix II for Process Flow Diagrams:
   - USS Process Flow Diagram No. MWE-03 Outfalls
   - USS Process Flow Diagram No. MWE-04 Outfalls 104 and 204 Wastewater Treatment Processes
   - USS Process Flow Diagram No. MWM-04 Pretreatment Area
   - Chemtreat Graphic No. KV291 API Oil Interceptor
   - Chemtreat Graphic No. ML1457 Monroe API Oil Interceptor

3. Equipment Description
   a. Oil EQ Tank – Tank with a capacity of 75,000 gallons which receives oily wastewater from the Oil Waste Pad Sump, the 80" and 52" Mills, the DCR Mill and the Tin Mill Temper Mill.
   b. North Oil Interceptor – Named API Oil Interceptors East and West each with a capacity of 111,000 gallons.
   c. North Oil Interceptor Tanks – Named North Oil Holding Tank and South Oil Holding Tank each with a capacity of 30,000 gallons.
   d. South Oil Interceptor – Named Monroe API with a capacity of 16,000 gallons.
   e. Dissolved Air Floatation Units – Named DAF East and West each with a capacity of 18,000 gallons.
   f. Centrifuge – An Alfa-Laval centrifuge with a processing rate of 3,000-5,000 gallons per Day, which can produce approximately 1,000-1,650 gallons of finished oil (or equivalent) per Day.
   g. Centrifuge Oil Tank – Receives oil from the centrifuge with a capacity of 5,000 gallons.

4. Operating Procedure(s)

Procedure Description	Procedure Number
Oil Separation Process Overview	NSCS-M-P-7093-02-45
Handling Oil and Chemicals Shipped	NSCS-M-P-7091-56

Procedure Description	Procedure Number
Greenbelt Landfill, Oil Waste Pad	NSCS-M-P-7094-19
Incompatible Wastes	UT03-17
Oil Recovery System	NSCS-M-P-7093-02-13
Oil Separation Process Control Practices	NSCS-M-P-7093-02-46

5. Preventive Maintenance Program

Equipment	Maintenance Description	Frequency
EQ Tank	Visual Inspection	Semi-annual
EQ Tank	Non-Destructive Testing	Every 10 years
North Interceptors	Visual Inspection	Semi-annual
North Interceptors	Sludge depth	Annual
North Interceptor Oil Tanks	Visual Inspection	Semi-annual
North Interceptor Oil Tanks	Non-Destructive Testing	Every 10 years
South Interceptors	Visual Inspection	Semi-annual
South Interceptors	Non-Destructive Testing	Every 10 years
South Interceptor screw and chain motors	Motor thermal check	Quarterly
DAF	Visual Inspection	Semi-annual
DAF	Non-Destructive Testing	Every 10 years
DAF air blower motor	Motor thermal check	Quarterly
Key Equipment	Lubrication Inspection	Quarterly
Centrifuge (Contractor operated)	Contractor	Contractor

6. Key Equipment Calibration

Instrument Description	Calibration Schedule
Oil Holding Tanks Temperature Probe	Quarterly
Oil Holding Tank Level Control	Quarterly

7. Forms
   - Form 7010-01 Dump Log Sheet
   - Form 7091-10 Basin Skimming Log Sheet
   - Form 7093-10 Interceptor Log Sheet
   - Form 7010-14 Utilities WWT Report

II.C. Chrome Treatment Plant

1. Process Description

Wastewater systems containing chrome and chrome rinse waters are collected in dedicated conveyances which are directed into the 60,000-gallon Equalization Tank. Additionally, intermittent basement sump flow from the tin production areas is also sent to the Equalization Tank. The Equalization Tank feeds wastewater to one of two parallel chrome treatment systems. The first step of chrome reduction treatment process converts hexavalent chrome (Cr^{+6}) to trivalent chrome (Cr^{+3}) in the Reduction Tank. Sulfuric acid and sodium bisulfite are reagents added to and mixed with the wastewater to facilitate the reduction of chrome. From the Reduction Tank, the wastewater flows into the pH Adjustment Tank where the pH is raised to precipitate the reduced chrome into chrome floc. The wastewater flows from the pH Adjustment Tank into a “fast” mix tank, which is

part of the lamella clarifier, where coagulant polymer is added to agglomerate the floc particles. The agglomerated flow continues into the "slow" Mix Tank, also integral to the lamella clarifier, where flocculant polymer is added to create larger particles. The flocculated wastewater then flows through the Lamella Clarifier where the flocculated solids settle and the clean effluent flows into a continuous backwash sand filter. The effluent from the filter goes into a holding tank. The effluent is discharged through NPDES Internal Outfall 204 and ultimately discharged through NPDES Outfall 004 into Burns Waterway.

The settled solids from the Lamella Clarifier are pumped into a sludge holding tank which feeds the chrome filter press. The pressed sludge is removed in waste boxes to an offsite licensed disposal facility. The supernatant from the filter press and the backwash from the filters along with any washdown or extraneous waters throughout the process are collected in a building sump and returned to the Equalization Tank for processing.

2. Process Flow Diagrams
Refer to Appendix II for Process Flow Diagrams:
- USS Process Flow Diagram No. MWE-03 Outfalls
- USS Process Flow Diagram No. MWE-04 Outfalls 104 and 204 Wastewater Treatment Processes
- USS Process Flow Diagram No. MWM-04 Pretreatment Area
- Chemtreat Graphic No. AG2002 Chrome Treatment Plant

3. Equipment Description
- Equalization Tank – Tank which receives process wastewater from the Tin and Tin-Free Process Lines with a capacity of 60,000 gallons
- Chrome Reduction Tanks – Two tanks, one for each train, each with a capacity of 11,090 gallons
- Sulfuric Acid Tank – Tank with a capacity of 6,400 gallons
- Sodium Bisulfite Tanks – Two tanks, which can feed either Train, each with a capacity of 7,000 gallons
- pH Adjustment Tank – Two tanks, one for each Train, each with a capacity of 5,430 gallons
- Sodium Hydroxide Tank – Tank with a capacity of 7,000 gallons
- Coagulant Tank – Tank with a capacity of 1,100 gallons
- Flocculant Tank – Tank with a capacity of 540 gallons, which feeds a make-up system
- Lamella Clarifier – Two clarifiers, one for each train, each equipped with a Fast Mixing Tank, and Slow Mixing Tank and 1,135 ft^2 of plate area
- Sand Filters – Two Dynasand Filter 100 ft^2 systems, one for each Train
- Sludge Holding Tank – Tank with a capacity of 5,000 gallons
- Filter Press – Plate and frame filter press

4. Operating Procedure(s)

Procedure Description	Procedure Number
Chrome Wastewater Treatment Plant Overview	NSCS-M-P-7093-02-03
pH Testing – Chrome Plant	NSCS-M-P-7093-02-08
Trench System	NSCS-M-P-7093-02-11
ORP Analysis and Testing	NSCS-M-P-7093-02-17
Testing Conductivity	NSCS-M-P-7093-02-26
Hexavalent Chrome Test Hach DR	NSCS-M-P-7093-02-32

Procedure Description	Procedure Number
Unknown High or Low Incoming pH, Strong Chrome, Unusual Water	NSCS-M-P-7093-02-42
Chrome Treat with Sodium Bisulfite	UT04-10
Indexing Sludge Cake From Sludge Presses	UT05-05
Chrome Treatment Process Control Practices	NSCS-M-P-7093-02-48

5. Preventive Maintenance Program

Equipment	Maintenance Description	Frequency
Lamella Clarifiers A and B	Inspection	Annually
Lamella Clarifiers A and B	Non-Destructive Testing	5 Years
Dyna Sand Filters A and B	Inspection	Annually
Dyna Sand Filters A and B	Check Filter Media Level and Maintain Level as Required	Semi-Annual
Filter Press	Inspection	Semi-Annual
EQ Tank	Inspection	Semi-Annual
EQ Tank	Non-Destructive Testing	5 Years
Chrome Reduction Tanks A and B	Inspection	Semi-Annual
pH Adjustment Tanks A and B	Inspection	Semi-Annual
Holding Tank	Inspection	Semi-Annual
Sludge Holding Tank	Inspection	Semi-Annual
Sludge Holding Tank	Non-Destructive Testing	10 Years
Mixer Motors	Thermal Checks	Quarterly
Chrome Trench	Chrome Test on Water in Trench	Daily
Chrome Trench	Inspection	Quarterly
Chrome Trench	Full Inspection with all covers pulled	Annually
Chrome Trench Piping	Non-Destructive Testing	10-years
Chrome Line Transfer Piping	Inspection	Semi-Annual
Chrome Line Transfer Piping	Non-Destructive Testing	10-years
Chrome Line Transfer Trench	Inspection	Semi-Annual
Key Equipment	Lubrication Inspection	Quarterly

Key Equipment Calibration

Instrument Description	Calibration Schedule
60k EQ Tank Inlet ORP	Monthly
60k EQ Tank Inlet pH	Monthly
60k EQ Tank Inlet Conductivity	Monthly
60k EQ Tank Level Transmitter	Yearly
Reduction Tanks A and B ORP	Semimonthly
Reduction Tanks A and B pH	Semimonthly

Instrument Description	Calibration Schedule
Reduction Tanks A and B Flowmeters	Annual
Adjustment Tanks A and B pH	Semimonthly
Lamellas A and B pH	Semimonthly
Lamellas A and B Turbidity Meters	Quarterly
Chrome Line Plater Basement Sump Conductivity Meters	Quarterly
Tin Line Chemtreat Basement Sump Conductivity Meters	Quarterly
Chrome Trench Sump Conductivity	Quarterly
Chrome Trench Sump Level Control	Quarterly
Chrome Wastewater Transfer Pipe Flowmeters	Annually
Sulfuric Acid Tank Level Transmitter	Yearly
Sodium Hydroxide Tank Level Transmitter	Yearly
Sodium Bisulfite Tanks A and B Level Transmitters	Yearly

6. Forms
   - Form 7093-03 Pretreat Log Sheet
   - Form 7010-01 Mill Dump Report
   - Form 7010-14 Utilities WWT Report

II.D. Final Treatment Plant

1. Process Description

Wastewater from the Oil Pretreatment System, sludge dewater, process wastewater from several operating mills, basement sumps and miscellaneous small water sources enter the two equalization basins at the front of the Final Treatment Plant. These basins use air agitation to mix these influent streams and help remove any remaining oil from the wastewater. Separated oils are then skimmed, concentrated and shipped off site.

At the mix tank, the wastewater is pH adjusted, as necessary, using acids and/or lime slurry. Polymer is also added at this time, as is compressed air, in order to complete the mixing of all the constituents. After chemical additions and mixing, the wastewater flows into the flocculation section of the sedimentation basin where additional chemical treatment is performed and the larger solids form. The flow continues into the sedimentation basin where the large solids settle to the bottom of the basins and are collected by drag flights and cross collectors and concentrated into hoppers. The solids from the hoppers are pumped to the Sludge Dewater Facility for processing and disposal. Also, a portion of the solids are recirculated to the Mix Tank as a "seed" flow. This flow helps the flocculation and sedimentation steps by creating less need for chemical additions in the process as the additional large solids provides “bulking” and helps keep the pH in the proper range by allowing more use of the lime for reaction. Any floating oils and/or solids are skimmed by flights into a collection tube where they are pumped into the Oil Separation Tank. Finally, the treated water overflows through a weir into a discharge flume. There, defoamer may be added as needed, and the effluent flows through a Parshall Flume for flow determination prior to discharge through NPDES Outfall 104. This flow combines with the flow from NPDES Outfall 204 and non-contact cooling water and discharges into the Burns Waterway through NPDES Outfall 004.

2. Process Flow Diagrams
   Refer to Appendix II for Process Flow Diagrams:
   - USS Process Flow Diagram No. MWE-03 Outfalls
   - USS Process Flow Diagram No. MWE-04 Outfalls 104 and 204 Wastewater Treatment Processes
   - USS Process Flow Diagram No. MWM-05 Final Treatment Plant
   - Chemtreat Graphic No. KV289 Final Treatment Plant

3. Equipment Description
   - EQ Basins – Two EQ Basins (north and south) receive process water from the Sheet Division and wastewater from Oil Removal/Recycle. Each basin is approximately 285,000 gallons.
   - Sulfuric Acid Tank – Tank with a capacity of 6,350 gallons
   - Lime Tanks – Named North and South Lime Tanks each with a capacity of 22,500 gallons
   - Air Mix Tanks – Named East and West Air Mix Tank contain submerged blower mixers with a combined capacity of 50,700 gallons
   - Flocculent Tank – Tank with a capacity of 1,550 gallons
   - Starch Tank – Tank with a capacity of 1,550 gallons
   - Flocculation Area – Area which receives water via a distribution channel from the Air Mix Tank
   - Sedimentation Basins – Two Sedimentation Basins (east and west) are separated from the flocculation area by cross collectors. The Basins each have a capacity of approximately 1,000,000 gallons
   - Defoamer Tank – Tank with a capacity of 1,000 gallons

4. Operating Procedure(s)

Procedure Description	**Procedure Number**
Final Treatment Overview including monitoring treatment plant conditions, reviewing test information, handling chemicals, and performing lab tests	NSCS-M-P-7091_01
Routine Inspection	NSCS-M-P-7091-02
Settleable Solids Test	NSCS-M-P-7091-04
Turbidity Test	NSCS-M-P-7091-06
pH Testing, pH Bird Baths, pH Cross Checks	NSCS-M-P-7091-07
Equalization Basins	NSCS-M-P-7091-09
Mix Tank and Coagulant Aid	NSCS-M-P-7091-10
Sedimentation Tank	NSCS-M-P-7091-12
Antifoam	NSCS-M-P-7091-14
High Turbidity at Outfall 104/004	NSCS-M-P-7091-21
Polymer System	NSCS-M-P-7091-22
Wastewater Flow Control	NSCS-M-P-7091-30
Lime Slurry Roto dips	UT02-01
Making Up Polymer Tank	UT02-25
Securing Sludge Sample	UT02-29
Final Treatment Process Control Practices	NSCS-M-P-7093-02-47

5. Preventive Maintenance Program

Equipment	Maintenance Description	Frequency
North EQ Basin	Inspection	Semi-Annual
South EQ Basin	Inspection	Semi-Annual
Mix Tank Area	Inspection	Annually
Sedimentation Basins	Inspection	Annually
Cross Collectors	Inspection	Annually
Scrapers and Skimmers	Inspection	Annually
Wastewater Skimming Decant Tank	Inspection	Semi-Annual
Wastewater Skimming Decant Tank	Non-Destructive Testing	10 Years
Air Blower Motors	Thermal Testing	Quarterly
Mixer Motors	Thermal Testing	Quarterly
Acid Trench (PKL wastewater)	Inspection	Semi-Annual
Acid Trench Piping (PKL wastewater)	Inspection	Semi-Annual
Key Equipment	Lubrication Inspection	Quarterly

Key Equipment Calibration

Instrument Description	Calibration Schedule
EQ Basin pH Probe	Semimonthly
Pre-mix pH probe	Semimonthly
Mix Tank Probe	Semimonthly
Outfall 104 pH	Semimonthly
Sulfuric Acid Flowmeter	Annually
Sludge Pump Flowmeter	Annually
Outfall 104 Flowmeter	Annually
Outfall 004 Flowmeter	Annually
Outfall 003 Flowmeter	Annually

6. Forms
   - Form 7010-01 Mill Dump
   - Form 7091-01 Final Treatment Plant Daily Operating Report
   - Form 7091-10 Equal Basin and North End Skimming
   - Form 7010-14 Utilities wastewater treatment report

II.E. Sludge Dewatering

1. Process Description

Underflow sludge from the Final Treatment Plant sedimentation basins is pumped and metered into a sludge splitter box. The flow from the splitter box is directed into one of two gravity thickeners. At the gravity thickeners, the sludge is concentrated, and the lime slurry is added for bulking and pH control. Thickener rakes operate continuously. The thickener overflows through V notch weirs and the supernatant effluent returns to the Final Treatment Plant equalization basins. The thickened underflow is metered and pumped to one of two filter presses. The filter press cycle of sludge followed by compressed air is then performed. The water pressed out returns to the Final Treatment EQ Basins and the dried sludge is dropped into a sludge box for disposal at the onsite landfill.

2. Process Flow Diagrams
   Refer to Appendix II for Process Flow Diagrams:
   - USS Process Flow Diagram No. MWE-03 Outfalls
   - USS Process Flow Diagram No. MWE-04 Outfalls 104 and 204 Wastewater treatment Processes
   - USS Process Flow Diagram No. MWM-05 Final Treatment Area
   - Chemtreat Graphic No. KV293 Sludge Dewatering Plant

3. Equipment Description
   - Thickener Tanks – Two Tanks named East and West Thickener Tanks each with a capacity of 285,000 gallons.
   - Lime Tank – Tank with a capacity of 104,000 dry pounds.
   - Mix Tank – Tank equipped with a blower mixer to slake lime.
   - Filter Presses – Two plate and frame filter presses named North and South Filter Press each equipped with 120 plates.

4. Operating Procedure(s)

Procedure Description	Procedure Number
Gravity Thickening	NSCS-M-P-7094-01
Filter Presses	NSCS-M-P-7094-02
Recording Turn Information	NSCS-M-P-7094-03
Testing pH	NSCS-M-P-7094-06
Percent Solids Test	NSCS-M-P-7094-07
#1 and #2 Gravity Thickeners	NSCS-M-P-7094-10
Cake Thickness	NSCS-M-P-7094-11
Filter Cloth Replacement ND Plate Cleaning	NSCS-M-P-7094-16
Indexing Sludge Cake from Sludge Presses	UT05-05
Plate Washing	UT05-07
Determining Sludge Levels in Thickeners	UT05-10
Sludge Dewatering Process Control Practices	NSCS-M-P-7093-02-49

5. Preventive Maintenance Program

Equipment	Maintenance Description	Frequency
East Thickener	Inspection	Annually
East Thickener	Non-Destructive Testing	10 Year
West Thickener	Inspection	Annually
West Thickener	Non-Destructive Testing	10 Year
East Drive/Rake	Inspection	Annually
West Drive/Rake	Inspection	Annually
Driver Motors	Thermal Scan	Quarterly
Mixer Motors	Thermal Scan	Quarterly
North Filter Press	Inspection	Semi-Annual
South Filter Press	Inspection	Semi-Annual
Key Equipment	Lubrication Inspection	Quarterly

6. Forms
   - Form 7094-02 Sludge dewatering plant log sheet

II.F. Zebra Mussel Control

1. Process Description

Sodium Hypochlorite (bleach) is added to the intake for Lake Michigan water used throughout the Midwest Plant to control the proliferation of Zebra and Quagga mussels. Treatment for mussel control begins when the lake water temperature reaches 60° F.

Initially, a "kill" cycle is run for about 20 days. This cycle runs bleach 24 hours per day (chlorination) at a measured residual concentration in the system of approximately 0.5 ppm. After the initial "kill" cycle, a maintenance cycle begins which runs the bleach feed for 3 to 5 hours per day (chlorination). It is this maintenance cycle that prevents the mussels from growing and reproducing in the service water system.

Prior to beginning chlorination of the service water system as described above, a dechlorination system is initiated at each outfall to ensure that chlorinated water is not returned to Lake Michigan. Each outfall has been calculated to determine the dechlorination rate required for removal of chlorine from the discharge water. Sodium bisulfite is fed into the chlorinated wastewater to facilitate dechlorination at a constant rate throughout the Zebra mussel season. A third-party contractor conducts daily analysis to ensure there is no chlorine residual remaining in the effluent. The program remains in effect until the water temperature falls below 54° F at which time the bleach feed is terminated. The dechlorination process, including sampling, continues for at least two days after the termination of the bleach feed. Total residual chlorine values are included in the daily monitoring report sent to IDEM.

2. Process Flow Diagrams

- USS Process Flow Diagram No. MWE-03 Outfalls
- USS Process Flow Diagram No. MWE-04 Outfalls 104 and 204 Wastewater Treatment Processes
- USS Process Flow Diagram No. MWM-03 Lake Pump House ChemTreat Graphic No. KV294 Outfalls/Service Water Treatment (Zebra Mussels)

3. Equipment Description

- Control instrument – bleach flow meter for incoming service water.
- Control instrument – sodium bisulfite totalizer at discharge Outfalls 002, 003 and 004.

All critical equipment is tested and calibrated by the responsible contractor prior to use each season.

II.G. Job Descriptions - WWT Assigned Personnel

1. Training

U. S. Steel has an Environmental Management System which is certified by an independent party to meet the requirements of the ISO14001 Standard. All training with regards to employee competency and job task training is conducted in accordance with the specifications of ISO14001. Specific procedures, equipment and additional responsibilities, as well as an acknowledgement of received training can be found in the Job Qualifications Record (JQR). Sample JQR's can be found in Appendix IV. Each JQR lists the training requirements as well as acknowledgement from the trainer, trainee and responsible manager. Each employee has their own specific JQR for each position they have been trained on. The JQR's are maintained by the Utilities Department Document Custodian.

2. Chrome Plant Operator – (Advanced Position)
This operator has primary responsibility for the treatment of chrome bearing wastewater from plant operations and the effluent discharged through NPDES Outfall 204. This operator is familiar with the water treatment process at the Chrome Treatment Plant including; wastewater collection systems, flow control, chemical additions, reduction of metals (specifically hexavalent chrome to trivalent chrome), pH control, solids removal, pumping, dewatering, and filtration. The operator shall work safely with an environmental awareness of their industrial work environment. The operator is responsible for completing and recording rounds according to procedure. They must operate and maintain the facility by the review of operating information, as well as make proper decisions based on this information, operational knowledge and experience. The operator must understand the legal responsibilities and obligations of this position. The pretreatment operator must also have been trained as a Utility Helper and Final Treatment Plant Operator.

3. Final Treatment Plant Operator – (Intermediate Position)
This operator has primary responsibility for the treatment of process wastewaters from the plant operations and the effluent discharged through NPDES Outfall 104. This operator is familiar with the water treatment process at the Final Treatment Plant and all associated instrumentation including; flow control, chemical additions, starting, operating and stopping equipment as required for air addition, mixing, sludge separation, collection and transfer, and final discharge. The operator shall work safely with an environmental awareness of their industrial work environment. The operator is responsible to complete and report rounds and operate and maintain the facility by review of operating information, as well as make proper decisions based on this information, operational knowledge and experience. This operator must understand the legal responsibilities and obligations of this position. The Final Treatment Plant Operator must also have been trained as a Utilities Helper.

4. Sludge Dewatering Plant Operator – (Advanced Position)
This operator has primary responsibility for the treatment and dewatering of underflow sludge from the Final Treatment Plant. This operator is familiar with the thickening, pumping, filter pressing and disposal of the underflow sludge created through the wastewater treatment process. The operator shall work safely with an environmental awareness of their industrial work environment. The operator is responsible for completing and recording rounds according to procedure. They must operate and maintain the facility by the review of operating information, as well as make proper decisions based on this information, operational knowledge and experience. The operator must understand the legal responsibilities and obligations of this position. The Sludge Dewatering Operator must also have been trained as a Utility Helper and Final Treatment Plant Operator.

5. Utilities Helper – (Entry Position)
This position has primary responsibility for the Oil Pretreatment System and assists other treatment operations as assigned. This operator is familiar with the oil separation process at the Chrome Treatment and Final Treatment Plants including process flows and chemical additions. This operator understands the legal responsibilities and obligations of the position. The operator shall work safely with an environmental awareness of their industrial work environment. The operator is responsible to completing and recording rounds according to procedure. They must operate and maintain the facility by the review of operating information, as well as make proper decisions based on this information, operational knowledge and experience.

6. Instrument Repairman
U.S. Steel utilizes in-house, trained personnel to facilitate instrumentation requirements. These employees maintain instruments for the Utilities Department including wastewater treatment facilities. These employees are responsible for low voltages up to 480 V. They diagnose, repair, calibrate and test instrumentation, including: pneumatic and electrical control devices, burner management systems, HVAC and programmable logic controllers. Instrument technicians are trained to read and understand electrical drawings and ladder logic to facilitate any required maintenance.

7. Mechanical Repairman
U.S. Steel utilizes in-house, trained personnel to facilitate mechanical maintenance. These employees are specifically assigned to the utility's areas, including wastewater treatment facilities. They are responsible for the diagnoses, testing and repairs to rotating and mechanical equipment, piping and utility systems. They are proficient in burning and welding techniques, as well as rigging and operation of mobile equipment.

8. Electrical Repairman
U.S. Steel utilizes in-house trained personnel to facilitate electrical maintenance. These employees are specifically assigned to maintain the utilities areas, including the wastewater treatment facilities. They have responsibility for multiple voltage equipment from 24V. to 13,800 V. They maintain and repair equipment including transformers, motors, controls and electrical panels. They are trained to troubleshoot and test electrical equipment, pull and terminate wiring, and make repairs in accordance with national electrical code standards. Electrical maintenance personnel assume the lead position in any cross-functional maintenance projects.

9. Centrifuge Operator – (Contractor)
Midwest has assigned the primary responsibility for the final processing of wastewater oil skimmings to achieve an oil product for recycling to a third-party vendor. A centrifuge has been installed and is being used to achieve the recyclable oil specification. The selected vendor is familiar with centrifuge operations and oil recycling and distribution. Vendor responsibilities include: inventory control and throughput; feed rates; material transfer including temperature control; centrifuge operations; cleaning of all feed and discharge lines; and centrifuge maintenance. The vendor is responsible for finished material removal from the facility and all recycle distributions. This vendor has been instructed to communicate any operations issues to U. S. Steel personnel and understands the legal responsibilities and obligations of spill control and potential impacts to the environment.

10. Zebra / Quagga Mussel Control Personnel – (Contractor)
Midwest has assigned the primary responsibilities for the chemical treatment of Zebra and Quagga Mussel to a third-party vendor who provides water treatment chemicals and service for the Midwest Facility. U.S. Steel personnel provide oversite of the operation and the third-party laboratory provides all required NPDES sampling and reporting.

The onsite chemical vendor is familiar with the treatment program including: delivery of required sodium hypochlorite and sodium bisulfite, determining start and stop times for all cycles of the program, establishing the required feed rates for chlorination and dechlorination, maintaining usage rates and inventory of chemicals, taking total residual chlorine (TRC) colorimetric tests at the internal and final discharges to ensure target TRC levels are maintained and inspecting feed equipment and communicating any issues to U. S. Steel personnel. The vendor must understand the legal responsibilities and obligations of this program and its impacts to the environment.

11. Chemical Supplier – (Contractor)
This Chemical Supplier recommends water treatment products and is responsible for the ordering and delivery of wastewater treatment chemicals. They monitor chemical consumption and chemical tank levels, provide field testing as needed, and communicate and document treatment results. This vendor provides an account manager and trained, qualified personnel who have technical water treatment backgrounds and experience in steel operations, specifically at the Midwest Facility. Further, all vendor employees are trained in U. S. Steel requirements including immediate notification to U. S. Steel personnel of any issues, and maintaining an understanding of the legal responsibilities and obligations of spill control, operational issues and other potential impacts to the environment.

12. Sample Collection and Analysis – (Contractor)
Midwest has assigned the primary responsibility for NPDES field services and analysis to a third-party vendor. This vendor provides all NPDES and groundwater sampling, operation and maintenance of required monitoring, sampling and flow monitoring equipment, sample transport to the laboratory per required procedures and all field analysis and report preparation as required by the NPDES permit. This vendor provides a project manager and trained, qualified personnel who are familiar with all sampling protocols for permits, orders and agency requirements associated with the Midwest Facility. Further, all vendor employees are trained in U. S. Steel requirements, including immediate notification to U. S. Steel personnel of any issues. The vendor employees must understand the legal responsibilities and obligations of spill control, operational issues and other potential impacts to the environment.

III. Laboratory Requirements

Midwest has assigned primary responsibility for NPDES sampling and analytical testing to an EPA certified third-party laboratory. This testing includes analysis of all NPDES required testing as well as operation and maintenance of all NPDES lab and field instruments. The third-party is responsible for proper operation and calibration of all instruments. The laboratory NELAP certifications are included in Appendix III.

The contracted laboratory is directly associated with the field services group that collects the samples for analysis. U. S. Steel requires that the laboratory meet all the regulatory requirements. All analytical methods are approved by standard methods and undergo validation prior to their approval for use in the laboratory. The approval methods contain criteria for quality control and performance throughout all stages of analysis including sample preparation. The laboratory also performs internal audits of all systems by a quality assurance manager at each facility. Accreditation, certification and licensing bodies also perform audits to ensure laboratory conformance to all standards and regulations. The vendor has achieved accreditation from NELAC and various other industry programs including:

- EPA and OECD Good Laboratory Practices
- National Environmental Laboratory Accreditation Program
- U.S. Environmental Protection Agency
- North American Proficiency Testing Program
- National Voluntary Laboratory Accreditation Program

The vendor has been instructed to immediately notify U. S. Steel personnel when any analysis exceeds NPDES permit or U. S. Steel internal limits. The vendor must understand the legal responsibilities of the permits, orders and impacts to the environment.

Midwest has the responsibility of proper operation and maintenance of the following flow meters used in NPDES compliance: Greenbelt II Landfill flow meter, influent flow meter of Train A of Chrome Treatment, influent flow meter of Train B of Chrome Treatment, the Chrome Treatment sump flow meter and the Final Treatment effluent flow meter. Each flow meter is maintained and calibrated per manufacture guidelines. Owner's manuals are kept on site for reference purposes. See table below for calibration schedule for the flow meters.

Instrument Description	Instrument Type	Calibration Schedule
Greenbelt II Flow Meter	Inline Magnetic	Annually
Chrome Train A Influent Flow Meter	Inline Magnetic	Annually
Chrome Train B Influent Flow Meter	Inline Magnetic	Annually
Chrome Sump Flow Meter	Inline Magnetic	Annually
Final Treatment Effluent Flow Meter	Parshall Flume	Annually

IV. Recordkeeping Requirements

U. S. Steel complies with the recordkeeping requirements of this Operating and Maintenance Manual / Preventative Maintenance Program and the Permit by maintaining the appropriate data and records for a minimum of five years.

All preventative Maintenance and calibration activities are tracked by an electronic maintenance management system. Currently, U. S. Steel uses Oracle Enterprise Business Suite, Enterprise Asset Management and Viziya Scheduler as the electronic maintenance management system. Work required, including frequency of the activity, is entered into the electronic maintenance management system. Once a task becomes due, a work order is generated by the electronic management system. A maintenance planner then directs the work order to the appropriate manager who schedules and assigns the task to maintenance personnel. Once the tasks are complete, the planner then documents the activity in the electronic system.

V. Plan for Inspection, Cleaning and Maintenance of Outfall Channels

The final outfalls are visually observed on a daily basis by a third party. The visual observations include water quality and physical condition of the outfall. If debris or structural deficiency is noted in the outfall channel, appropriate measures will be taken to return the outfall to normal operating condition. Midwest will also conduct scheduled annual maintenance inspections of the outfall structures. These inspections will be documented in the electronic maintenance management system.

A third-party contractor is responsible for flow measurements at the final Outfalls (002, 003, 004). They maintain and calibrate each flow meter per manufacturer recommendations. The flow meters are capable of accurate readings in varying flow conditions.

VI. Preventive Maintenance Program Plan

U. S. Steel conducts a Preventative Maintenance Program designed to help prevent breakdowns, reduce wear, improve efficiency and extend the life of its wastewater treatment infrastructure. Schedules for preventative maintenance inspections and testing are integrated into this Operating and Maintenance Manual for each wastewater treatment system at the facility. The calibration

schedules for key equipment and infrastructure for each treatment system are also provided above. All preventative maintenance activities will be documented in an electronic maintenance management system. If preventative maintenance activities indicate the need for corrective action, a work order will be initiated and documented in the electronic management system. Refer to Section IV of this manual for specific recordkeeping requirements.

VII. Review of O&M Plan and Preventative Maintenance Program Plan

At least annually, U. S. Steel will review the O&M Manual, including the Preventative Maintenance Program, to determine whether modifications to the Manual are necessary for the proper operation and maintenance of the wastewater treatment process equipment. The results of the review will be documented and kept with the O&M Manual. The results will also be submitted along with the semiannual report.

As per section 11.d of the Consent Decree, U. S. Steel will incorporate into the O&M and Preventative Maintenance plan all additional equipment included in the Enhanced Monitoring Plan within 5 months of approval of said plan. The modification to the plan will be documented and kept with the O&M Manual. The results will also be submitted along with the semi-annual report.

VIII. Appendices

All appendices are for reference only. Material referenced in the appendices can be changed without revising the O&M plan. Document control practices encourage the use of referencing material as needed to avoid duplication and use of material that is not the latest revision. Refer to the electronic versions for the most up to date information. The most current versions can be found at the locations described below:

- Appendix I – NPDES Permit IN0000337
  - IDEM Virtual File Cabinet - https://vfc.idem.in.gov/DocumentSearch.aspx

- Appendix II – Process Flow Diagrams
  - Midwest Electronic Archive – Contact Environmental Control

- Appendix III – Laboratory Certifications
  - ALS Environmental – Valparaiso, 2400 Cumberland Dr., Valparaiso, IN 46383
  - Ramboll Environ, 201 Summit View Drive, Suite 300, Brentwood, TN 37027

- Appendix IV – Job Qualification Records (JQRs)
  - Midwest Document Management System or the Document Custodian

Appendix I.A.
NPDES Permit Part I
Effluent Limits, Monitoring, & Conditions

STATE OF INDIANA

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

AUTHORIZATION TO DISCHARGE UNDER THE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq., the "Act"), and IDEM's authority under IC13-15,

U.S. STEEL CORPORATION – MIDWEST PLANT

is authorized to discharge from a steel manufacturing facility that is located at 6300 U.S. Route 12, Portage, Indiana to receiving waters identified as Portage-Burns Waterway in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III, and IV hereof. This permit may be revoked for the nonpayment of applicable fees in accordance with IC 13-18-20.

Effective Date: April 1, 2016

Expiration Date: March 31, 2021

In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit such information and forms as are required by the Indiana Department of Environmental Management no later than 180 days prior to the date of expiration.

Signed March 30, 2016, for the Indiana Department of Environmental Management.

Paul Higginbotham
Deputy Assistant Commissioner
Office of Water Quality

Table of Contents

PART I

A. Effluent Limitations and Monitoring Requirements……..…..5
- Outfall 002……5
- Outfall 003……8
- Outfall 004……11
- Outfall 104 and 204……..…..13
- Outfall 304……..…..16

B. Narrative Water Quality Standards……19

C. Monitoring and Reporting……19
1. Representative Sampling……..……19
2. Discharge Monitoring Reports……...19
3. Definitions……20
4. Test Procedures……23
5. Recording of Results……24
6. Additional Monitoring by Permittee ……..…..24
7. Records Retention ……...……..25

D. Storm Water Monitoring and Non-Numeric Conditions……..25

E. Storm Water Pollution Prevention Plan……37

F. Chronic Biomonitoring Program Requirements……44

G. Pollution Minimization Program……..50

H. Toxic Pollutant Management Program……..51

I. Reopening Clause……52

J. Reporting Requirements for Solvents, Degreasing Agents, Rolling Oils, Water Treatment Chemicals and Biocides……53

K. Schedule of Compliance……53

PART II STANDARD CONDITIONS FOR NPDES PERMITS

A. General Conditions
1. Duty to Comply……...55
2. Duty to Mitigate……...55
3. Duty to Reapply……..55
4. Permit Transfer……...56
5. Permit Actions……56
6. Property Rights……...57
7. Severability……..57
8. Oil and Hazardous Substance Liability……...58
9. State Laws……...58
10. Penalties for Violation of Permit Conditions……..58
11. Penalties for Tampering of Falsification……58
12. Toxic Pollutants……...59
13. Wastewater treatment plant certified operators……59
14. Construction Permit……59
15. Inspection and Entry……60
16. New or Increased Discharge of Pollutants into an OSRW……60

B. Management Requirements
1. Property Operations and Maintenance……61
2. Bypass of Treatment Facilities……61

3. Upset Conditions……63
4. Removed Substances……64
C. Reporting Requirements……..64
1. Planned Changes in Facility of Discharge……..64
2. Monitoring and Reporting……..65
3. Twenty-Four Hour Reporting Requirements……...65
4. Other Compliance/Noncompliance Reporting……66
5. Other Information……67
6. Signatory Requirements……67
7. Availability of Reports……..68
8. Penalties for Falsification of Reports……68
9. Changes in Discharge of Toxic Substances……68

PART III OTHER REQUIREMENTS
A. Thermal Effluent Requirements……70
B. Polychlorinated Biphenyl (PCB)……73

Part IV Cooling Water Intake Structure
A. Best Technology Available (BTS) Determination……74
B. Permit Requirements……74

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 002. The discharge is limited to non-contact cooling water and storm water. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into Portage-Burns Waterway. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1] [2] [10]

Outfall 002

Table 1

	Quantity or Loading			Quality or Concentration			Monitoring Requirements	
Parameter	Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units	Measurement Frequency	Sample Type
Flow	Report	Report	MGD	----	-----	-	1 x Weekly	24 Hour Total
Oil and Grease[8]	-----	--------	-------	-----	Report	mg/l	1 x Weekly	Grab
Total Residual Chlorine (TRC)[3,4,6]	0.04	0.09[5]	lbs/day	0.01	0.02	mg/l	Daily[7]	Grab
TSS	------	--------	-------	-----	Report	mg/l	Quarterly[9]	Grab
COD	------	--------	-------	-----	Report	mg/l	Quarterly[9]	Grab
Ammonia	------	--------	-------	-----	Report	mg/l	Quarterly[9]	Grab
Zinc[11]	------	--------	-------	-----	Report	mg/l	Quarterly[9]	Grab

Table 2

	Quality or Concentration			Monitoring Requirements	
Parameter	Daily Minimum	Daily Maximum	Units	Measurement Frequency	Sample Type
pH	6.0	9.0	s.u.	Weekly	Grab

[1] See Part I.B. of the permit for the Narrative Water Quality Standards.

[2] In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to this Outfall, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives or dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.

[3] The monthly average water quality based effluent limit (WQBEL) for Total Residual Chlorine is less than the limit of quantitation (LOQ) as specified below. Compliance with the monthly average limit will be demonstrated if the monthly average effluent level is less than or equal to the monthly average WQBEL. Daily effluent values

that are less than the LOQ, used to determine the monthly average effluent levels less than the LOQ, may be assigned a value of zero (0), unless, after considering the number of monitoring results that are greater than the limit of detection (LOD), and applying appropriate statistical techniques, a value other than zero (0) is warranted.

[4] The daily maximum WQBEL for Total Residual Chlorine is greater than or equal to the LOD but less than the LOQ as specified below. Compliance with the daily maximum limit will be demonstrated if the observed effluent concentrations are less than the LOQ.

The following EPA test methods and/or Standard Methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM.

Parameter	Test Method	LOD	LOQ
Chlorine	4500-Cl-D,E or 4500-Cl-G	0.02 mg/l	0.06 mg/l

Case-Specific LOD/LOQ

The permittee may determine a case-specific LOD or LOQ using the analytical method specified above, or any other test method which is approved by the Commissioner prior to use. The LOD shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the LOQ shall be set equal to 3.18 times the LOD. Other methods may be used if first approved by the Commissioner.

[5] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 0.26 lbs/day.

[6] See Part I.G for the Pollutant Minimization Program requirements.

[7] Monitoring for TRC shall be 1 X Daily during Zebra and Quagga mussel intake chlorination, and continue for three (3) additional days after Zebra and Quagga mussel treatment has been completed.

[8] If oil and grease is measured in the effluent in significant quantities, the source of such discharge is to be investigated and eliminated. The facility is required to investigate and eliminate any significant or measured concentration of oil and grease (quantities in excess of 5 mg/l). The intent of this requirement is to assure that oil and grease is not added to once-through cooling water in measurable quantities (5 mg/l). This limit is considered sufficient to ensure compliance with narrative water quality criteria in 327 IAC 2-1.5-8(b)(1)(C) which prohibits oil or other substances in amounts sufficient to create a visible film or sheen on the receiving water.

[9] All samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event.

For each sample taken, the permittee shall record the duration and total rainfall of the storm event, the number of hours between beginning of the storm measured and the end of the previous measurable rain event, and the outside temperature at the time of sampling.

A grab sample shall be taken during the first thirty (30) minutes of the discharge (or as soon thereafter as practicable).

[10] The Storm Water Monitoring and Non Numeric Effluent Limits and the Storm Water Pollution Prevention Plan (SWPPP) requirements can be found in Part I.D. and I.E. of this permit.

[11] The permittee shall measure and report the identified metal in <u>total recoverable</u> form.

2. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 003. The discharge is limited to non-contact cooling water and storm water. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into Portage-Burns Waterway. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1] [2] [10]

Outfall 003

Table 1

	Quantity or Loading			Quality or Concentration			Monitoring Requirements	
Parameter	Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units	Measurement Frequency	Sample Type
Flow	Report	Report	MGD	----	-----	-	1 x Weekly	24 Hour Total
Oil and Grease[8]	-----	--------	-------	-----	Report	mg/l	1 x Weekly	Grab
Total Residual Chlorine (TRC)[3,4,6]	1.14	2.27[5]	lbs/day	0.01	0.02	mg/l	Daily[7]	Grab
TSS	------	--------	-------	-----	Report	mg/l	Quarterly[9]	Grab
COD	------	--------	-------	-----	Report	mg/l	Quarterly[9]	Grab
Ammonia	------	--------	-------	-----	Report	mg/l	Quarterly[9]	Grab
Zinc[11]	------	--------	-------	-----	Report	mg/l	Quarterly[9]	Grab

Table 2

	Quality or Concentration			Monitoring Requirements	
Parameter	Daily Minimum	Daily Maximum	Units	Measurement Frequency	Sample Type
pH	6.0	9.0	s.u.	Weekly	Grab

[1] See Part I.B. of the permit for the Narrative Water Quality Standards.

[2] In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to this Outfall, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives or dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.

[3] The monthly average water quality based effluent limit (WQBEL) for Total Residual Chlorine is less than the limit of quantitation (LOQ) as specified below. Compliance with the monthly average limit will be demonstrated if the monthly average effluent level is less than or equal to the monthly average WQBEL. Daily effluent values that are less than the LOQ, used to determine the monthly average effluent levels less than the LOQ, may be assigned a value of zero (0), unless, after considering

the number of monitoring results that are greater than the limit of detection (LOD), and applying appropriate statistical techniques, a value other than zero (0) is warranted.

[4] The daily maximum WQBEL for Total Residual Chlorine is greater than or equal to the LOD but less than the LOQ as specified below. Compliance with the daily maximum limit will be demonstrated if the observed effluent concentrations are less than the LOQ.

The following EPA test methods and/or Standard Methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM.

Parameter	Test Method	LOD	LOQ
Chlorine	4500-Cl-D,E or 4500-Cl-G	0.02 mg/l	0.06 mg/l

Case-Specific LOD/LOQ

The permittee may determine a case-specific LOD or LOQ using the analytical method specified above, or any other test method which is approved by the Commissioner prior to use. The LOD shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the LOQ shall be set equal to 3.18 times the LOD. Other methods may be used if first approved by the Commissioner.

[5] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 6.82 lbs/day.

[6] See Part I.G for the Pollutant Minimization Program requirements.

[7] Monitoring for TRC shall be 1 X Daily during Zebra and Quagga mussel intake chlorination, and continue for three (3) additional days after Zebra and Quagga mussel treatment has been completed.

[8] If oil and grease is measured in the effluent in significant quantities, the source of such discharge is to be investigated and eliminated. The facility is required to investigate and eliminate any significant or measured concentration of oil and grease (quantities in excess of 5 mg/l). The intent of this requirement is to assure that oil and grease is not added to once-through cooling water in measurable quantities (5 mg/l). This limit is considered sufficient to ensure compliance with narrative water quality criteria in 327 IAC 2-1.5-8(b)(1)(C) which prohibits oil or other substances in amounts sufficient to create a visible film or sheen on the receiving water.

[9] All samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event.

For each sample taken, the permittee shall record the duration and total rainfall of the storm event, the number of hours between beginning of the storm measured and the end of the previous measurable rain event, and the outside temperature at the time of sampling.

A grab sample shall be taken during the first thirty (30) minutes of the discharge (or as soon thereafter as practicable).

[10] The Storm Water Monitoring and Non Numeric Effluent Limits and the Storm Water Pollution Prevention Plan (SWPPP) requirements can be found in Part I.D. and I.E. of this permit.

[11] The permittee shall measure and report the identified metal in <u>total recoverable</u> form.

3. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 004. The discharge is limited to process waste water from internal outfalls 104 and 204. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into Portage-Burns Waterway. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1] [2]
Outfall 004

Table 1

	Quantity or Loading			Quality or Concentration			Monitoring Requirements	
Parameter	Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units	Measurement Frequency	Sample Type
Flow	Report	Report	MGD	----	-----	-	5 x Weekly	24 Hour Total
Oil and Grease	-----	--------	-------	-----	Report	mg/l	5 x Weekly	Grab
Total Residual Chlorine (TRC)[3,4,6,9]	1.3	3.1[5]	lbs/day	0.01	0.02	mg/l	Daily[12]	Grab
Silver [3,4,6,7,9]	0.012	0.021[5]	lbs/day	0.076	0.13	ug/l	2 X Monthly	24 Hr Comp
F. Cyanide[8,9]	1.2	2.1	lbs/day	0.0075	0.013	mg/l	2 X Monthly	Grab
Cadmium[7]	1.2	2.1	lbs/day	0.0077	0.013	mg/l	2 X Monthly	24 Hr Comp
Copper [7]	4.7	8.2	lbs/day	0.030	0.052	mg/l	2 X Monthly	24 Hr Comp
Nickel[7][14]								
Interim	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	24 Hr. Comp
Final	33.3	57.1	lbs/day	0.21	0.36	mg/l	2 X Monthly	24 Hr Comp
Lead [7][14]								
Interim	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	24 Hr. Comp
Final	6.0	10.5	lbs/day	0.038	0.066	mg/l	2 X Monthly	24 Hr Comp
Mercury[7,9]	Report	Report	lbs/day	Report	Report	ng/l	6 X Yearly[13]	Grab
Whole Effluent Toxicity [10]	------	See Part I.F of the permit for Whole Effluent Toxicity Testing requirements.				TUc	Quarterly [11]	24 Hr Comp

Table 2

	Quality or Concentration			Monitoring Requirements	
Parameter	Daily Minimum	Daily Maximum	Units	Measurement Frequency	Sample Type
pH	6.0	9.0	s.u.	5 x Weekly	Grab

[1] See Part I.B. of the permit for the Narrative Water Quality Standards.

[2] In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to this Outfall, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives or dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.

[3] The monthly average water quality based effluent limit (WQBEL) for Total Residual Chlorine and Silver is less than the limit of quantitation (LOQ) as specified below (see footnote [9]). Compliance with the monthly average limit will be demonstrated if the monthly average effluent level is less than or equal to the monthly average WQBEL. Daily effluent values that are less than the LOQ, used to determine the monthly average effluent levels less than the LOQ, may be assigned a value of zero (0), unless, after considering the number of monitoring results that are greater than the limit of detection (LOD), and applying appropriate statistical techniques, a value other than zero (0) is warranted.

[4] The daily maximum WQBEL for Total Residual Chlorine and Silver is greater than or equal to the LOD but less than the LOQ as specified below (see footnote [9]). Compliance with the daily maximum limit will be demonstrated if the observed effluent concentrations are less than the LOQ.

Case-Specific LOD/LOQ

The permittee may determine a case-specific LOD or LOQ using the analytical method specified above, or any other test method which is approved by the Commissioner prior to use. The LOD shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the LOQ shall be set equal to 3.18 times the LOD. Other methods may be used if first approved by the Commissioner.

[5] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 9.51 lbs/day for Total Residual Chlorine and 0.1 lbs/day for Silver.

[6] See Part I.G for the Pollutant Minimization Program requirements.

[7] The permittee shall measure and report the identified metal in total recoverable form.

[8] Sample preservation procedures and maximum allowable holding times for total cyanide, or available (free) cyanide are prescribed in Table II of 40 CFR Part 136. Note the footnotes specific to cyanide. Preservation and holding time information in Table II takes precedence over information in specific methods or elsewhere.

[9] The following EPA test methods and/or Standard Methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM.

Parameter	Test Method	LOD	LOQ
Chlorine	4500-Cl-D,E or 4500-Cl-G	0.02 mg/l	0.06 mg/l
Silver	200.8	0.2 ug/l	0.64 ug/l
Cyanide, Free	4500-CN-I	2.5 ug/l	5.0 ug/l
Mercury	1631, Revision E	0.2 ng/l	0.5 ng/l

[10] See Part I.F of the permit for Whole Effluent Toxicity Testing requirements.

[11] Samples shall be taken once at any time during each of the four annual quarters:

(A) January-February-March;
(B) April-May-June;
(C) July-August-September; and
(D) October-November-December.

For quarterly monitoring, in the first quarter for example, the permittee may conduct sampling within the month of January, February or March. The result from this reporting timeframe shall be reported on the March DMR, regardless of which of the months within the quarter the sample was taken.

[12] Monitoring for TRC shall be 1 X Daily during Zebra and Quagga mussel intake chlorination, and continue for three (3) additional days after Zebra and Quagga mussel treatment has been completed.

[13] Mercury monitoring shall be conducted bi-monthly in the months of February, April, June, August, October, and December of each year for the term of the permit using EPA Test Method 1631, Revision E.

[14] The permittee has a 54 month schedule of compliance as outlined in Part I.K in which to meet the final effluent limitations for Nickel and Lead.

4 The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfalls 104 and 204. The discharge is limited to process waste water. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge and prior to commingling. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS

Outfalls 104 and 204

Table 1

	Quantity or Loading			Quality or Concentration			Monitoring Requirements	
Parameter	Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units	Measurement Frequency	Sample Type
Flow	Report	Report	MGD	----	-----	-	5 x Weekly	24 Hour Total
TSS	Report	Report	lbs/day	Report	Report	mg/l	5 x Weekly	24-Hr Comp
Oil and Grease	----------	Report	lbs/day	Report	Report	mg/l	5 x Weekly	3 grabs/24-Hr Comp[1]
T. Chromium[2]	Report	Report	lbs/day	Report	Report	mg/l	5 x Weekly	24-Hr Comp
Zinc[2]	Report	Report	lbs/day	Report	Report	mg/l	5 x Weekly	24-Hr Comp
Lead[2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr Comp
Nickel[2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr Comp
Cadmium[2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr Comp
Copper [2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr Comp
Silver[2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr Comp
T. Cyanide[3]	Report	Report	lbs/day	Report	Report	mg/l	5 x Weekly	Grab
Hex. Chromium[4]	Report	Report	lbs/day	Report	Report	mg/l	Weekly	Grab
Naphthalene	----------	Report	lbs/day	----------	Report	mg/l	Monthly	Grab
Tetrachloro-Ethylene	----------	Report	lbs/day	Report	Report	mg/l	Monthly	Grab
Total Toxic Organics[5]	----------	Report	lbs/day	----------	Report	mg/l	Monthly	24 Hr-Comp
Fluoride	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24 Hr-Comp

[1] A minimum of three (3) grab samples shall be collected at equally spaced time intervals for the duration of the discharge within a twenty-four (24) hour period. Each sample shall be analyzed individually, and the arithmetic mean of the concentrations reported as the value for the twenty-four (24) hour period.

[2] The permittee shall measure and report the identified metal in total recoverable form.

[3] Sample preservation procedures and maximum allowable holding times for total cyanide, or available (free) cyanide are prescribed in Table II of 40 CFR Part 136. Note the footnotes specific to cyanide. Preservation and holding time information in Table II takes precedence over information in specific methods or elsewhere.

The following EPA test methods and/or Standard Methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM.

Parameter	Test Method	LOD	LOQ
Cyanide, Total	335.4 or 4500 CN-E	5 ug/l	16 ug/l

Upon demonstration to IDEM that "no Sulfides" are present at the effected internal and/or final outfalls and IDEM has reviewed and approved the demonstration, the permittee may collect samples by 24-Hr. Composite.

[4] Hexavalent Chromium shall be measured and reported as dissolved metal. The Hexavalent Chromium sample type shall be grab method. The maximum holding time for a Hexavalent Chromium sample is 24 hours (40 CFR 136.3 Table IB). Therefore, the grab sample must be analyzed within 24 hours.

[5] The limitation for TTO (Total Toxic Organics) applies to the summation of all quantifiable values greater than 0.01 mg/l for all toxic organics listed under 40 CFR 433.11(e) which are reasonably expected to be present. This is a federal effluent guideline based limitation and is not an authorization to discharge toxic organic compounds at levels which cause or may cause water quality violations. The discharge of organic compounds at levels which cause or may cause water quality violations is prohibited. The intent of this limitation is to assure that any solvent or other products in use at the plant, which contain any of the listed toxic organic compounds, are disposed of properly, and not dumped, spilled, discharged or leaked.

Certification Statement

In lieu of quarterly monitoring for TTO, the party responsible for signing the monthly discharge monitoring report (DMR) forms may make the following statement, as part of the DMR: "Based on my inquiry of the persons directly responsible for managing compliance with the permit limitations for TTO, I certify that, to the best of my knowledge and belief, no disposal of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the Toxic Organic Pollutant Management Plan submitted to the Compliance Data Section of the Office of Water Quality, as required by this permit." The Certification Statement may not be used until completion of the Toxic Organic Pollutant Management Plan required by Part I.H of this permit. However, the certification statement may be used as long as there have been no changes at the facility that would significantly alter the current TOPMP, and the permittee is following the current TOPMP that was developed under the previous permit until the new plan is completed as required by Part I.H of this permit.

If the above mentioned responsible party is unable to make the above Certification Statement because of discharge or spills of any TTO compounds, the Permittee is required to notify IDEM in accordance with Part II.C.3 of this permit.

5. The permittee is authorized to discharge from the outfalls 104 and 204 and report (combined total) as Outfall 304. The discharge is limited to process waste water and chrome wastewaters which includes the Greenbelt II Landfill. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [6]
Outfall 304

Table 1

	Quantity or Loading			Quality or Concentration			Monitoring	Requirements
Parameter	Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units	Measurement Frequency	Sample Type
Flow	Report	Report	MGD	----	-----	-	5 x Weekly	24 Hour Total
TSS	1147	2290	lbs/day	Report	Report	mg/l	5 x Weekly	24-Hr Comp
Oil and Grease	----------	765	lbs/day	Report	Report	mg/l	5 x Weekly	3 grabs/24-Hr Comp[1]
T. Chromium[2]	10.0	30.0	lbs/day	Report	Report	mg/l	5 x Weekly	24-Hr Comp
Zinc[2]	10.0	30.0	lbs/day	Report	Report	mg/l	5 x Weekly	24-Hr Comp
Lead[2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr Comp
Nickel[2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr Comp
Cadmium[2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr Comp
Copper [2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr Comp
Silver[2]	Report	Report	lbs/day	Report	Report	mg/l	Monthly	24-Hr Comp
T. Cyanide[3]	3.41	7.95	lbs/day	Report	Report	mg/l	5 x Weekly	Grab
Hex. Chromium[4]	0.17	0.51	lbs/day	Report	Report	mg/l	Weekly	Grab
Naphthalene	----------	0.86	lbs/day	----------	Report	mg/l	Monthly	Grab
Tetrachloro-Ethylene	----------	1.29	lbs/day	Report	Report	mg/l	Monthly	Grab
Total Toxic Organics[5]	----------	38.43	lbs/day	----------	Report	mg/l	Monthly	24 Hr-Comp
Fluoride	150	400	lbs/day	Report	Report	mg/l	Monthly	24 Hr-Comp

[1] A minimum of three (3) grab samples shall be collected at equally spaced time intervals for the duration of the discharge within a twenty-four (24) hour period. Each sample shall be analyzed individually, and the arithmetic mean of the concentrations reported as the value for the twenty-four (24) hour period.

[2] The permittee shall measure and report the identified metal in total recoverable form.

[3] Sample preservation procedures and maximum allowable holding times for total cyanide, or available (free) cyanide are prescribed in Table II of 40 CFR Part 136. Note the footnotes specific to cyanide. Preservation and holding time information in Table II takes precedence over information in specific methods or elsewhere.

The following EPA test methods and/or Standard Methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM.

Parameter	Test Method	LOD	LOQ
Cyanide, Total	335.4 or 4500 CN-E	5 ug/l	16 ug/l

Upon demonstration to IDEM that "no Sulfides" are present at the effected internal and/oir final outfalls and IDEM has reviewed and approved the demonstration, the permittee may collect samples by 24-Hr. composite.

[4] Hexavalent Chromium shall be measured and reported as dissolved metal. The Hexavalent Chromium sample type shall be grab method. The maximum holding time for a Hexavalent Chromium sample is 24 hours (40 CFR 136.3 Table IB). Therefore, the grab sample must be analyzed within 24 hours.

[5] The limitation for TTO (Total Toxic Organics) applies to the summation of all quantifiable values greater than 0.01 mg/l for all toxic organics listed under 40 CFR 433.11(e) which are reasonably expected to be present. This is a federal effluent guideline based limitation and is not an authorization to discharge toxic organic compounds at levels which cause or may cause water quality violations. The discharge of organic compounds at levels which cause or may cause water quality violations is prohibited. The intent of this limitation is to assure that any solvent or other products in use at the plant, which contain any of the listed toxic organic compounds, are disposed of properly, and not dumped, spilled, discharged or leaked.

Certification Statement

In lieu of quarterly monitoring for TTO, the party responsible for signing the monthly discharge monitoring report (DMR) forms may make the following statement, as part of the DMR: "Based on my inquiry of the persons directly responsible for managing compliance with the permit limitations for TTO, I certify that, to the best of my knowledge and belief, no disposal of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the Toxic Organic Pollutant Management Plan submitted to the Compliance Data Section of the Office of Water Quality, as required by this permit." The Certification Statement may not be used until completion of the Toxic Organic Pollutant Management Plan required by Part I.H of this permit. However, the certification statement may be used as long as there have been no changes at the facility that would significantly alter the current TOPMP, and the permittee is following the current TOPMP that was developed under the previous permit until the new plan is completed as required by Part I.H of this permit.

If the above mentioned responsible party is unable to make the above Certification Statement because of discharge or spills of any TTO compounds, the Permittee is required to notify IDEM in accordance with Part II.C.3 of this permit.

[6] The reported mass for each parameter shall be calculated as a sum of mass in lbs/day of both internal Outfalls 104 and 204 and reported as 304. Samples for discharges from Outfalls 104 and 204 shall be taken on the same day.

B. NARRATIVE WATER QUALITY STANDARDS

At all times the discharge from any and all point sources specified within this permit shall not cause receiving waters:

1. including the mixing zone, to contain substances, materials, floating debris, oil, scum, or other pollutants:

   a. that will settle to form putrescent or otherwise objectionable deposits;

   b. that are in amounts sufficient to be unsightly or deleterious;

   c. that produce color, visible oil sheen, odor, or other conditions in such degree as to create a nuisance;

   d. which are in amounts sufficient to be acutely toxic to , or to otherwise severely injure or kill aquatic life, other animals, plants, or humans;

   e. which are in concentrations or combinations that will cause or contribute to the growth of aquatic plants or algae to such a degree as to create a nuisance, be unsightly, or otherwise impair the designated uses.

2. outside the mixing zone, to contain substances in concentrations which on the basis of available scientific data are believed to be sufficient to injure, be chronically toxic to, or be carcinogenic, mutagenic, or teratogenic to humans, animals, aquatic life, or plants.

C. MONITORING AND REPORTING

1. <u>Representative Sampling</u>

   Samples and measurements taken as required herein shall be representative of the volume and nature of the discharge.

2. <u>Discharge Monitoring Reports</u>

   a. For parameters with monthly average water quality based effluent limitations (WQBELs) below the LOQ, daily effluent values that are less than the limit of quantitation (LOQ) may be assigned a value of zero (0).

   b. For all other parameters for which the monthly average WQBEL is equal to or greater than the LOQ, calculations that require averaging of measurements of daily values (both concentration and mass) shall use an arithmetic mean. When a daily discharge value is below the

LOQ, a value of zero (0) shall be used for that value in the calculation to determine the monthly average unless otherwise specified or approved by the Commissioner.

c. Effluent concentrations less than the LOD shall be reported on the Discharge Monitoring Report (DMR) forms as < (less than) the value of the LOD. For example, if a substance is not detected at a concentration of 0.1 µg/l, report the value as <0.1 µg/l.

d. Effluent concentrations greater than or equal to the LOD and less than the LOQ that are reported on a DMR shall be reported as the actual value and annotated on the DMR to indicate that the value is not quantifiable.

e. Mass discharge values which are calculated from concentrations reported as less than the value of the limit of detection shall be reported as less than the corresponding mass discharge value.

f. Mass discharge values that are calculated from effluent concentrations greater than the limit of detection shall be reported as the calculated value.

The permittee shall submit federal and state discharge monitoring reports to the Indiana Department of Environmental Management containing results obtained during the previous month which shall be postmarked no later than the 28th day of the month following each completed monitoring period. The first report shall be submitted by the 28th day of the month following the month in which the permit becomes effective. All reports shall be either be mailed to IDEM, Office of Water Quality, Compliance Data Section, 100 North Senate Ave., Indianapolis, Indiana 46204-2251 or submitted electronically by using the NetDMR application, upon registration and approval receipt. Electronically submitted reports (using NetDMR) have the same deadline as mailed reports. After December 31, 2016, all reports shall be submitted using NetDMR and paper reports will no longer be accepted. The Regional Administrator may request the permittee to submit monitoring reports to the Environmental Protection Agency if it is deemed necessary to assure compliance with the permit.

3. Definitions

a. Monthly Average

(1) Mass Basis - The “monthly average” discharge means the total mass discharge during a calendar month divided by the number of days in the month that the production or commercial facility was discharging. Where less than daily samples is required by

this permit, the monthly average discharge shall be determined by the summation of the measured daily mass discharges divided by the number of days during the calendar month when the measurements were made.

(2) Concentration Basis - The “monthly average” concentration means the arithmetic average of all daily determinations of concentration made during a calendar month. When grab samples are used, the daily determination of concentration shall be the arithmetic average (weighted by flow value) of all the samples collected during the calendar day.

b. “Daily Discharge”

(1) Mass Basis – The “daily discharge” means the total mass discharge by weight during any calendar day.

(2) Concentration Basis – The “daily discharge” means the average concentration over the calendar day or any twenty-four (24) hour period that reasonably represents the calendar day for the purposes of sampling.

c. “Daily Maximum”

(1) Mass Basis – The “daily maximum” means the maximum daily discharge mass value for any calendar day.

(2) Concentration Basis – The “daily maximum” means the maximum daily discharge value for any calendar day.

(3) Temperature Basis – The “daily maximum” means the highest temperature value measured for any calendar day.

d. A 24-hour composite sample consists of at least 3 individual flow-proportioned samples of wastewater, taken by the grab sample method or by an automatic sampler, which are taken at approximately equally spaced time intervals for the duration of the discharge within a 24-hour period and which are combined prior to analysis. A flow-proportioned composite sample may be obtained by:

(1) recording the discharge flow rate at the time each individual sample is taken,

(2) adding together the discharge flow rates recorded from each individuals sampling time to formulate the “total flow” value,

(3) the discharge flow rate of each individual sampling time is divided by the total flow value to determine its percentage of the total flow value,

(4) then multiply the volume of the total composite sample by each individual sample's percentage to determine the volume of that individual sample which will be included in the total composite sample.

e. Concentration -The weight of any given material present in a unit volume of liquid. Unless otherwise indicated in this permit, concentration values shall be expressed in milligrams per liter (mg/l).

f. The "Regional Administrator" is defined as the Region 5 Administrator, U.S. EPA, located at 77 West Jackson Boulevard, Chicago, Illinois 60604.

g. The "Commissioner" is defined as the Commissioner of the Indiana Department of Environmental Management, which is located at the following address: 100 North Senate Avenue, Indianapolis, Indiana 46204.

h. "Limit of Detection" or "LOD" means a measurement of the concentration of a substance that can be measured and reported with ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) for a particular analytical method and sample matrix. The LOD is equivalent to the method detection level or MDL.

i. "Limit of Quantitation" or "LOQ" means a measurement of the concentration of a contaminant obtained by using a specified laboratory procedure calibrated at a specified concentration above the method detection level. It is considered the lowest concentration at which a particular contaminant can be quantitatively measured using a specified laboratory procedure for monitoring of the contaminant. This term is also sometimes called limit quantification or quantification level.

j. "Method Detection Level" or "MDL" means the minimum concentration of an analyte (substance) that can be measured and reported with a ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) as determined by procedure set forth in 40 CFR 136, Appendix B. The method detection level or MDL is equivalent to the LOD.

4. Test Procedures

The analytical and sampling methods used shall conform to the current version of 40 CFR 136. Multiple editions of Standard Methods for the Examination of Water and Wastewater are currently approved for most methods, however, 40 CFR Part 136 should be checked to ascertain if a particular method is approved for a particular analyte. The approved methods may be included in the texts listed below. However, different but equivalent methods are allowable if they receive the prior written approval of the Commissioner and the U.S. Environmental Protection Agency.

a. Standard Methods for the Examination of Water and Wastewater
18th, 19th, or 20th Editions, 1992, 1995, or 1998, American Public Health Association, Washington, D.C. 20005.

b. A.S.T.M. Standards, Parts 23, Water; Atmosphere Analysis
1972 American Society for Testing and Materials, Philadelphia, PA 19103.

c. Methods for Chemical Analysis of Water and Wastes
June 1974, Revised, March 1983, Environmental Protection Agency, Water Quality Office, Analytical Quality Control Laboratory, 1014 Broadway, Cincinnati, OH 45202.

d. The following analytical method and limits of detection and limits of quanititation shall be used:

Parameter [3]	Method [1]	Concentration (in ug/l)	
		LOD	(LOQ or ML)
Ammonia	SM 4500-NH3-G, EPA 350.1 (undistilled)	10	32
	SM 4500-NH3-G (w/prep SM 4500-NH3-B) (distilled)	50	160
Cadmium	200.8	0.5	1.6
Chlorine	4500-Cl-D,E or 4500-Cl-G	20	60
Copper	200.8	0.5	1.6
Fluoride	SM 4500-F-C (Ion Selective Mode)	31	100
	300.0	100	320
Lead	200.8	0.31	1.0
Mercury [2]	1631	0.0002	0.0005
Naphthalene	610 (HPLC)	0.2	0.64
Naphthalene	610 MS, EPA625	2.0	6.4
Nickel	3113B	1	3.2
	200.8	0.5	1.6
Phenols			
	420.4	2	6.4
Selenium	200.8	1	3.2
Silver	3113B	0.2	0.64
Tetrachloroethylene	624	0.4	1.3
Total Suspended Solids	SM 2540 D	640	2000
Zinc	3120B	3.3	10
	200.8	1.8	5.7

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall maintain records of all monitoring information and monitoring activities, including:

a. The date, exact place and time of sampling or measurement;

b. The person(s) who performed the sampling or measurements;

c. The date(s) and time(s) analyses were performed;

d. The person(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of such measurements and analyses.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of this monitoring shall be included in the calculation and reporting of the values required in the monthly Discharge Monitoring Report (DMR) and Monthly Monitoring Report (MMR). Such increased frequency shall also be indicated. Other monitoring data not specifically required in this permit (such as internal process or internal waste stream data) which is collected by or for the permittee need not be submitted unless requested by the Commissioner.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed and calibration and maintenance of instrumentation and recording from continuous monitoring instrumentation, shall be retained for a minimum of three (3) years. In cases where the original records are kept at another location, a copy of all such records shall be kept at the permitted facility. The three years shall be extended:

a. automatically during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or regarding promulgated effluent guidelines applicable to the permittee; or

b. as requested by the Regional Administrator or the Indiana Department of Environmental Management.

D. STORM WATER MONITORING AND NON-NUMERIC EFFLUENT LIMITS

Within twelve (12) months of the effective date of this permit, the permittee shall implement the non-numeric permit conditions in this Section of the permit for the entire site as it relates to storm water associated with industrial activity regardless which outfall the storm water is discharged from.

1. Control Measures and Effluent Limits

In the technology-based limits included in Part D.2-4., the term “minimize” means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically

available and economically practicable and achievable in light of best industry practice.

2. Control Measures

Select, design, install, and implement control measures (including best management practices) to address the selection and design considerations in Part D.3 to meet the non-numeric effluent limits in Part D.4. The selection, design, installation, and implementation of these control measures must be in accordance with good engineering practices and manufacturer's specifications. Any deviation from the manufacturer's specifications shall be documented. If the control measures are not achieving their intended effect in minimizing pollutant discharges, the control measures must be modified as in accordance with the corrective action requirements in Part I.D.6. Regulated storm water discharges from the facility include storm water run-on that commingles with storm water discharges associated with industrial activity at the facility.

3. Control Measure Selection and Design Considerations

When selecting and designing control measures consider the following:

a. preventing storm water from coming into contact with polluting materials is generally more effective, and cost-effective, than trying to remove pollutants from storm water;

b. use of control measures in combination is more effective than use of control measures in isolation for minimizing pollutants in storm water discharge;

c. assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures that will achieve the limits in this permit;

d. minimizing impervious areas at your facility and infiltrating runoff onsite (including bioretention cells, green roofs, and pervious pavement, among other approaches), can reduce runoff and improve groundwater recharge and stream base flows in local streams, although care must be taken to avoid ground water contamination;

e. flow can be attenuated by use of open vegetated swales and natural depressions;

f. conservation and/or restoration of riparian buffers will help protect streams from storm water runoff and improve water quality; and

g. use of treatment interceptors (e.g. swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

4. Technology-Based Effluent Limits (BPT/BAT/BCT): Non-Numeric Effluent Limits

a. Minimize Exposure

Minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff. To the extent technologically available and economically practicable and achievable, either locate industrial materials and activities inside or protect them with storm resistant coverings in order to minimize exposure to rain, snow, snowmelt, and runoff (although significant enlargement of impervious surface area is not recommended). In minimizing exposure, pay particular attention to the following areas:

Note: Industrial materials do not need to be enclosed or covered if storm water runoff from affected areas will not be discharged to receiving waters.

b. Good Housekeeping

Keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals, store materials in appropriate containers, identify and control all on-site sources of dust to minimize stormwater contamination from the deposition of dust on areas exposed to precipitation, keep all dumpsters under cover or fit with a lid that must remain closed when not in use, and ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged.

As part of the developed good housekeeping program, include a cleaning and maintenance program for all impervious areas of the facility where particulate matter, dust, or debris may accumulate, especially areas where material loading and unloading, storage, handling, and processing occur; and where practicable, the paving of areas where vehicle traffic or material storage occur but where vegetative or other stabilization methods are not practicable (institute a sweeping program in these areas too). For unstabilized areas where sweeping is not practicable, consider using storm water management devices such as sediment traps, vegetative buffer strips,

filter fabric fence, sediment filtering boom, gravel outlet protection, or other equivalent measures that effectively trap or remove sediment.

c. Maintenance

Maintain all control measures which are used to achieve the effluent limits required by this permit in effective operating condition. Nonstructural control measures must also be diligently maintained (e.g., spill response supplies available, personnel appropriately trained). If control measures need to be replaced or repaired, make the necessary repairs or modifications as expeditiously as practicable.

d. Spill Prevention and Response Procedures

You must minimize the potential for leaks, spills and other releases that may be exposed to storm water and develop plans for effective response to such spills if or when they occur. At a minimum, you must implement:

(1) Procedures for plainly labeling containers (e.g., "Used Oil", "Spent Solvents", "Fertilizers and Pesticides", etc.) that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;

(2) Preventive measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;

(3) Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of your storm water pollution prevention team;

(4) Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies. State or local requirements may necessitate reporting spills or discharges to local emergency response, public health, or drinking water supply agencies. Contact information must be in locations that are readily accessible and available;

(5) A procedure for documenting all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a storm water conveyance.

e. Erosion and Sediment Controls

Through the use of structural and/or non-structural control measures stabilize, and contain runoff from, exposed areas to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants. Among other actions to meet this limit, place flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion and/or settle out pollutants. In selecting, designing, installing, and implementing appropriate control measures for erosion and sediment control, you are encouraged to check out information from both the State and EPA websites. The following two websites are given as information sources:

http://www.in.gov/idem/stormwater/2363.htm
and
http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-Pollution-Prevention-Plans-for-Construction-Activities.cfm

f. Management of Runoff

Divert, infiltrate, reuse, contain or otherwise reduce storm water runoff, to minimize pollutants in the discharge.

g. Salt Storage Piles or Piles Containing Salt

Enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. You must implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Piles do not need to be enclosed or covered if storm water runoff from the piles is not discharged.

h. Employee Training

Train all employees who work in areas where industrial material or activities are exposed to storm water, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of your Pollution Prevention Team.

The following personnel must understand the requirements of Part I.D. and Part I.E. of this permit and their specific responsibilities with respect to those requirements: Personnel who are responsible for the design, installation, maintenance, and/or repair of controls (including pollution prevention measures); personnel responsible for the storage

and handling of chemicals and materials that could become contaminants in stormwater discharges; personnel who are responsible for conducting and documenting monitoring and inspections related to storm water; and personnel who are responsible for taking and documenting corrective actions as required in Part I.D.6.

Personnel must be trained in at least the following if related to the scope of their job duties (e.g., only personnel responsible for conducting inspections need to understand how to conduct inspections): an overview of what is in the SWPPP; spill response procedures, good housekeeping, maintenance requirements, and material management practices; the location of all controls on the site required by this permit, and how they are to be maintained; the proper procedures to follow with respect to the permit's pollution prevention requirements; and when and how to conduct inspections, record applicable findings, and take corrective actions.

i. Non-Storm water Discharges

You must determine if any non-storm water discharges not authorized by an NPDES permit exist. Any non-storm water discharges discovered must either be eliminated or modified into this permit.

The following non-storm water discharges are authorized and should be documented when they occur in accordance with Part I.E.2.c. of the permit:

Discharges from fire-fighting activities;
Fire Hydrant flushings;
Potable water, including water line flushings;
Uncontaminated condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids;
Irrigation drainage;
Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling;
Pavement wash water where no detergents are used and no spills or leaks of toxic or hazardous material have occurred (unless all spilled material has been removed);
Routine external building washdown that does not use detergents;
Uncontaminated ground water or spring water;
Foundation or footing drains where flows are not contaminated with process materials;

Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from cooling towers (e.g., “piped cooling tower blowdown or drains);
Vehicle wash- waters where uncontaminated water without detergents or solvents is utilized; and

j. Dust Generation and Vehicle Tracking of Industrial Materials

You must minimize generation of dust and off-site tracking of raw, final, or waste materials.

5. Annual Review

At least once every 12 months, you must submit an Annual Report which includes the following: the results or a summary of your past year’s routine facility inspection documentation and quarterly visual assessment documentation; information copied or summarized from the corrective action documentation required (if applicable). If corrective action is not yet completed at the time of submission of this Annual Report, you must describe the status of any outstanding corrective action(s); benchmark monitoring results, the rationale for why you believe that no further pollutant reductions are achievable (i.e., technologically available and economically practicable and achievable in light of best industry practices); and any incidents of noncompliance observed or, if there is no noncompliance, a certification signed by a responsible corporate officer, general partner or the proprietor, executive officer or ranking elected official, stating the facility is in compliance with this permit. You must also submit the report to the Industrial NPDES Permit Section on an annual basis.

6. Corrective Actions – Conditions Requiring Review

a. If any of the following conditions occur, you must review your SWPPP to determine if and where revisions may need to be made to eliminate the condition and prevent its reoccurrence:

(1) An unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this NPDES permit) occurs at your facility;

(2) Your control measures are not stringent enough for the discharge to meet applicable water quality standards;

(3) A required control measure was never installed, was installed incorrectly, or is not being properly operated or maintained;

(4) Visual assessments indicate obvious signs of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam); or

(5) The average of four sampling results exceeds a benchmark.

b. If the following condition occurs, you must review and revise the selection, design, installation, and implementation of your control measures to determine if modifications are necessary to meet the effluent limits in this permit:

construction or a change in design, operation, or maintenance at your facility that significantly changes the nature of pollutants discharged in storm water from your facility, or significantly increases the quantity of pollutants discharge.

7. Corrective Action Deadlines

If additional changes are necessary, a new or modified control must be installed and made operational, or a repair completed, before the next storm event if possible, and within 45 calendar days from the time of discovery by a member of the Stormwater Pollution Prevention Team. If it is infeasible to complete the installation or repair within 45 calendar days, , the reason(s) must be documented. A schedule for completing the work must also be identified, which must be done as soon as practicable after the 45-day timeframe but no longer than 90 days after discovery.

Where corrective actions result in changes to any of the controls or procedures documented in the SWPPP, the SWPPP must be modified accordingly within 14 calendar days of completing corrective action work.

These time intervals are not grace periods, but are schedules considered reasonable for documenting your findings and for making repairs and improvements. They are included in this permit to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely.

8. Corrective Action Report

The existence of any of the conditions listed in Part I.D.6 must be documented within 24 hours of a member of the Stormwater Pollution Prevention Team becoming aware of such condition. The following information must be included in the documentation:

(a) Identification and description of the condition triggering the need for corrective action review. For any spills or leaks, include the following information: a description of the incident including material, date/time, amount, location, and reason for spill, and any leaks, spills or other releases that resulted in discharges of pollutants to waters of U.S., through stormwater or otherwise;

(b) Date the condition was identified; and

(c) A discussion of whether the triggering condition requires corrective action. For any spills or leaks, include response actions, the date/time clean-up completed, notifications made, and staff involved. Also include any measures taken to prevent the reoccurrence of such releases.

You must also document the corrective actions taken that occurred as a result of the conditions listed in Part I.D.6. within 45 days from the time of discovery by a member of the Stormwater Pollution Prevention Team of any of those conditions. Provide the dates when each corrective action was initiated and completed (or is expected to be completed). If applicable, document why it is infeasible to complete necessary installations or repairs within the 45-day timeframe and document your schedule for installing the controls and making them operational as soon as practicable after the 45-day timeframe.

9. Inspections

(a) Routine Facility Inspections

During normal facility operating hours you must conduct inspections of areas of the facility covered by the requirements in this permit, including the following:

(1) Areas where industrial materials or activities are exposed to stormwater;
(2) Areas identified in the SWPPP and those that are potential pollutant sources;
(3) Areas where spills and leaks have occurred in the past 3 years.
(4) Discharge points; and
(5) Control measures used to comply with the effluent limits contained in this permit.

Inspections must be conducted at least quarterly (i.e., once each calendar quarter), or in some instances more frequently (e.g., monthly), as appropriate. Increased frequency may be appropriate for some types of equipment, processes and stormwater control

measures, or areas of the facility with significant activities and materials exposed to stormwater. At least one of your routine inspections must be conducted during a period when a stormwater discharge is occurring.

Inspections must be performed by qualified personnel (as defined in Appendix A) with at least one member of your stormwater pollution prevention team participating. Inspectors must consider the results of visual and analytical monitoring (if any) for the past year when planning and conducting inspections.

During the inspection you must examine or look out for the following:

(6) Industrial materials, residue or trash that may have or could come into contact with stormwater;
(7) Leaks or spills from industrial equipment, drums, tanks and other containers;
(8) Offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site;
(9) Tracking or blowing of raw, final or waste materials from areas of no exposure to exposed areas; and
(10) Control measures needing replacement, maintenance or repair.

As part of conducting your routine facility inspections at least quarterly, address all potential sources of pollutants, including (if applicable) air pollution control equipment.

Also inspect all process and material handling equipment (e.g., conveyors, cranes, and vehicles) for leaks, drips, or the potential loss of material; and material storage areas (e.g., piles, bins, or hoppers for storing coke, coal, scrap, or slag, as well as chemicals stored in tanks and drums) for signs of material losses due to wind or stormwater runoff.

During an inspection occurring during a stormwater discharge, control measures implemented to comply with effluent limits must be observed to ensure they are functioning correctly. Discharge outfalls must also be observed during this inspection. If such discharge locations are inaccessible, nearby downstream locations must be inspected.

(b) Routine Facility Inspection Documentation

The findings of facility inspections must be documented and the report maintained with your SWPPP. Findings must be summarized in the

annual report. Document all findings, including but not limited to, the following information:

(1) The inspection date and time;
(2) The name(s) and signature(s) of the inspector(s);
(3) Weather information;
(4) All observations relating to the implementation of control measures at the facility, including:
    (a) A description of any discharges occurring at the time of the inspection;
    (b) Any previously unidentified discharges and/or pollutants from the site;
    (c) Any evidence of, or the potential for, pollutants entering the drainage system;
    (d) Observations regarding the physical condition of and around all outfalls including any flow dissipation devices, and evidence of pollutants in discharges and/or the receiving water;
    (e) Any control measures needing maintenance, repairs, or replacement;
(5) Any additional control measures needed to comply with the permit requirements; and
(6) Any incidents of noncompliance observed.

Any corrective action required as a result of a routine facility inspection must be performed consistent with Part I.D.6. of this permit.

If the discharge was visual assessed, as required in Part I.D.9.c., during the facility inspection, you may include the results of the assessment with the report required in Part I.D.9.a., as long as all components of both types of inspections are included in the report.

(c) Quarterly Visual Assessment Procedures

Once each quarter for the entire permit term, you must collect a stormwater sample from each outfall and conduct a visual assessment of each of these samples. These samples are not required to be collected consistent with 40 CFR Part 136 procedures but should be collected in such a manner that the samples are representative of the stormwater discharge. Guidance on monitoring is available at:

http://water.epa.gov/polwaste/npdes/stormwater/EPA-Multi-Sector-General-Permit-MSGP.cfm

The visual assessment must be made:

(1) Of a sample in a clean, clear glass, or plastic container, and examined in a well-lit area;
(2) On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and you must document why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge from your site; and
(3) For storm events, on discharges that occur at least 72 hours (3 days) from the previous discharge. The 72-hour (3-day) storm interval does not apply if you document that less than a 72-hour (3-day) interval is representative for local storm events during the sampling period.

You must visually inspect or observe the sample for the following water quality characteristics:

(4) Color;
(5) Odor;
(6) Clarity (diminished);
(7) Floating solids;
(8) Settled solids;
(9) Suspended solids;
(10) Foam;
(11) Oil sheen; and
(12) Other obvious indicators of stormwater pollution.

Whenever the visual assessment shows stormwater discharges are not in compliance with narrative water quality criteria, initiate the corrective action procedures in Part I.D.6.

(d) Quarterly Visual Assessment Documentation

Results of visual assessments must be documented and the documentation maintained onsite with the SWPPP. Documentation of the visual assessment must include, but is not be limited to:

(1) Sample location(s);
(2) Sample collection date and time, and visual assessment date and time for each sample;
(3) Personnel collecting the sample and performing visual assessment, and their signatures;

(4) Nature of the discharge (i.e., runoff or snowmelt);
(5) Results of observations of the stormwater discharge;
(6) Probable sources of any observed stormwater contamination; and
(7) If applicable, why it was not possible to take samples within the first 30 minutes.

Any corrective action required as a result of a quarterly visual assessment must be performed consistent with Part I.D.6. of this permit.

(e) Exceptions to Quarterly Visual Assessments

(1) Adverse Weather Conditions: When adverse weather conditions prevent the collection of samples during the quarter, you must take a substitute sample during the next qualifying storm event. Documentation of the rationale for no visual assessment for the quarter must be included with your SWPPP records. Adverse conditions are those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, or electrical storms, or situations that otherwise make sampling impractical, such as extended frozen conditions.

(2) Snow: In areas subject to snow, if possible, at least one quarterly visual assessment must capture snowmelt discharge, taking into account the exception described above for climates with irregular stormwater runoff.

E. STORM WATER POLLUTION PREVENTION PLAN

1. Development of Plan

Within 12 months from the effective date of this permit, the permittee is required to review and update the current Storm Water Pollution Prevention Plan (SWPPP) for the permitted facility. The SWPPP does not contain effluent limitations. The SWPPP is intended to document the selection, design, and installation of control measures. As distinct from the SWPPP, the additional documentation requirements are intended to document the implementation (including inspection, maintenance, monitoring, and corrective action) of the permit requirements. The plan shall at a minimum include the following:

a. Identify potential sources of pollution, which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. Storm water associated with industrial activity (defined in 40 CFR 122.26(b)(14)) includes, but is

not limited to, the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing or materials storage areas at an industrial plant;

b. Describe practices and measure to be used in reducing the potential for pollutants to be exposed to storm water; and

c. Assure compliance with the terms and conditions of this permit.

2. Contents

The plan shall include, at a minimum, the following items:

a. Pollution Prevention Team – The SWWPPP must identify the staff members (by name or title) that comprise the facility's stormwater pollution prevention team as well as their individual responsibilities. The stormwater pollution prevention team is responsible for overseeing development of the SWPPP, any later modifications to it, and for compliance with permit Parts I.D. and I.E. of this permit. Each member of the stormwater pollution prevention team must have ready access to either an electronic or paper copy of applicable portions of this permit, the most updated copy of the SWPPP, other relevant documents or information that must be kept with the SWPPP.

b. Site Description – As a minimum, the plan shall contain the following:

(1) *Activities at the Facility.* Provide a description of the nature of the industrial activities at your facility.

(2) *General location map*. Provide a general location map (e.g., U.S. Geological Survey (USGS) quadrangle map) with enough detail to identify the location of your facility and all receiving waters for your stormwater discharges.

(3) *Site map.* Provide a map showing:

(A) Boundaries of the property and the size of the property in acres;
(B) Location and extent of significant structures and impervious surfaces;
(C) Directions of stormwater flow (use arrows);
(D) Locations of all stormwater control measures;
(E) Locations of all receiving waters, including wetlands, in the immediate vicinity of your facility. Indicate which

waterbodies are listed as impaired and which are identified by the State of Indiana or EPA as Tier 2 or Tier 2.5 waters;

(F) Locations of all stormwater conveyances including ditches, pipes, and swales;

(G) Locations of potential pollutant sources identified;

(H) Locations where significant spills or leaks identified have occurred;

(I) Locations of all stormwater monitoring points;

(J) Locations of stormwater inlets and outfalls, with a unique identification code for each outfall (e.g., Outfall No. 1, No. 2), indicating if you are treating one or more outfalls as “substantially identical”, and an approximate outline of the areas draining to each outfall;

(K) If applicable, municipal separate storm sewer systems and where your stormwater discharges to them;

(L) Areas of federally-listed critical habitat for endangered or threatened species, if applicable.

(M) Locations of the following activities where such activities are exposed to precipitation: o fueling stations;

i. vehicle and equipment maintenance and/or cleaning areas;
ii. loading/unloading areas;
iii. locations used for the treatment, storage, or disposal of wastes;
iv. liquid storage tanks;
v. processing and storage areas;
vi. immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility;
vii. transfer areas for substances in bulk; and
viii. machinery

(N) Locations and sources of run-on to your site from adjacent property that contains significant quantities of pollutants.

(O) Identify in the SWPPP where any of the following activities may be exposed to precipitation or surface runoff: storage or disposal of wastes such as spent solvents and baths, sand, slag and dross; liquid storage tanks and drums; processing areas including pollution control equipment (e.g., baghouses); and storage areas of raw material such as coal, coke, scrap, sand, fluxes, refractories, or metal in any form. In addition, indicate

where an accumulation of significant amounts of particulate matter could occur from such sources as furnace or oven emissions, losses from coal and coke handling operations, etc., and could result in a discharge of pollutants to waters of the United States.

(P) Include in the inventory of materials handled at the site that potentially may be exposed to precipitation or runoff, areas where deposition of particulate matter from process air emissions or losses during material-handling activities are possible .

(c) Potential Pollutant Sources:

The SWPPP must document areas at your facility where industrial materials or activities are exposed to stormwater or from which allowable non-stormwater discharges may be released. Industrial materials or activities include, but are not limited to: material handling equipment or activities; industrial machinery; raw materials; industrial production and processes; and intermediate products, by-products, final products, and waste products. *Material handling activities* include, but are not limited to: the storage, loading and unloading, transportation, disposal, or conveyance of any raw material, intermediate product, final product or waste product. For structures located in areas of industrial activity, you must be aware that the structures themselves are potential sources of pollutants. This could occur, for example, when metals such as aluminum or copper are leached from the structures as a result of acid rain.

For each area identified, the description must include:

(1) *Activities in the Area.* A list of the industrial activities exposed to stormwater (e.g., material storage; equipment fueling, maintenance, and cleaning; cutting steel beams).

(2) *Pollutants.* A list of the pollutant(s) or pollutant constituents (e.g., crankcase oil, zinc, sulfuric acid, and cleaning solvents) associated with each identified activity, which could be exposed to rainfall or snowmelt and could be discharged from your facility. The pollutant list must include all significant materials that have been handled, treated, stored, or disposed, and that have been exposed to stormwater in the three years prior to the date the SWPPP is prepared or amended.

(3) *Spills and Leaks.* The SWPPP must document where potential spills and leaks could occur that could contribute pollutants to stormwater discharges, and the corresponding outfall(s) that

would be affected by such spills and leaks. The SWPPP must document all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a stormwater conveyance, in the three years prior to the date the SWPPP is prepared or amended.

(4) *Non-Storm water Discharges* – The SWPPP must document that you have evaluated for the presence of non-storm water discharges not authorized by an NPDES permit. Any non-storm water discharges have either been eliminated or incorporated into this permit. Documentation of non-storm water discharges shall include:

A written non-storm water assessment, including the following:

(A) The date of the evaluation;

(B) A description of the evaluation criteria used;

(C) A list of the outfalls or onsite drainage points that were directly observed during the evaluation; and

(D) The action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), or documentation that a separate NPDES permit was obtained. For example, a floor drain was sealed, a sink drain was re-routed to sanitary, or an NPDES permit application was submitted for an unauthorized cooling water discharge.

(5) Salt Storage - The location of any storage piles containing salt used for deicing or other commercial or industrial purposes must be documented in the SWPPP.

(6) Sampling Data - All stormwater discharge sampling data collected at your facility during the previous permit term must be summarized in the SWPPP.

(7) Description of Control Measures to Meet Technology-Based Effluent Limits.

The location and type of control measures you have specifically chosen and/or designed to comply with Permit Part I.D. must be documented in the SWPPP.

Regarding your control measures, the following must be documented as appropriate:

(a) How the selection and design considerations of control measures were addressed.
(b) How the control measures address the pollutant sources identified.

(d) Schedules and Procedures

The following must be documented in your SWPPP:

(1) Good Housekeeping – A schedule for regular pickup and disposal of waste materials, along with routine inspections for leaks and conditions of drums, tanks and containers;

(2) Maintenance – Preventative maintenance procedures, including regular inspections, testing, maintenance and repair of all control measures to avoid situations that may result in leaks, spills, and other releases, and any back-up practices in place should a runoff event occur while a control measure is off-line. The SWPPP shall include the schedule or frequency for maintaining all control measures used to comply with the storm water requirements.

(3) Spill Prevention and Response Procedures – Procedures for preventing and responding to spills and leaks, including notification procedures. For preventing spills, include in your SWPPP the control measures for material handling and storage, and the procedures for preventing spills that can contaminate stormwater. Also specify cleanup equipment, procedures and spill logs, as appropriate, in the event of spills. You may reference the existence of other plans for Spill Prevention Control and Countermeasure (SPCC) developed for the facility under Section 311 of the CWA or BMP programs otherwise required by an NPDES permit for the facility, provided that you keep a copy of that other plan onsite and make it available for review;

(4) Erosion and Sediment Control – If you use polymers and/or other chemical treatments as part of your controls, you must identify the polymers and/or chemicals used and the purpose; and

(5) Employee Training – The elements of your employee training plan shall include all, but not be limited to, the requirements set forth in Permit Part.I.D., and also the following:

(a) The content of the training; The frequency/schedule of training for employees who have duties in areas of industrial activities subject to this permit;
(b) A log of the dates on which specific employees received training.

(e) Pertaining to Inspections

You must document in your SWPPP your procedures for performing, as appropriate, the types of inspections specified by this permit, including:

(a) Routine facility inspections and;
(b) Quarterly visual assessment of stormwater discharges.

For each type of inspection performed, your SWPPP must identify:

(c) Person(s) or positions of person(s) responsible for inspection;
(d) Schedules for conducting inspections, including tentative schedule for irregular stormwater runoff discharges; and
(e) Specific items to be covered by the inspection, including schedules for specific outfalls.

(f) Pertaining to Monitoring

You must document in your SWPPP your procedures for conducting the five types of analytical monitoring specified by this permit, where applicable to your facility, including Benchmark monitoring;

For each type of monitoring, your SWPPP must document:

(a) Locations where samples are collected, including any determination that two or more outfalls are substantially identical;
(b) Parameters for sampling and the frequency of sampling for each parameter;
(c) Schedules for monitoring at your facility, including schedule for alternate monitoring periods for climates with irregular stormwater runoff;

(d) Any numeric control values (benchmarks, effluent limitations guidelines, TMDL-related requirements, or other requirements) applicable to discharges from each outfall; and

(e) Procedures (e.g., responsible staff, logistics, laboratory to be used) for gathering storm event data.

g. General Requirements – The SWPPP must meet the following general requirements:

(1) The SWPPP shall be prepared in accordance with good engineering practices and to industry standards. The SWPPP may be developed by either a person on your staff or a third party you hire, and it shall be certified in accordance with the signature requirements, under Part II.C.6.

(2) You must retain a complete copy of your current SWPPP required by this permit at the facility in any accessible format. A complete SWPPP includes any documents incorporated by reference and all documentation supporting your permit eligibility pursuant to Part 5.2.6 of this permit, as well as your signed and dated certification page. Regardless of the format, the SWPPP must be immediately available to facility employees, EPA, a state or tribe, the operator of an MS4 receiving discharges from the site; and representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) at the time of an onsite inspection. Your current SWPPP or certain information from your current SWPPP described below must also be made available to the public (except any confidential business information (CBI) or restricted information, but you must clearly identify those portions of the SWPPP that are being withheld from public access.

(3) Where your SWPPP refers to procedures in other facility documents, such as a Spill Prevention, Control and Countermeasure (SPCC) Plan or an Environmental Management System (EMS), copies of the relevant portions of those documents must be kept with your SWPPP.

F. CHRONIC BIOMONITORING PROGRAM REQUIREMENTS

The 1977 Clean Water Act explicitly states, in Section 101(3) that it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited. In support of this policy the U.S. EPA in 1995 amended 40 CFR 136.3 (Tables IA and II) by adding testing method for measuring acute and short-term chronic toxicity of whole effluents and receiving waters. To adequately assess the character of the effluent, and the effects of the effluent on aquatic life, the permittee shall conduct Whole Effluent Toxicity Testing. Part 1 of this section describes the testing procedures, Part 2 describes the Toxicity Reduction Evaluation (TRE) which is only required if the effluent demonstrated toxicity, as described in section 1.f.

1. Whole Effluent Toxicity Tests

The permittee shall continue with their current schedule for the series of bioassay tests described below to monitor the toxicity of the discharge from Outfall 004. If toxicity is demonstrated as defined under section f. below, the permittee is required to conduct a toxicity reduction evaluation (TRE).

a. Bioassay Test Procedures and Data Analysis

(1) All test organisms, test procedures and quality assurance criteria used shall be in accordance with the Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms; Fourth Edition Section 13, Cladoceran (*Ceriodaphnia dubia*) Survival and Reproduction Test Method 1002.0; and Section 11, Fathead Minnow (*Pimephales promelas*) Larval Survival and Growth Test Method, (1000.0) EPA 821-R-02-013, October 2002, or most recent update.

(2) Any circumstances not covered by the above methods, or that required deviation from the specified methods shall first be approved by the IDEM's Permit Branch.

(3) The determination of effluent toxicity shall be made in accordance with the Data Analysis general procedures for chronic toxicity endpoints as outlined in Section 9, and in Sections 11 and 13 of the respective Test Method (1000.0 and 1002.0) of Short-term Methods of Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms (EPA-821-R-02-013), Fourth Edition, October 2002, or most recent update.

b. Types of Bioassay Tests

(1) The permittee shall conduct 7-day Daphnid (*Ceriodaphnia dubia*) Survival and Reproduction Test and a 7-day Fathead Minnow (*Pimephales promelas*) Larval Survival and Growth Test on samples of final effluent. All tests will be conducted on 24-hour composite samples of final effluent. All test solutions shall be renewed daily. On days three and five fresh 24-hour composite samples of the effluent collected on alternate days shall be used to renew the test solutions.

(2) If, in any control, more than 10% of the test organisms die in 96 hours, or more than 20% of the test organisms die in 7 days, that test shall be repeated. In addition, if in the *Ceriodaphnia dubia* test control the number of newborns produced per surviving female is less than 15, or if 60% of surviving control females have less than three broods; and in the fathead minnow test if the mean dry weight of 7-day old surviving fish in the control group is less than 0.25 mg, that test shall also be repeated. Such testing will determine whether the effluent affects the survival, reproduction, and/or growth of the test organisms. Results of all tests regardless of completion must be reported to IDEM.

c. Effluent Sample Collection and Chemical Analysis

(1) Samples taken for the purposes of Whole Effluent Toxicity Testing will be taken at a point that is representative of the discharge, but prior to discharge. The maximum holding time for whole effluent is 36 hours for a 24 hour composite sample. Bioassay tests must be started within 36 hours after termination of the 24 hour composite sample collection. Bioassay of effluent sampling may be coordinated with other permit sampling requirements as appropriate to avoid duplication.

(2) Chemical analysis must accompany each effluent sample taken for bioassay test, especially the sample taken for the repeat or confirmation test as outlined in section f.3. below. The analysis detailed under Part I.A. should be conducted for the effluent sample. Chemical analysis must comply with approved EPA test methods.

d. Testing Frequency and Duration

The chronic toxicity test specified in section b. above shall be conducted **quarterly** for the duration of the permit. After three tests

have been completed, and if no toxicity is demonstrated, as defined in section f. below, the permittee may reduce the number of species tested to only include the most sensitive to the toxicity in the effluent. In the absence of toxicity with either species in the monthly testing for three (3) months in the current tests, sensitive species will be selected based on frequency and failure of whole effluent toxicity tests with one or the other species in the immediate past.

If toxicity is demonstrated as defined under section f., the permittee is required to conduct a toxicity reduction evaluation (TRE) as specified in Section 2.

e. Reporting

(1) Results shall be reported according to EPA 821-R-02-013, October 2002, Section 10 (Report Preparation). The completed report for each test shall be submitted to the Compliance Data Section of IDEM no later than 60 days after completion of the test.

In lieu of mailing reports, reports may be submitted to IDEM electronically as an e-mail attachment. E-mails should be sent to wwreports@idem.in.gov.

(2) For quality control, the report shall include the results of appropriate standard reference toxic pollutant tests for chronic endpoints and historical reference toxic pollutant data with mean values and appropriate ranges for the respective test species *Ceriodaphnia dubia* and *Pimephales promelas*. Biomonitoring reports must also include copies of Chain-of-Custody Records and Laboratory raw data sheets.

(3) Statistical procedures used to analyze and interpret toxicity data including critical values of significance to evaluate each point of toxicity should be described and included as part of the biomonitoring report.

f. Demonstration of Toxicity

(1) Acute toxicity will be demonstrated if the effluent is observed to have exceeded 1.0 TU_a (acute toxic units) based on 100% effluent for the test organism in 48 and 96 hours for *Ceriodaphnia dubia* or *Pimephales promelas*, respectively.

(2) Chronic toxicity will be demonstrated if the effluent is observed to have exceeded **1.9** TU_c (chronic toxic units) for *Ceriodaphnia dubia* or *Pimephales promelas*.

(3) If toxicity is found in any of the tests as specified above, a confirmation toxicity test using the specified methodology and same test species shall be conducted within two weeks of the completion of the failed test to confirm results. During the sampling for any confirmation test the permittee shall also collect and preserve sufficient effluent samples for use in any Toxicity Identification Evaluation (TIE) and/or Toxicity Reduction Evaluation (TRE), if necessary. If any two (2) consecutive tests, including any and all confirmation tests, indicate the presence of toxicity, the permittee must begin the implementation of a Toxicity Reduction Evaluation (TRE) as described below. The whole effluent toxicity tests required above may be suspended (upon approval from IDEM) while the TRE/TIE are being conducted.

g. Definitions

(1) TU_c is defined as 100/NOEC or 100/IC_{25}, where the NOEC or IC_{25} are expressed as a percent effluent in the test medium.

(2) TU_a is defined as 100/LC_{50} where the LC_{50} is expressed as a percent effluent in the test medium of an acute whole effluent toxicity (WET) test that is statistically or graphically estimated to be lethal to fifty percent (50%) of the test organisms.

(3) “Inhibition concentration 25” or “IC_{25}” means the toxicant (effluent) concentration that would cause a twenty-five percent (25%) reduction in a nonquantal biological measurement for the test population. For example, the IC_{25} is the concentration of toxicant (effluent) that would cause a twenty-five percent (25%) reduction in mean young per female or in growth for the test population.

(4) “No observed effect concentration” or “NOEC” is the highest concentration of toxicant (effluent) to which organisms are exposed in a full life cycle or partial life cycle (short term) test, that causes no observable adverse effects on the test organisms, that is, the highest concentration of toxicant (effluent) in which the values for the observed responses are not statistically significantly different from the controls.

2. Toxicity Reduction Evaluation (TRE) Schedule of Compliance
The development and implementation of a TRE (including any post-TRE biomonitoring requirements) is only required if toxicity is demonstrated as defined in Part 1, section f. above.

a. Development of TRE Plan

Within 90 days of determination of toxicity, the permittee shall submit plans for an effluent toxicity reduction evaluation (TRE) to the Compliance Data Section, Office of Water Quality of the IDEM. The TRE plan shall include appropriate measures to characterize the causative toxicants and the variability associated with these compounds. Guidance on conducting effluent toxicity reduction evaluations is available from EPA and from the EPA publications list below:

(1) Methods for Aquatic Toxicity Identification Evaluations:

Phase I Toxicity Characteristics Procedures, Second Edition (EPA/600/6-91/003, February 1991.

Phase II Toxicity Identification Procedures (EPA 600/R-92/080), September 1993.

Phase III Toxicity Confirmation Procedures (EPA 600/R-92/081), September 1993.

(2) Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I. EPA/600/6-91/005F, May 1992.

(3) Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs), (EPA/600/2-88/070), April 1989.

(4) Toxicity Reduction Evaluation Protocol for Municipal Wastewater Treatments Plants (EPA/833-B-99-022) August 1999.

b. Conduct the Plan

Within 30 days after the submission of the TRE plan to IDEM, the permittee must initiate an effluent TRE consistent with the TRE plan. Progress reports shall be submitted every 90 days to the Compliance Data Section, Office of Water Quality of the IDEM beginning 90 days after initiation of the TRE study.

c. Reporting

Within 90 days of the TRE study completion, the permittee shall submit to the Compliance Data Section, Office of Water Quality of the IDEM, the final study results and a schedule for reducing the toxicity to acceptable levels through control of the toxicant source or treatment of whole effluent.

d. Compliance Date

The permittee shall complete items a, b, and c from Section 2 above and reduce the toxicity to acceptable levels as soon as possible, but no later than three years after the date of determination of toxicity.

e. Post-TRE Biomonitoring Requirements (Only Required After Completion of a TRE)

After the TRE, the permittee shall conduct monthly toxicity tests with 2 or more species for a period of three months. Should three consecutive monthly tests demonstrate no toxicity, the permittee may reduce the number of species tested to only include the species demonstrated to be most sensitive to the toxicity in the effluent, (see section 1.d. above for more specifics on this topic), and conduct chronic tests quarterly for the duration of the permit.

If toxicity is demonstrated, as defined in paragraph 1.f. above, after the initial three month period, testing must revert to a TRE as described in Part 2 (TRE) above.

f. In lieu of mailing reports, reports may be submitted to IDEM electronically via e-mail. E-mails should be sent to wwreports@idem.in.gov.

G. POLLUTION MINIMIZATION PROGRAM

The permittee is required to develop and conduct a pollutant minimization program (PMP) for each pollutant with a WQBEL below the LOQ. This permit contains a WQBEL below the LOQ for Total Residual Chlorine and Silver.

a. The goal of the pollutant minimization program shall be to maintain the effluent at or below the WQBEL. The pollutant minimization program shall include, but is not limited to, the following:

(1) Submit a control strategy designed to proceed toward the goal within 180 days of the effective date of this permit.

(2) Implementation of appropriate cost-effective control measures, consistent with the control strategy within 365 days of the effective date of this permit.

(3) Monitor as necessary to record the progress toward the goal. Potential sources of the pollutant shall be monitored on a semi-annual basis. Quarterly monitoring of the influent of the wastewater treatment system is also required. The permittee may request a reduction in this monitoring requirement after four quarters of monitoring data.

(4) Submit an annual status to the Commissioner at the address listed in Part I.C.3.g. to the attention of the Office of Water Quality, Compliance Data Section, by January 31 of each year that includes the following information:

(i) All minimization program monitoring results for the previous year.

(ii) A list of potential sources of the pollutant.

(iii) A summary of all actions taken to reduce or eliminate the identified sources of the pollutant.

(5) A pollution minimization program may include the submittal of pollution prevention strategies that use changes in production process technology, materials, processes, operations, or procedures to reduce or eliminate the source of the pollutant.

b. No pollution minimization program is required if the permittee demonstrates that the discharge of a pollutant with a WQBEL below the LOQ is reasonably expected to be in compliance with the WQBEL at the point of discharge into the receiving water. This demonstration may include, but is not limited to, the following:

(1) Treatment information, including information derived from modeling the destruction of removal of the pollutant in the treatment process.

(2) Mass balance information.

(3) Fish tissue studies or other biological studies.

c. In determining appropriate cost-effective control measures to be implemented in a pollution minimization program, the following factors may be considered:

(1) Significance of sources.

(2) Economic and technical feasibility.

(3) Treatability.

H. TOXIC ORGANIC POLLUTANT MANAGEMENT PLAN

In order to use the Certification Statement for Total Toxic Organics on Pages 15 and 17 of this permit, the Permittee is required to submit a management plan for toxic organic pollutants. The Toxic Organic Pollutant Management Plan is to be submitted to the Compliance Data Section of the Office of Water Quality within ninety (90) days of the effective date of this permit, and is to include a listing of toxic organic compounds used, the method of disposal, and procedure for ensuring that these compounds do not routinely spill or leak into the process wastewater, noncontact cooling water, groundwater, stormwater, or other surface waters.

Upon review by IDEM of the above report the Permittee may be required to perform additional specific monitoring for toxic organics, or may be allowed to use the Certification Statement.

I. REOPENING CLAUSES

This permit may be modified, or alternately, revoked and reissued, after public notice and opportunity for hearing:

1. to comply with any applicable effluent limitation or standard issued or approved under 301(b)(2)(C),(D) and (E), 304 (b)(2), and 307(a)(2) of the Clean Water Act, if the effluent limitation or standard so issued or approved:

   a. contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

   b. controls any pollutant not limited in the permit.

2. to incorporate any of the reopening clause provisions cited at 327 IAC 5-2-16.

3. to include a case-specific Limit of Detection (LOD) and/or Limit of Quantitation (LOQ). The permittee must demonstrate that such action is warranted in accordance with the procedures specified under Appendix B, 40 CFR Part 136, using the most sensitive analytical methods approved by EPA under 40 CFR Part 136, or approved by the Commissioner.

4. to specify the use of a different analytical method if a more sensitive analytical method has been specified in or approved under 40 CFR 136 or approved by the Commissioner to monitor for the presence and amount in the effluent of the pollutant for which the WQBEL is established. The permit shall specify, in accordance with 327 IAC 5-2-11.6(h)(2)(B), the LOD and LOQ that can be achieved by use of the specified analytical method.

5. to comply with any applicable standards, regulations and requirements issued or approved under section 316(b) of the Clean Water Act.

6. to allow for the existing thermal model whereby the permit may be reopened to include such a provision for compliance. Any revision to the existing model must limit the mixing zone to one-half the width of Portage-Burns Waterway and account for: the range of the upstream flows and temperature and effluent flows and temperature expected at the site; and the combined effect of the discharges from Outfall 002, 003 and 004 on the temperature at the edge of the mixing zone.

J. REPORTING REQUIREMENTS FOR SOLVENTS, DEGREASING AGENTS, ROLLING OILS, WATER TREATMENT CHEMICALS AND BIOCIDES

Annually, US Steel Midwest Plant will report, as part of the forth monthly Discharge Monitoring Report of the following year, the total quantity (lbs/yr) of each solvent, degreasing agent, water treatment chemical, rolling oil and biocide that was purchased for that year and which can be present in any outfall regulated by this permit. This reporting requirement includes all surfactants, anionic cationic and non-ionic, which may be used in part or wholly as a constituent in these compounds.

US Steel Midwest Plant may submit the annual SARA 312 chemical inventory report, in lieu of a separate chemical report, by the end of the first quarter of each year.

US Steel Midwest Plan will maintain these files for a period of ten (10) years. Files will include the Material Safety Data Sheet, FIFRA Label for each biocide, chemical name and CAS number for each compound used. If these compounds contain proprietary material, US Steel Midwest Plant may maintain this information in a separate file that can be accessed by U.S. EPA or IDEM personnel with appropriate authority.

K. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the effluent limitations specified for Nickel and Lead at Outfall 004 in accordance with the following schedule:

   a. The permittee shall submit a written progress report to the Compliance Data Section of the Office of Water Quality (OWQ) twelve

(12) months from the effective date of this permit. The progress report shall include a description of the progress the permittee has made in characterizing discharges.

b. The permittee shall submit a written progress report to the Compliance Data Section of the Office of Water Quality (OWQ) twenty-one (21) months from the effective date of this permit. The progress report shall include a description of the method(s) selected for meeting the newly imposed limitation for Nickel and Lead, in addition to any other relevant information. The progress report shall also include a specific time line specifying when each of the steps will be taken. The new effluent limits for Nickel and Lead are deferred for the term of this compliance schedule, unless the new effluent limits can be met at an earlier date. The permittee shall notify the Compliance Data Section of OWQ as soon as the newly imposed effluent limits for Nickel and Lead can be met. Upon receipt of such notification by OWQ, the final limits for Nickel and Lead will become effective, but no later than fifty four (54) months from the effective date of this permit. Monitoring and reporting of the effluent for these parameters is required during the interim period.

c. The permittee shall submit a subsequent progress report thirty-three (33) and forty five (45) months from the effective date of this permit. This report shall include detailed information on the steps the permittee has taken to achieve compliance with the final effluent limitations and whether the permittee is meeting the time line set out in the initial progress report.

d. The permittee shall comply with the final effluent limitations for Nickel and Lead at outfall 004 fifty-four (54) months from the effective date of this permit.

PART II

STANDARD CONDITIONS FOR NPDES PERMITS

A. GENERAL CONDITIONS

1. <u>Duty to Comply</u>

Appendix I.B.
NPDES Permit Part II
Standard Permit Conditions

PART II

STANDARD CONDITIONS FOR NPDES PERMITS

A. GENERAL CONDITIONS

1. Duty to Comply

The permittee shall comply with all terms and conditions of this permit in accordance with 327 IAC 5-2-8(1) and all other requirements of 327 IAC 5-2-8. Any permit noncompliance constitutes a violation of the Clean Water Act and IC 13 and is grounds for enforcement action or permit termination, revocation and reissuance, modification, or denial of a permit renewal application.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

2. Duty to Mitigate

In accordance with 327 IAC 5-2-8(3), the permittee shall take all reasonable steps to minimize or correct any adverse impact to the environment resulting from noncompliance with this permit. During periods of noncompliance, the permittee shall conduct such accelerated or additional monitoring for the affected parameters, as appropriate or as requested by IDEM, to determine the nature and impact of the noncompliance.

3. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must obtain and submit an application for renewal of this permit in accordance with 327 IAC 5-2-8(2). It is the permittee's responsibility to obtain and submit the application. In accordance with 327 IAC 5-2-3(c), the owner of the facility or operation from which a discharge of pollutants occurs is responsible for applying for and obtaining the NPDES permit, except where the facility or operation is operated by a person other than an employee of the owner in which case it is the operator's responsibility to apply for and obtain the permit. Pursuant to 327 IAC 5-3-2(a)(2), the application must be submitted at least 180 days before the expiration date of this permit. This deadline may be extended if:

a. permission is requested in writing before such deadline;

b. IDEM grants permission to submit the application after the deadline; and

c. the application is received no later than the permit expiration date.

Under the terms of the proposed Federal E-Reporting Rule, the permittee may be required to submit its application for renewal electronically in the future.

4. Permit Transfers

In accordance with 327 IAC 5-2-8(4)(D), this permit is nontransferable to any person except in accordance with 327 IAC 5-2-6(c). This permit may be transferred to another person by the permittee, without modification or revocation and reissuance being required under 327 IAC 5-2-16(c)(1) or 16(e)(4), if the following occurs:

a. the current permittee notified the Commissioner at least thirty (30) days in advance of the proposed transfer date;

b. a written agreement containing a specific date of transfer of permit responsibility and coverage between the current permittee and the transferee (including acknowledgment that the existing permittee is liable for violations up to that date, and the transferee is liable for violations from that date on) is submitted to the Commissioner;

c. the transferee certifies in writing to the Commissioner their intent to operate the facility without making such material and substantial alterations or additions to the facility as would significantly change the nature or quantities of pollutants discharged and thus constitute cause for permit modification under 327 IAC 5-2-16(d). However, the Commissioner may allow a temporary transfer of the permit without permit modification for good cause, e.g., to enable the transferee to purge and empty the facility's treatment system prior to making alterations, despite the transferee's intent to make such material and substantial alterations or additions to the facility; and

d. the Commissioner, within thirty (30) days, does not notify the current permittee and the transferee of the intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

The Commissioner may require modification or revocation and reissuance of the permit to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act or state law.

5. <u>Permit Actions</u>

In accordance with 327 IAC 5-2-16(b) and 327 IAC 5-2-8(4), this permit may be modified, revoked and reissued, or terminated for cause, including, but not limited to, the following:

a. Violation of any terms or conditions of this permit;

b. Failure of the permittee to disclose fully all relevant facts or misrepresentation of any relevant facts in the application, or during the permit issuance process; or

c. A change in any condition that requires either a temporary or a permanent reduction or elimination of any discharge controlled by the permit, e.g., plant

closure, termination of discharge by connection to a POTW, a change in state law that requires the reduction or elimination of the discharge, or information indicating that the permitted discharge poses a substantial threat to human health or welfare.

Filing of either of the following items does not stay or suspend any permit condition: (1) a request by the permittee for a permit modification, revocation and reissuance, or termination, or (2) submittal of information specified in Part II.A.3 of the permit including planned changes or anticipated noncompliance.

The permittee shall submit any information that the permittee knows or has reason to believe would constitute cause for modification or revocation and reissuance of the permit at the earliest time such information becomes available, such as plans for physical alterations or additions to the permitted facility that:

1. could significantly change the nature of, or increase the quantity of pollutants discharged; or
2. the commissioner may request to evaluate whether such cause exists.

In accordance with 327 IAC 5-1-3(a)(5), the permittee must also provide any information reasonably requested by the Commissioner.

6. Property Rights

Pursuant to 327 IAC 5-2-8(6) and 327 IAC 5-2-5(b), the issuance of this permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to persons or private property or invasion of other private rights, any infringement of federal, state, or local laws or regulations. The issuance of the permit also does not preempt any duty to obtain any other state, or local assent required by law for the discharge or for the construction or operation of the facility from which a discharge is made.

7. Severability

In accordance with 327 IAC 1-1-3, the provisions of this permit are severable and, if any provision of this permit or the application of any provision of this permit to any person or circumstance is held invalid, the invalidity shall not affect any other provisions or applications of the permit which can be given effect without the invalid provision or application.

8. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under Section 311 of the Clean Water Act.

9. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act or state law.

10. Penalties for Violation of Permit Conditions

Pursuant to IC 13-30-4, a person who violates any provision of this permit, the water pollution control laws; environmental management laws; or a rule or standard adopted by the Environmental Rules Board is liable for a civil penalty not to exceed twenty-five thousand dollars ($25,000) per day of any violation.

Pursuant to IC 13-30-5, a person who obstructs, delays, resists, prevents, or interferes with (1) the department; or (2) the department's personnel or designated agent in the performance of an inspection or investigation performed under IC 13-14-2-2 commits a class C infraction.

Pursuant to IC 13-30-10-1.5(k), a person who willfully or recklessly violates any NPDES permit condition or filing requirement, any applicable standards or limitations of IC 13-18-3-2.4, IC 13-18-4-5, IC 13-18-8, IC 13-18-9, IC 13-18-10, IC 13-18-12, IC 13-18-14, IC 13-18-15, or IC 13-18-16, or who knowingly makes any false material statement, representation, or certification in any NPDES form, notice, or report commits a Class C misdemeanor.

Pursuant to IC 13-30-10-1.5(l), an offense under IC 13-30-10-1.5(k) is a Class D felony if the offense results in damage to the environment that renders the environment unfit for human or vertebrate animal life. An offense under IC 13-30-10-1.5(k) is a Class C felony if the offense results in the death of another person.

11. Penalties for Tampering or Falsification

In accordance with 327 IAC 5-2-8(9), the permittee shall comply with monitoring, recording, and reporting requirements of this permit. The Clean Water Act, as well as IC 13-30-10-1, provides that any person who knowingly or intentionally (a) destroys, alters, conceals, or falsely certifies a record that is required to be maintained under the terms of a permit issued by the department; and may be used to determine the status of compliance, (b) renders inaccurate or inoperative a recording device or a monitoring device required to be maintained by a permit issued by the department, or (c) falsifies testing or monitoring data required by a permit issued by the department commits a Class B misdemeanor.

12. Toxic Pollutants

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act for a toxic pollutant injurious to human health, and that standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition in accordance with 327 IAC 5-2-8(5). Effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants injurious to human health are effective and must be complied with, if applicable to the permittee, within the time provided in the implementing regulations, even absent permit modification.

13. Wastewater treatment plant and certified operators

The permittee shall have the wastewater treatment facilities under the responsible charge of an operator certified by the Commissioner in a classification corresponding to the classification of the wastewater treatment plant as required by IC 13-18-11-11 and 327 IAC 5-22. In order to operate a wastewater treatment plant the operator shall have qualifications as established in 327 IAC 5-22-7.

327 IAC 5-22-10.5(a) provides that a certified operator may be designated as being in responsible charge of more than one (1) wastewater treatment plant, if it can be shown that he will give adequate supervision to all units involved. Adequate supervision means that sufficient time is spent at the plant on a regular basis to assure that the certified operator is knowledgeable of the actual operations and that test reports and results are representative of the actual operations conditions. In accordance with 327 IAC 5-22-3(11), “responsible charge operator” means the person responsible for the overall daily operation, supervision, or management of a wastewater facility.

Pursuant to 327 IAC 5-22-10(4), the permittee shall notify IDEM when there is a change of the person serving as the certified operator in responsible charge of the wastewater treatment facility. The notification shall be made no later than thirty (30) days after a change in the operator.

14. Construction Permit

In accordance with IC 13-14-8-11.6, a discharger is not required to obtain a state permit for the modification or construction of a water pollution treatment or control facility if the discharger has an effective NPDES permit.

If the discharger modifies their existing water pollution treatment or control facility or constructs a new water pollution treatment or control facility for the treatment or control of any new influent pollutant or increased levels of any existing pollutant, then, within thirty (30) days after commencement of operation, the discharger shall file with the Department of Environment Management a notice of installation for the additional pollutant control equipment and a design summary of any modifications.

The notice and design summary shall be sent to the Office of Water Quality, Industrial NPDES Permits Section, 100 North Senate Avenue, Indianapolis, IN 46204-2251.

15. Inspection and Entry

In accordance with 327 IAC 5-2-8(7), the permittee shall allow the Commissioner, or an authorized representative, (including an authorized contractor acting as a representative of the Commissioner) upon the presentation of credentials and other documents as may be required by law, to:

a. Enter upon the permittee's premises where a point source, regulated facility, or activity is located or conducted, or where records must be kept pursuant to the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this permit;

c. Inspect at reasonable times any facilities, equipment or methods (including monitoring and control equipment), practices, or operations regulated or required pursuant to this permit; and

d. Sample or monitor at reasonable times, any discharge of pollutants or internal wastestreams for the purposes of evaluating compliance with the permit or as otherwise authorized.

16. New or Increased Discharge of Pollutants into an OSRW

This permit prohibits the permittee from undertaking any action that would result in the following:

a. A new or increased discharge of a bioaccumulative chemical of concern (BCC), other than mercury.

b. A new or increased discharge of mercury or a new or increased permit limit for a regulated pollutant that is not a BCC unless one of the following is completed prior to the commencement of the action:

(1) Information is submitted to the Commissioner demonstrating that the proposed new or increased discharges will not cause a

significant lowering of water quality as defined under 327 IAC 2-1.3-2(50). Upon review of this information, the Commissioner may request additional information or may determine that the proposed increase is a significant lowering of water quality and require the permittee to do the following:

(i) Submit an antidegradation demonstration in accordance with 327 IAC 2-1.3-5; and
(ii) Implement or fund a water quality improvement project in the watershed of the OSRW that results in an overall improvement in water quality in the OSRW in accordance with 327 IAC 2-1.3-7.

(2) An antidegradation demonstration is submitted to and approved by the Commissioner in accordance with 327 IAC 2-1.3-5 and 327 IAC 2-1.3-6 and the permittee implements or funds a water quality improvement project in the watershed of the OSRW that results in an overall improvement in water quality in the OSRW in accordance with 327 IAC 2-1.3-7.

B. MANAGEMENT REQUIREMENTS

1. Proper Operation and Maintenance

The permittee shall at all times maintain in good working order and efficiently operate all facilities and systems (and related appurtenances) for the collection and treatment which are installed or used by the permittee and which are necessary for achieving compliance with the terms and conditions of this permit in accordance with 327 IAC 5-2-8(8).

Neither 327 IAC 5-2-8(8), nor this provision, shall be construed to require the operation of installed treatment facilities that are unnecessary for achieving compliance with the terms and conditions of the permit.

2. Bypass of Treatment Facilities

Pursuant to 327 IAC 5-2-8(11):

a. Terms as defined in 327 IAC 5-2-8(11)(A):

(1) “Bypass” means the intentional diversion of a waste stream from any portion of a treatment facility.

(2) “Severe property damage” means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and

permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. The permittee may allow a bypass to occur that does not cause a violation of the effluent limitations in the permit, but only if it is also for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Part II.B.2.c., e, and f of this permit.

c. Bypasses, as defined in (a) above, are prohibited, and the Commissioner may take enforcement action against a permittee for bypass, unless the following occur:

(1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage, as defined above;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The permittee submitted notices as required under Part II.B.2.e; or

(4) The condition under Part II.B.2.b above is met.

d. Bypasses that result in death or acute injury or illness to animals or humans must be reported in accordance with the “Spill Response and Reporting Requirements” in 327 IAC 2-6.1, including calling 888/233-7745 as soon as possible, but within two (2) hours of discovery. However, under 327 IAC 2-6.1-3(1), when the constituents of the bypass are regulated by this permit, and death or acute injury or illness to animals or humans does not occur, the reporting requirements of 327 IAC 2-6.1 do not apply.

e. The permittee must provide the Commissioner with the following notice:

(1) If the permittee knows or should have known in advance of the need for a bypass (anticipated bypass), it shall submit prior written notice. If possible, such notice shall be provided at least

ten (10) days before the date of the bypass for approval by the Commissioner.

(2) The permittee shall orally report an unanticipated bypass that exceeds any effluent limitations in the permit within 24 hours of becoming aware of the bypass noncompliance. The permittee must also provide a written report within five (5) days of the time the permittee becomes aware of the bypass event. The written report must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; if the cause of noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate and prevent recurrence of the bypass event. If a complete fax or e-mail submittal is provided within 24 hours of the time that the permittee became aware of the unanticipated bypass event, then that report will satisfy both the oral and written reporting requirement. E-mails should be sent to wwreports@idem.in.gov.

f. The Commissioner may approve an anticipated bypass, after considering its adverse effects, if the Commissioner determines that it will meet the conditions listed above in Part II.B.2.c. The Commissioner may impose any conditions determined to be necessary to minimize any adverse effects.

3. Upset Conditions

Pursuant to 327 IAC 5-2-8(12):

a. “Upset” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Paragraph c of this section, are met.

c. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, that:

(1) An upset occurred and the permittee has identified the specific cause(s) of the upset;

(2) The permitted facility was at the time being properly operated;

(3) The permittee complied with any remedial measures required under Part II.A.2; and

(4) The permittee submitted notice of the upset as required in the "Twenty-Four Hour Reporting Requirements," Part II.C.3, or 327 IAC 2-6.1, whichever is applicable. However, under 327 IAC 2-6.1-3(1), when the constituents of the discharge are regulated by this permit, and death or acute injury or illness to animals or humans does not occur, the reporting requirements of 327 IAC 2-6.1 do not apply.

d. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof pursuant to 40 CFR 122.41(n)(4).

4. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed from or resulting from treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the State and to be in compliance with all Indiana statutes and regulations relative to liquid and/or solid waste disposal. The discharge of pollutants in treated wastewater is allowed in compliance with the applicable effluent limitations in Part I. of this permit.

C. REPORTING REQUIREMENTS

1. Planned Changes in Facility or Discharge

Pursuant to 327 IAC 5-2-8(10)(F), the permittee shall give notice to the Commissioner as soon as possible of any planned physical alterations or additions to the permitted facility. In this context, permitted facility refers to a point source discharge, not a wastewater treatment facility. Notice is required only when either of the following applies:

a. The alteration or addition may meet one of the criteria for determining whether the facility is a new source as defined in 327 IAC 5-1.5.

b. The alteration or addition could significantly change the nature of, or increase the quantity of, pollutants discharged. This notification

applies to pollutants that are subject neither to effluent limitations in Part I.A. nor to notification requirements in Part II.C.9. of this permit.

Following such notice, the permit may be modified to revise existing pollutant limitations and/or to specify and limit any pollutants not previously limited.

2. Monitoring Reports

Pursuant to 327 IAC 5-2-8(9) and 327 IAC 5-2-13 through 15, monitoring results shall be reported at the intervals and in the form specified in "Discharge Monitoring Reports", Part I.C.2.

3. Twenty-Four Hour Reporting Requirements

Pursuant to 327 IAC 5-2-8(10)(C), the permittee shall orally report to the Commissioner information on the following types of noncompliance within 24 hours from the time permittee becomes aware of such noncompliance. If the noncompliance meets the requirements of item b (Part II.C.3.b) or 327 IAC 2-6.1, then the report shall be made within those prescribed time frames. However, under 327 IAC 2-6.1-3(1), when the constituents of the discharge that is in noncompliance are regulated by this permit, and death or acute injury or illness to animals or humans does not occur, the reporting requirements of 327 IAC 2-6.1 do not apply.

a. Any unanticipated bypass which exceeds any effluent limitation in the permit;

b. Any noncompliance which may pose a significant danger to human health or the environment. Reports under this item shall be made as soon as the permittee becomes aware of the noncomplying circumstances;

c. Any upset (as defined in Part II.B.3 above) that causes an exceedance of any effluent limitation in the permit;

d. Violation of a maximum daily discharge limitation for any of the following toxic pollutants:

Cadmium, Hex. Chromium, T. Chromium, Copper, T. Cyanide, Lead, Nickel, Silver, Zinc, Naphthalene, Tetrachloro-ethylene, and Total Toxic Organics.

The permittee can make the oral reports by calling (317)232-8670 during regular business hours or by calling (317) 233-7745 ((888)233-7745 toll free in Indiana) during non-business hours. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the

circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce and eliminate the noncompliance and prevent its recurrence. The Commissioner may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. Alternatively the permittee may submit a "Bypass/Overflow Report" (State Form 48373) or a "Noncompliance 24-Hour Notification Report" (State Form 54215), whichever is appropriate, to IDEM at (317) 232-8637 or wwreports@idem.in.gov. If a complete fax or e-mail submittal is sent within 24 hours of the time that the permittee became aware of the occurrence, then the fax report will satisfy both the oral and written reporting requirements.

Upon its effectiveness, the proposed Federal E-Reporting Rule will require these reports to be submitted electronically.

4. Other Compliance/Noncompliance Reporting

Pursuant to 327 IAC 5-2-8(10)(D), the permittee shall report any instance of noncompliance not reported under the "Twenty-Four Hour Reporting Requirements" in Part II.C.3, or any compliance schedules at the time the pertinent Discharge Monitoring Report is submitted. The report shall contain the information specified in Part II.C.3;

The permittee shall also give advance notice to the Commissioner of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements; and

All reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

Upon its effectiveness, the proposed Federal E-Reporting Rule will require these reports to be submitted electronically.

5. Other Information

Pursuant to 327 IAC 5-2-8(10)(E), where the permittee becomes aware of a failure to submit any relevant facts or submitted incorrect information in a permit application or in any report, the permittee shall promptly submit such facts or corrected information to the Commissioner.

6. Signatory Requirements

Pursuant to 327 IAC 5-2-22 and 327 IAC 5-2-8(14):

a. All reports required by the permit and other information requested by the Commissioner shall be signed and certified by a person described below or by a duly authorized representative of that person:

(1) For a corporation: by a responsible corporate officer defined as a president, secretary, treasurer, any vice-president of the corporation in charge of a principal business function, or any other person who performs similar policymaking or decision making functions for the corporation or the manager of one or more manufacturing, production or operating facilities employing more than two hundred fifty (250) persons or having the gross annual sales or expenditures exceeding twenty-five million dollars ($25,000,000) (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a Federal, State, or local government body or any agency or political subdivision thereof: by either a principal executive officer or ranking elected official.

(4) Under the proposed Federal E-Reporting Rule, a method will be developed for submittal of all affected reports and documents using electronic signatures that is compliant with the Cross-Media Electronic Reporting Regulation (CROMERR). Enrollment and use of NetDMR currently provides for CROMERR-compliant report submittal.

b. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described above.

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or a position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

(3) The authorization is submitted to the Commissioner.

c. Certification. Any person signing a document identified under Part II.C.6. shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

7. Availability of Reports

Except for data determined to be confidential under 327 IAC 12.1, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Indiana Department of Environmental Management and the Regional Administrator. As required by the Clean Water Act, permit applications, permits, and effluent data shall not be considered confidential.

8. Penalties for Falsification of Reports

IC 13-30 and 327 IAC 5-2-8(14) provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance, shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 180 days per violation, or by both.

9. Changes in Discharge of Toxic Substances

Pursuant to 40 CFR 122.42(a)(1), 40 CFR 122.42(a)(2), and 327 IAC 5-2-9, the permittee shall notify the Commissioner as soon as it knows or has reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any pollutant identified as toxic pursuant to Section 307(a) of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels."

(1) One hundred micrograms per liter (100µg/l);

(2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500µg/l) for 2,4-dinitrophenol and 2-methyl-4,6-dinitophenol; and one milligram per liter (1mg/l) for antimony;

(3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or

(4) A notification level established by the Commissioner on a case-by-case basis, either at his own initiative or upon a petition by the permittee. This notification level may exceed the level specified in subdivisions (1), (2), or (3) but may not exceed the level which can be achieved by the technology-based treatment requirements applicable to the permittee under the CWA (see 327 IAC 5-5-2).

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:

(1) Five hundred micrograms per liter (500 µg/l);

(2) One milligram per liter (1 mg/l) for antimony;

(3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with Sec. 122.21(g)(7).

(4) A notification level established by the Commissioner on a case-by-case basis, either at his own initiative or upon a petition by the permittee. This notification level may exceed the level specified in subdivisions (1), (2), or (3) but may not exceed the level which can be achieved by the technology-based treatment requirements applicable to the permittee under the CWA (see 327 IAC 5-5-2).

c. That it has begun or expects to begin to use or manufacture, as an intermediate or final product or byproduct, any toxic pollutant which was not reported in the permit application under 40 CFR 122.21(g)(9).

Appendix I.C.
NPDES Permit Part III
Other Requirements

PART III
Other Requirements

A. Thermal Effluent Requirements

The combined effect of the effluent from Outfall 002, 003, and 004 shall comply with the following:

1. There shall be no rise in the temperature in Portage-Burns Waterway of greater than 2 ºF, as determined from upstream temperature and downstream temperature at the edge of the mixing zone.

2. The downstream temperature in ºF at the edge of the mixing zone shall not exceed the maximum limits in Temperature Table 1 below during more than one percent (1%) of the hours in the twelve (12) month period ending with any month: at no time shall the downstream temperature in ºF at the edge of the mixing zone exceed the maximum limits in Temperate table by more than 3 ºF:

Temperature Table 1
Maximum Instream Water Temperatures

	Jan	Feb	Mar	Dec
ºF	50	50	60	57

3. The number of hours where the downstream temperature at the edge of the mixing zone exceeds the maximum limits in Temperature Table 1 and the number of days where the downstream temperature exceeds the maximum limits in Temperature Table 1 by more than 3 ºF shall be reported on the state monthly monitoring report and the federal discharge monitoring report.

4. The cumulative number of hours where the downstream temperature at the edge of the mixing zone exceeds the maximum limits in Temperature Table 1 during the most recent twelve (12) months period shall be reported on the state monthly monitoring report and federal discharge monitoring report every month. The most recent twelve (12) months shall include the current month and the previous eleven (11) month.

5. The downstream temperature in ºF at the edge of the mixing zone shall not exceed the maximum limits in Temperature Table 2 below at any time:

Temperature Table 2
Maximum In-Stream Water Temperatures

Apr	May	Jun	Jul	Aug	Sep	Oct	Nov

ºF	65	65	70	70	70	65	65	65

6. The provisions of paragraph 5 above shall be inapplicable at any time when the upstream temperature is within 2 ºF of the maximum limitation for that day.

7. The mixing zone is the area in Portage-Burns Waterway extending laterally from Outfall 002 to one-half the width of Portage-Burns Waterway and to a distance of 300 feet downstream of Outfall 004.

8. In order to verify compliance with the above limitations, the permittee is required to report the following information as Outfall 500:

Parameter	Monthly Av.	Daily Max.	Units	Frequency	Sample Type
Intake Temp.	Report	Report	ºF	1 x Hourly	[1]
Upstream River Temp.	Report	Report	ºF	1 x Hourly	[1]
Outfall 002 Effluent	Report	Report	ºF	1 x Hourly	[1]
Outfall 003 Effluent	Report	Report	ºF	1 x Hourly	[1]
Outfall 004 Effluent	Report	Report	ºF	1 x Hourly	[1]
Downstream River Temp[2]	Report	Report	ºF	1 x Hourly	[3]
Delta T [4]	------	Report	ºF	1 x Daily	[5]

[1] Monitoring and reporting of temperature is to occur on a continuous basis. Temperature measurements shall be recorded continuously in one hour intervals and the highest single recorded hourly measurement shall be reported on the federal discharge monitoring report as the maximum daily temperature of that month.

[2] The following equation shall be used to calculate the downstream river temperature using concurrent hourly temperature and flow measurements:

$$T_d = \alpha * T_u * \frac{Q_u}{Q_t} + \gamma * T_2 * \frac{Q_2}{Q_t} + \delta * T_3 * \frac{Q_3}{Q_t} + \varepsilon * T_4 * \frac{Q_4}{Q_t}$$

where:

T_d = hourly downstream river temperature (°F)
T_u = hourly river temperature upstream of Outfall 002 (°F)
T_2 = hourly outfall 002 temperature (°F)
T_3 = hourly outfall 003 temperature (°F)
T_4 = hourly outfall 004 temperature (°F)
Q_u = the 24-hour rolling average flow in Portage-Burns Waterway measured upstream of Outfall 002 (MGD); this flow shall be calculated on an hourly basis as the average of the current hourly flow measurement and the previous 23 hourly flow measurements
Q_2 = hourly outfall 002 flow (MGD)
Q_3 = hourly outfall 003 flow (MGD)
Q_4 = hourly outfall 004 flow (MGD)
$Q_t = Q_u + Q_2 + Q_3 + Q_4$
$\alpha, \gamma, \delta, \varepsilon$ = regression model coefficients approved by the Commissioner.

Alternatively, the permittee may measure the temperature at the edge of the mixing zone approximately 300 feet downstream of Outfall 004. Temperature measurements shall be taken at mid-stream and at a depth of approximately one meter below the water's surface. An annotation shall be made on the state monthly monitoring report each day this option is used.

[3] Monitoring and reporting of temperature is to occur on a continuous basis. Temperature measurements shall be recorded continuously in one hour intervals and the total number of hours above the corresponding maximum limits in Part III.A.2 for the twelve (12) months shall be reported. The twelve (12) months shall include the current month and the previous elven (11) months. The highest single recorded hourly measurement shall be reported on the federal discharge monitoring report as a maximum daily temperature of that month.

[4] This is the difference each day between the maximum upstream and maximum downstream (peak) temperature.

[5] Calculated maximum

[6] The following narrative requirements for temperature shall apply outside the mixing zone:

a. There shall be no abnormal temperature changes that may adversely affect aquatic life unless caused by natural conditions.

b. The normal daily and seasonal temperature fluctuations that existed before the addition of heat due to other than natural causes shall be maintained.

B. POLYCHLORINATED BIPHENYL (PCB)

There shall be no discharge of polychlorinated biphenyl (PCB) compounds attributable to facility operations such as those historically used in transformer fluids. In order to determine compliance with the PCB discharge prohibition, the permittee shall provide the following PCB data with the next NPDES permit renewal application for at least one sample taken from each final outfall. The corresponding facility water intakes shall be monitored at the same time as the final outfalls.

Pollutant	Test Method	LOD	LOQ
PCBs*	EPA 608	0.1 ug/l	0.3 ug/l

*PCB 1242, 1254, 1221, 1232, 1248, 1260, 1016

Appendix I.D.
NPDES Permit Part IV
Cooling Water Intake Structures

Part IV
Cooling Water Intake Structures

A. Best Technology Available (BTA) Determination

In accordance with 40 CFR 401.14, the location, design, construction and capacity of cooling water intake structures of any point source for which a standard is established pursuant to section 301 or 306 of the Act shall reflect the best technology available for minimizing adverse environmental impact.

The EPA promulgated a Clean Water Act (CWA) section 316(b) regulation on August 15, 2014, that establishes standards for cooling water intake structures. 79 Fed. Reg. 48300-439 (August 15, 2014). The regulation establishes best technology available standards to reduce impingement and entrainment of aquatic organisms at existing power generation and manufacturing facilities and it became effective on October 14, 2014.

USS Midwest submitted the information required by 40 CFR 122.21(r) (2) through (r) (8) with the permit application as required by Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326) to IDEM.

Based on available information, IDEM has made a Best Technology Available (BTA) determination that the existing cooling water intake structures represent best technology available to minimize adverse environmental impact in accordance with Section 316(b) of the federal Clean Water Act (22 U.S.C section1326) at this time. This determination will be reassessed at the next permit reissuance to ensure that the CWISs continue to meet the requirements of Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326).

B. Permit Requirements

In accordance with 40 CFR 125.95(a)(1), the permittee must submit to the IDEM the information required in the applicable provisions of 40 CFR 122.21(r) when applying for a subsequent permit (consistent with the permittee's duty to reapply pursuant to 40 CFR 122.21(d)). Per 40 CFR 125.95(c) after the initial submission of the 40 CFR 122.21(r) permit application studies after October 14, 2014 the permittee may, in subsequent permit applications, request to reduce the information required, if conditions at the facility and in the waterbody remain substantially unchanged since the previous application so long as the relevant previously submitted information remains representative of current source water, intake structure, cooling water system, and operating conditions. The permittee must submit its request for reduced cooling water intake structure and waterbody application information to the IDEM at least two years and six months prior to the expiration of its NPDES permit. The permittee's request must identify each element of the application requirements that it determines has not substantially changed since the previous permit application and the basis for the determination. IDEM has the discretion to accept or reject any part of the request. The permittee shall comply with requirements below:

1. In accordance with 40 CFR 125.98(b)(1), nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.

2. At all times properly operate and maintain the intake equipment and incorporate management practices and operational measures necessary to ensure proper operation of the CWIS.

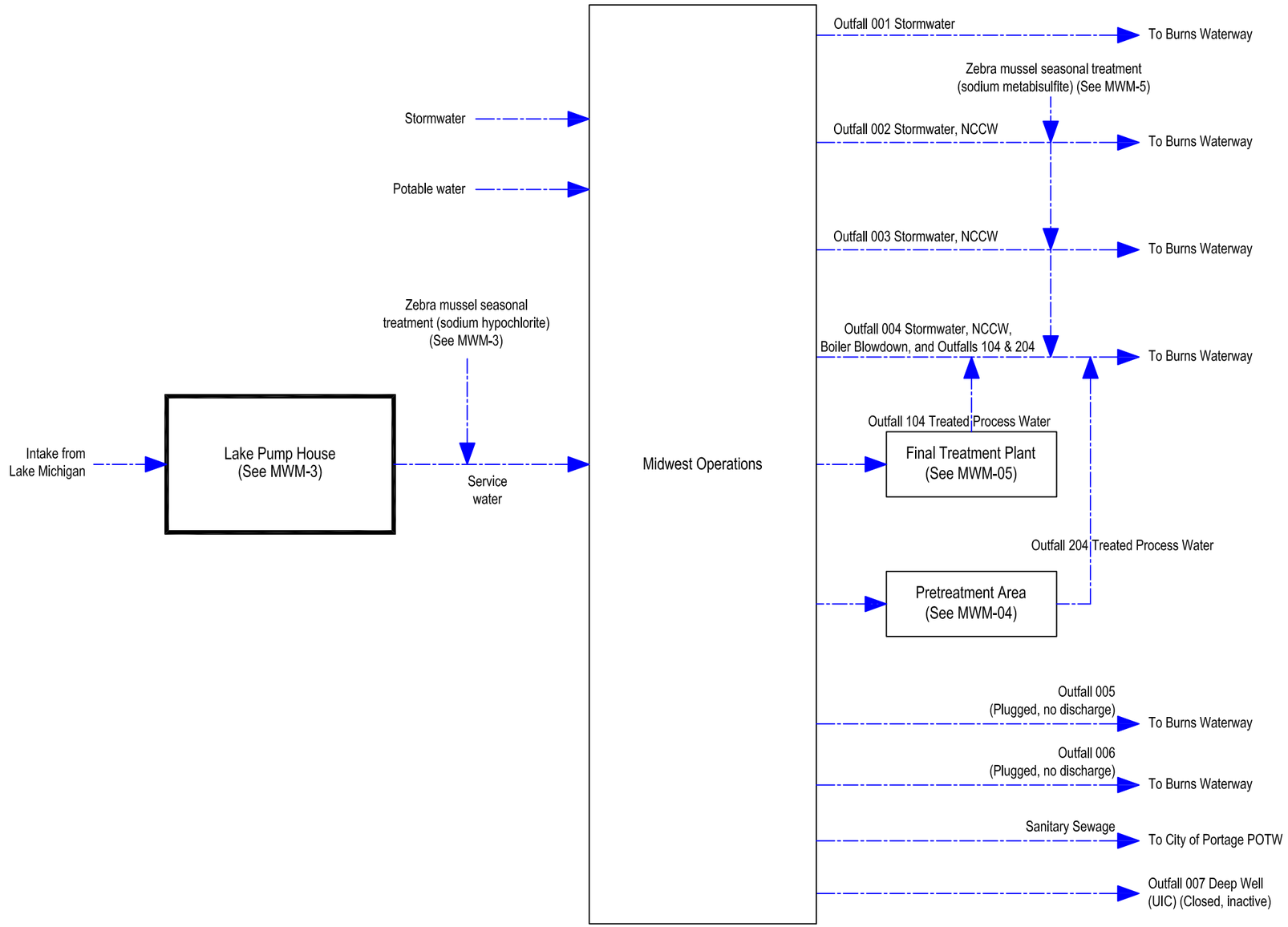
3. Provide advance notice to IDEM of any proposed changes to the CWIS or proposed changes to operations at the facility that affect the information taken into account in the current BTA evaluation.

4. There shall be no discharge of debris from intake screen washing which will settle to form objectionable deposits which are in amounts sufficient to be unsightly or deleterious, or which will produce colors or odors constituting a nuisance.

5. All required reports shall be submitted to the IDEM, Office of Water Quality, NPDES Permits Branch.

6. Submit the information required to be considered by the Director per 40 CFR 125.98 to assist IDEM with the fact sheet or statement of basis for entrainment BTA, as soon as practicable, but no later than with the application for the next permit renewal.

Appendix II
Process Flow Diagrams



CONFIDENTIAL

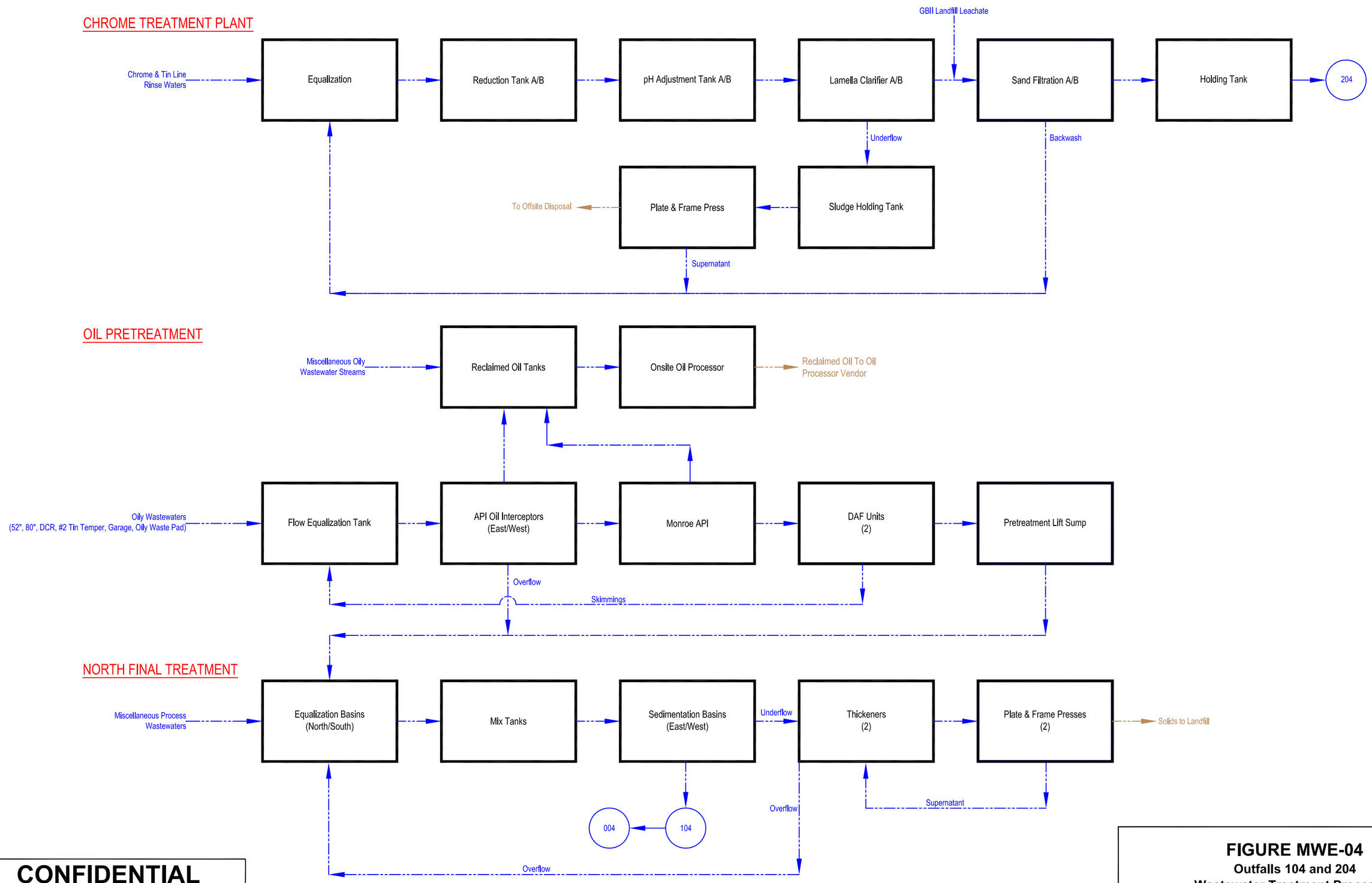
PRODUCT OR PROCESS THROUGHPUT				
LIQUID MATERIAL STREAMS	OUTFALL NUMBER		REVISION DATE:	03/22/2018
GASEOUS MATERIAL STREAMS	AIR EMISSION SOURCE		FILE PATH:	USMW/Drawings/PFDs
SOLID MATERIAL STREAMS	SOLID WASTE STREAM		FILE NAME:	MWE-03.DWG

FIGURE MWE-03
Outfalls

U. S. Steel - Midwest Plant
Process Flow Diagrams

ST Environmental LLC
PO Box 2557
Chesterton, IN 46304
Phone: (219) 728 - 6312

PRINTED COPIES ARE UNCONTROLLED DOCUMENTS - SEE ENVIRONMENTAL CONTROL FOR CURRENT VERSION



CONFIDENTIAL

PRODUCT OR PROCESS THROUGHPUT	
LIQUID MATERIAL STREAMS	OUTFALL NUMBER
GASEOUS MATERIAL STREAMS	AIR EMISSION SOURCE
SOLID MATERIAL STREAMS	SOLID WASTE STREAM

REVISION DATE:	03/22/2018
FILE PATH:	USSMW/Drawings
FILE NAME:	MWE-04.dwg

FIGURE MWE-04

Outfalls 104 and 204
Wastewater Treatment Processes

U. S. Steel - MIdwest Plant
Process Flow Diagrams

ST Environmental LLC
PO Box 2557
Chesterton, IN 46304
Phone: (219) 728 - 6312

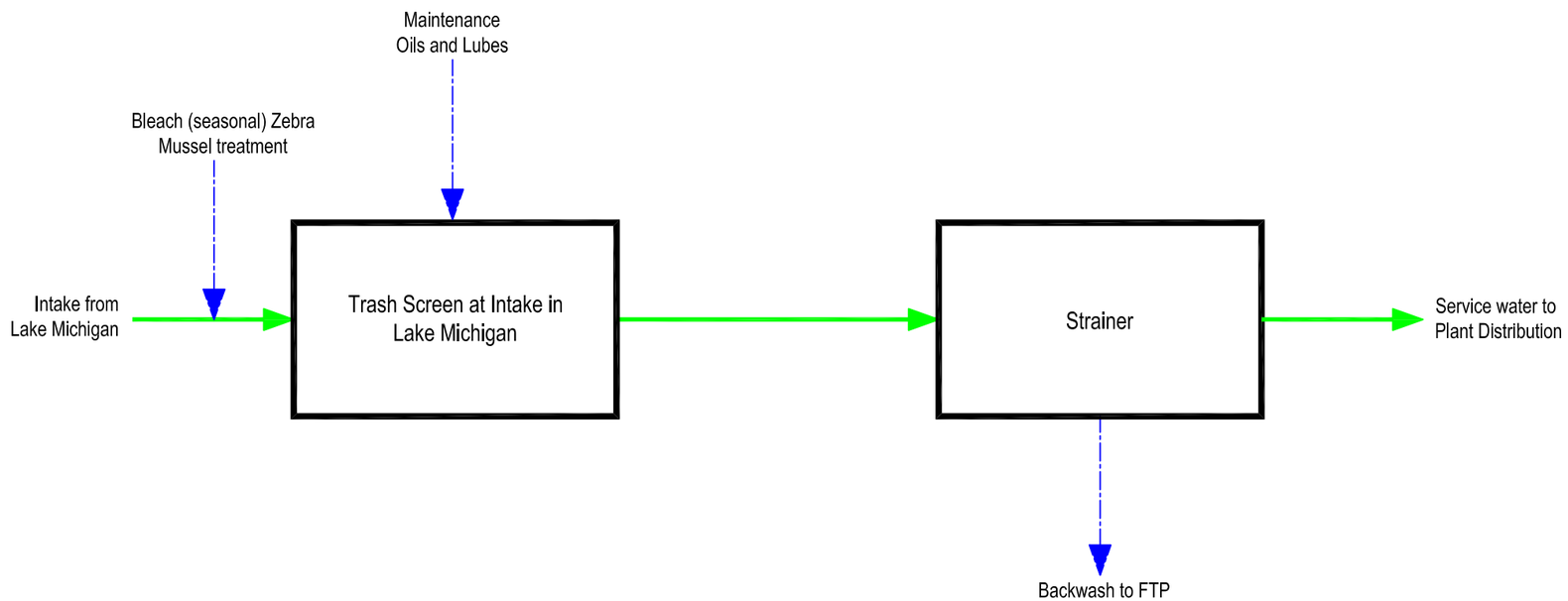


FIGURE MWM-03
Lake Pump House

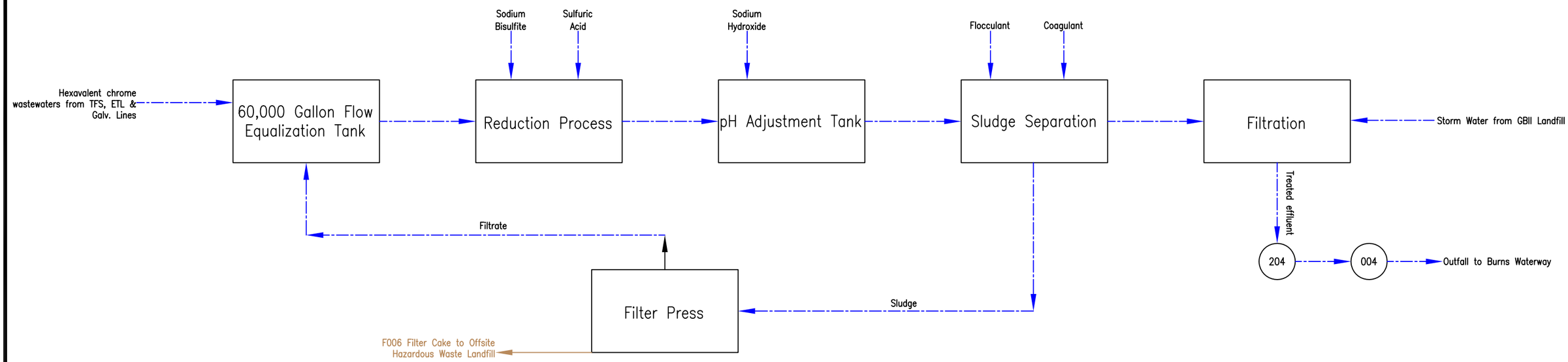
PRODUCT OR PROCESS THROUGHPUT				
LIQUID MATERIAL STREAMS	OUTFALL NUMBER	REVISION DATE:	03/15/2018	
GASEOUS MATERIAL STREAMS	AIR EMISSION SOURCE	FILE PATH:	USSMW/Drawings/PFDs	
SOLID MATERIAL STREAMS	SOLID WASTE STREAM	FILE NAME:	MWM-03.DWG	

U. S. Steel - Midwest Plant
Process Flow Diagrams

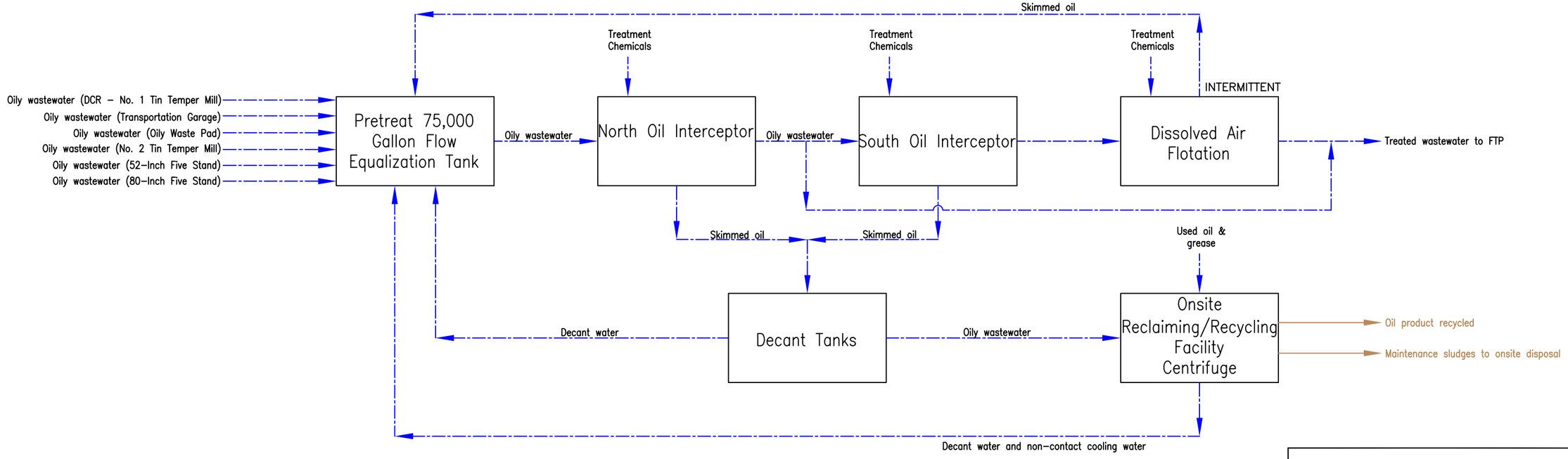
ST Environmental LLC
PO Box 2557
Chesterton, IN 46304
Phone: (219) 728 - 6312

PRINTED COPIES ARE UNCONTROLLED COPIES - CHECK ENVIRONMENTAL WEBSITE FOR CURRENT VERSION

CHROME TREATMENT PLANT



API/OIL SEPARATOR



CONFIDENTIAL

PRODUCT OR PROCESS THROUGHPUT	
LIQUID MATERIAL STREAMS	OUTFALL NUMBER
GASEOUS MATERIAL STREAMS	AIR EMISSION SOURCE
SOLID MATERIAL STREAMS	SOLID WASTE STREAM

REVISION DATE:	03/22/2018
FILE PATH:	USSMW/Drawings/PFDs
FILE NAME:	MWM-04.DWG

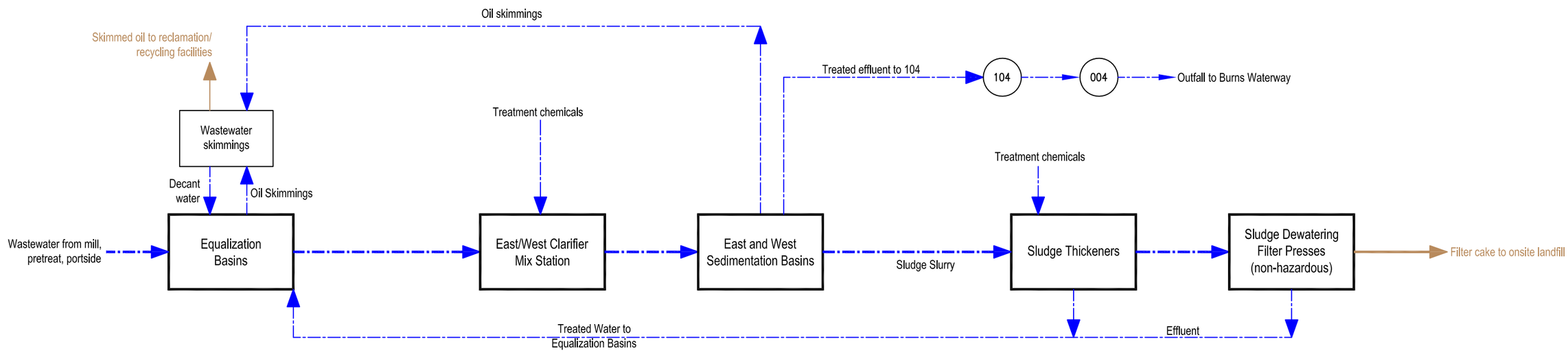
FIGURE MWM-04
Pre-Treatment Area

U. S. Steel - Midwest Plant
Process Flow Diagrams

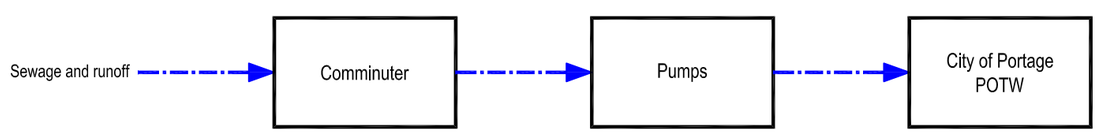
ST Environmental LLC
PO Box 2557
Chesterton, IN 46304
Phone: (219) 728 - 6312

PRINTED COPIES ARE UNCONTROLLED DOCUMENTS – SEE ENVIRONMENTAL CONTROL FOR CURRENT VERSION

Final Wastewater Treatment Plant (DIW Treatment)



Sanitary Sewer Treatment



Dechlorination Stations

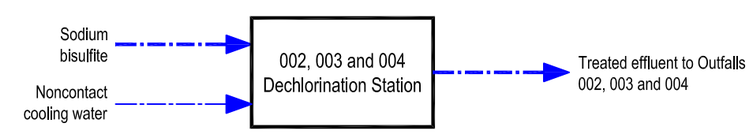


Figure MWM-05
Final Treatment Plant
Wastewater, Sanitary Sewer & Dechlorination Treatment

PRODUCT OR PROCESS THROUGHPUT				
LIQUID MATERIAL STREAMS	OUTFALL NUMBER	REVISION DATE:	03/22/2018	
GASEOUS MATERIAL STREAMS	AIR EMISSION SOURCE	FILE PATH:	USSMW/Drawings/PFDs	
SOLID MATERIAL STREAMS	SOLID WASTE STREAM	FILE NAME:	MWM-05.DWG	

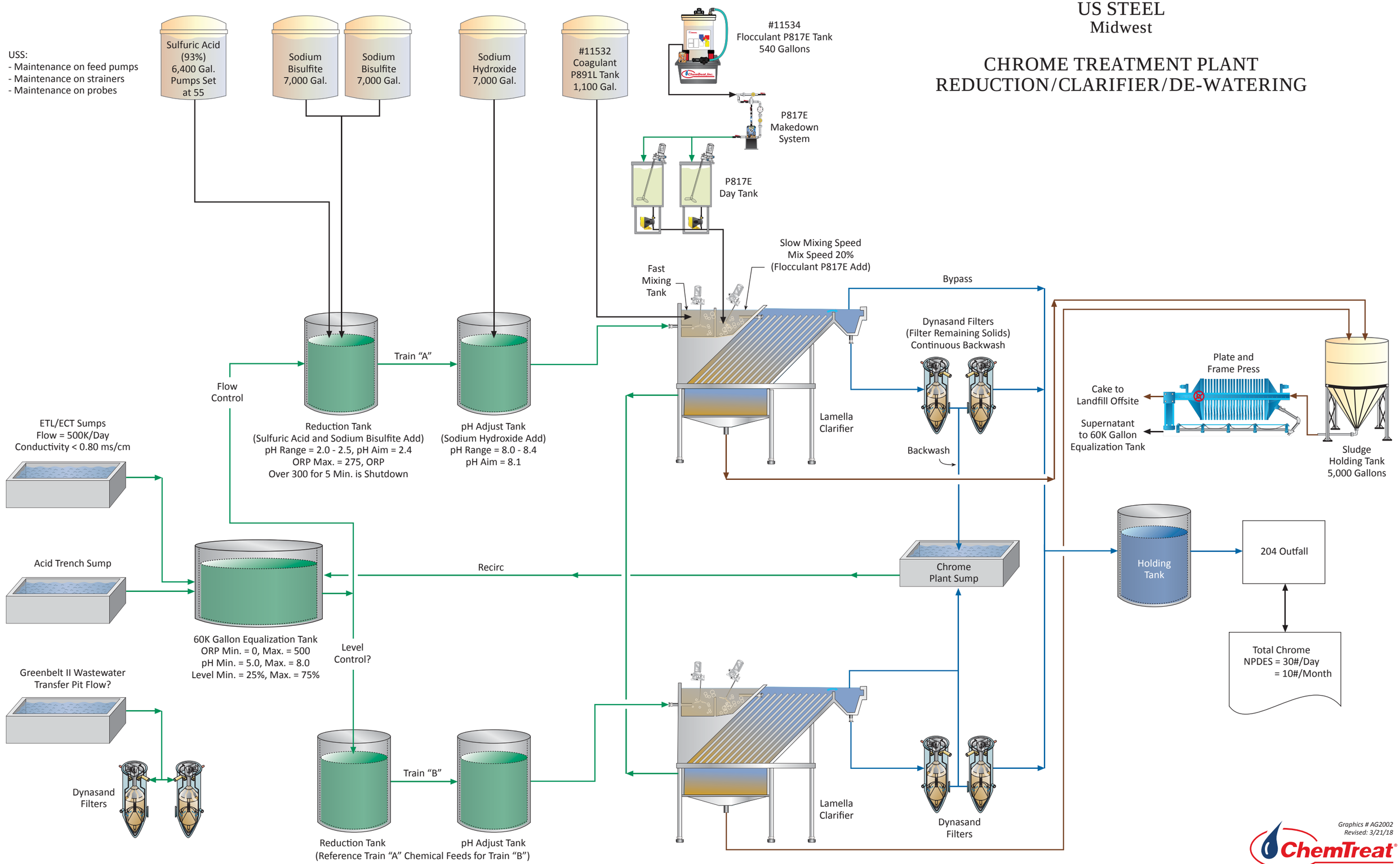
U. S. Steel - Midwest Plant
Process Flow Diagrams

ST Environmental LLC
PO Box 2557
Chesterton, IN 46304
Phone: (219) 728 - 6312

PRINTED COPIES ARE UNCONTROLLED DOCUMENTS - SEE ENVIRONMENTAL CONTROL FOR CURRENT VERSION

US STEEL
Midwest

CHROME TREATMENT PLANT
REDUCTION/CLARIFIER/DE-WATERING



** Drawing not to scale. For illustration purposes only.*

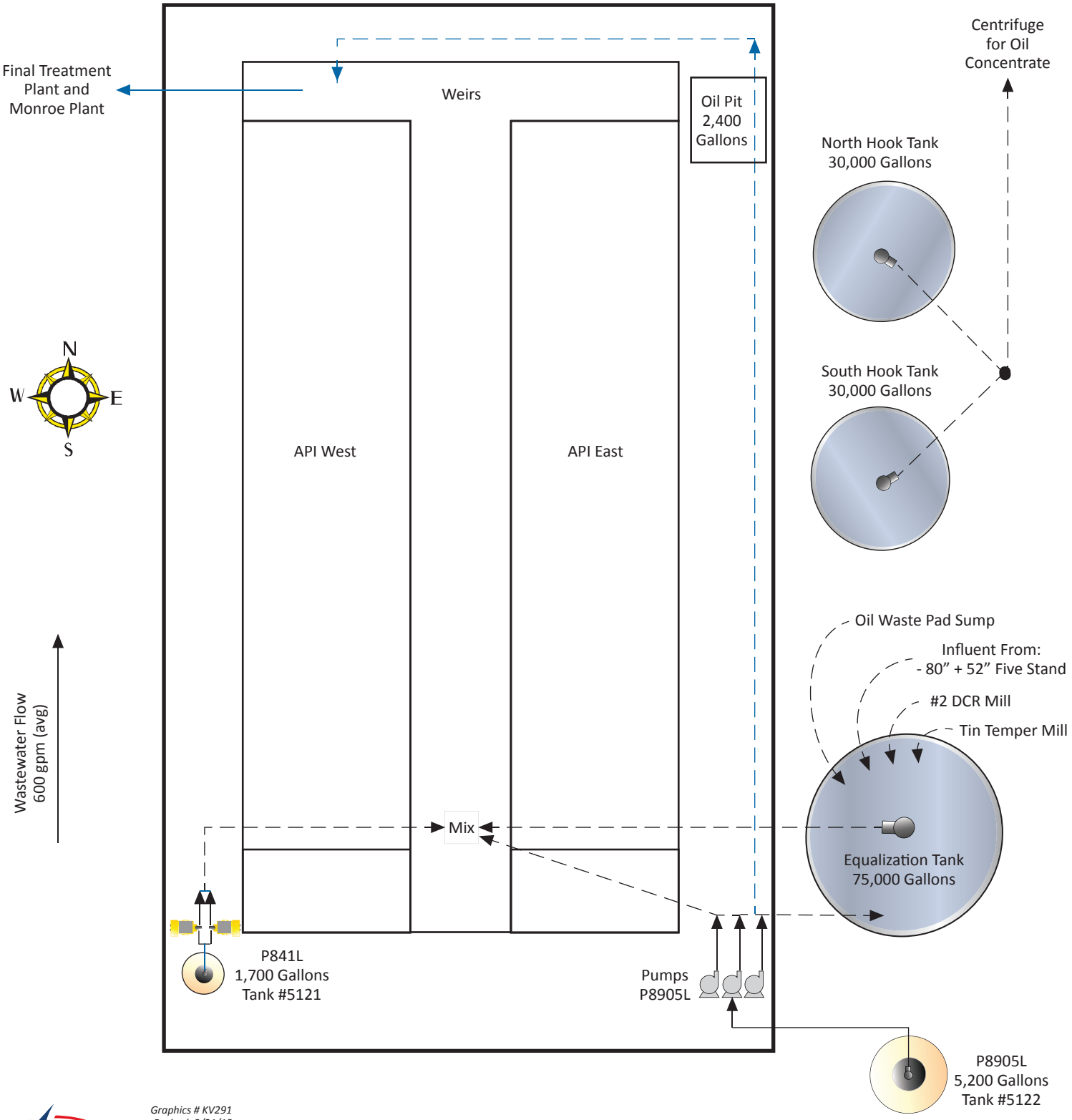
Graphics # AG2002
Revised: 3/21/18

ChemTreat®

© 2018 ChemTreat, Inc.

US STEEL
Midwest

API OIL INTERCEPTOR BUILDING AT PRE-TREAT



Graphics # KV291
Revised: 3/21/18

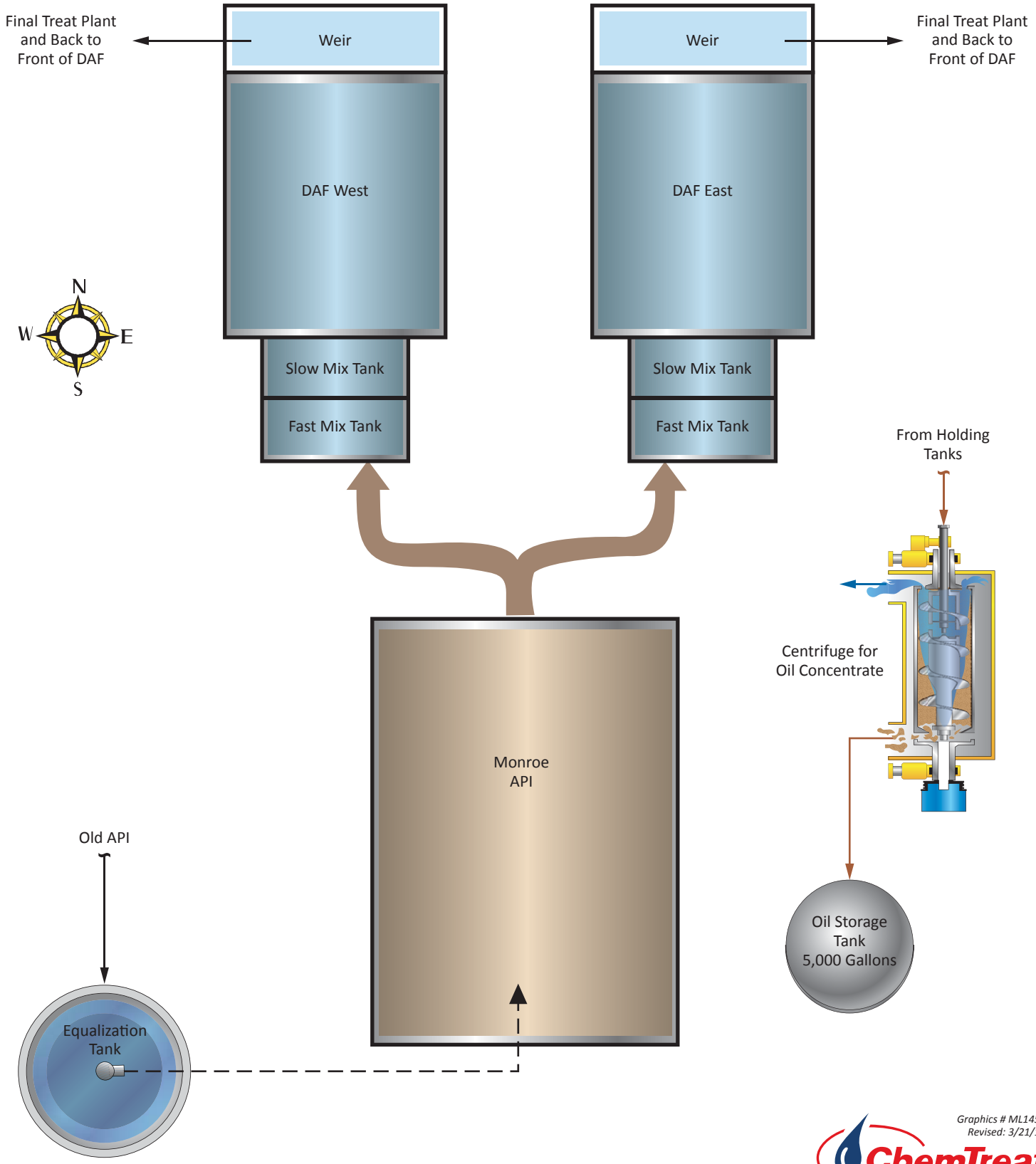
ChemTreat®

© 2018 ChemTreat, Inc.

** Drawing not to scale. For illustration purposes only.*

US STEEL
Midwest

NEW API OIL INTERCEPTOR BUILDING AT PRE-TREAT



Graphics # ML1457
Revised: 3/21/18

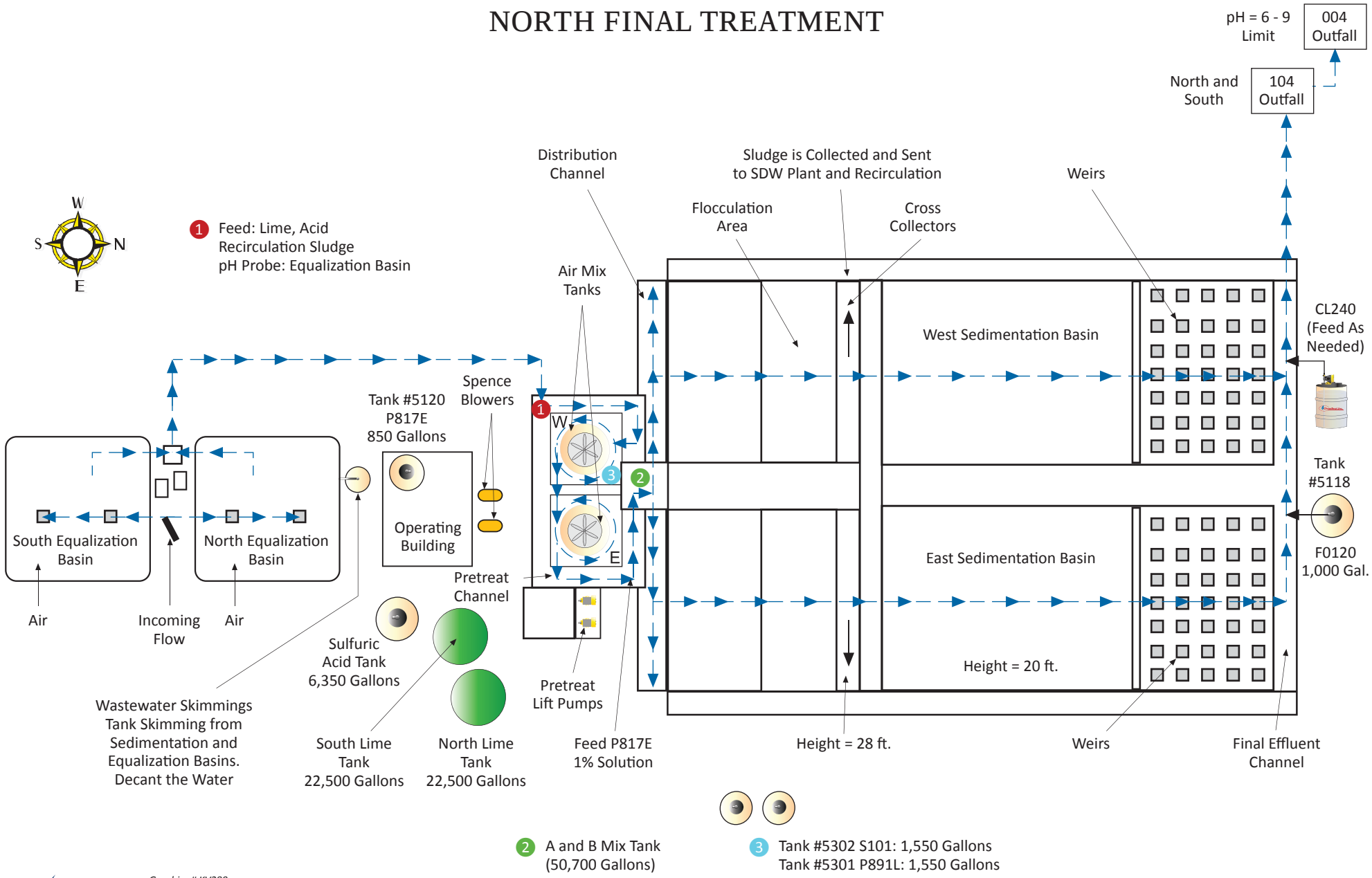
ChemTreat®

© 2018 ChemTreat, Inc.

** Drawing not to scale. For illustration purposes only.*

US STEEL
Midwest

NORTH FINAL TREATMENT



Graphics # KV289
Revised: 3/13/18

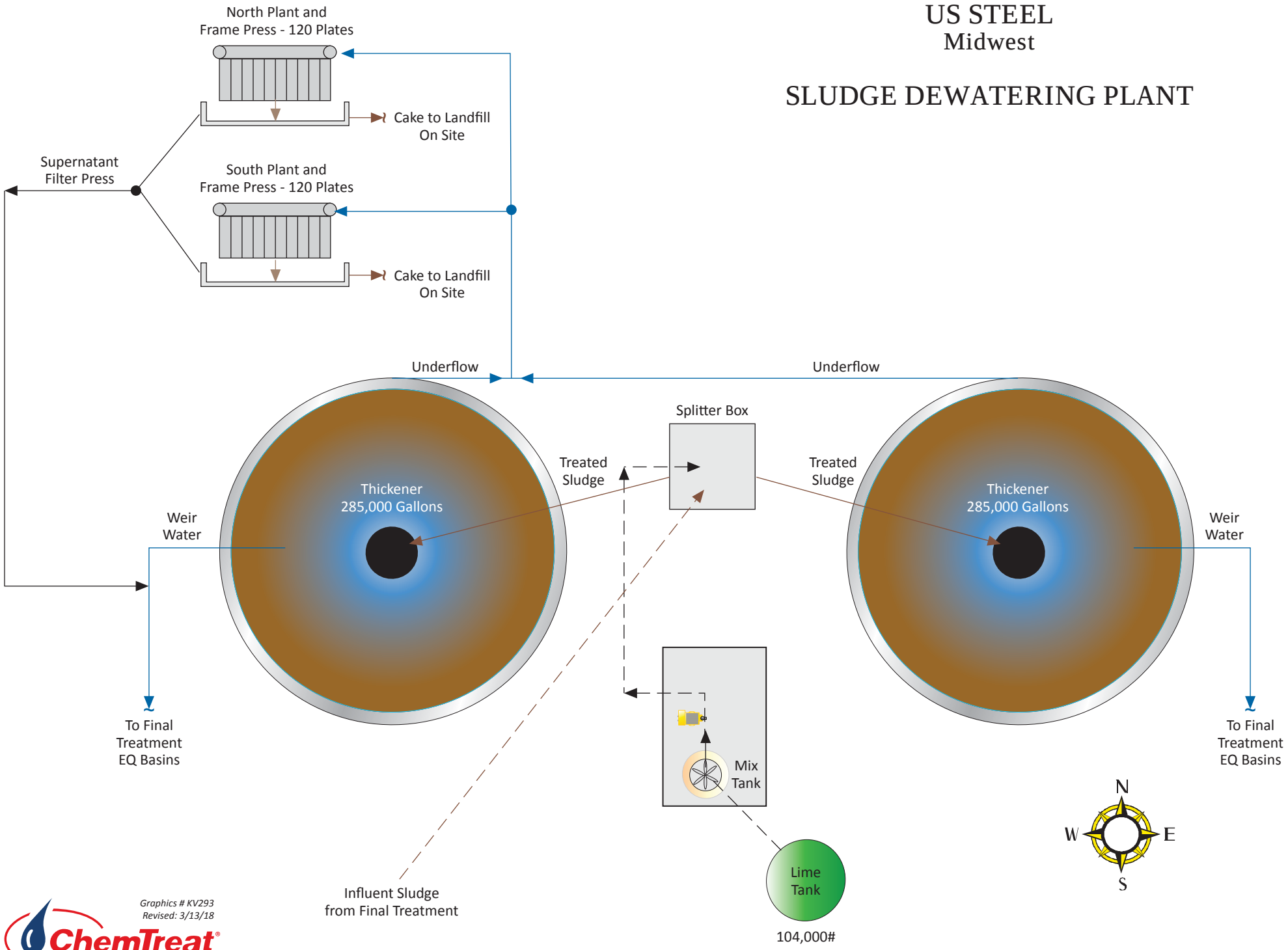
ChemTreat®

© 2018 ChemTreat, Inc.

** Drawing not to scale. For illustration purposes only.*

US STEEL
Midwest

SLUDGE DEWATERING PLANT



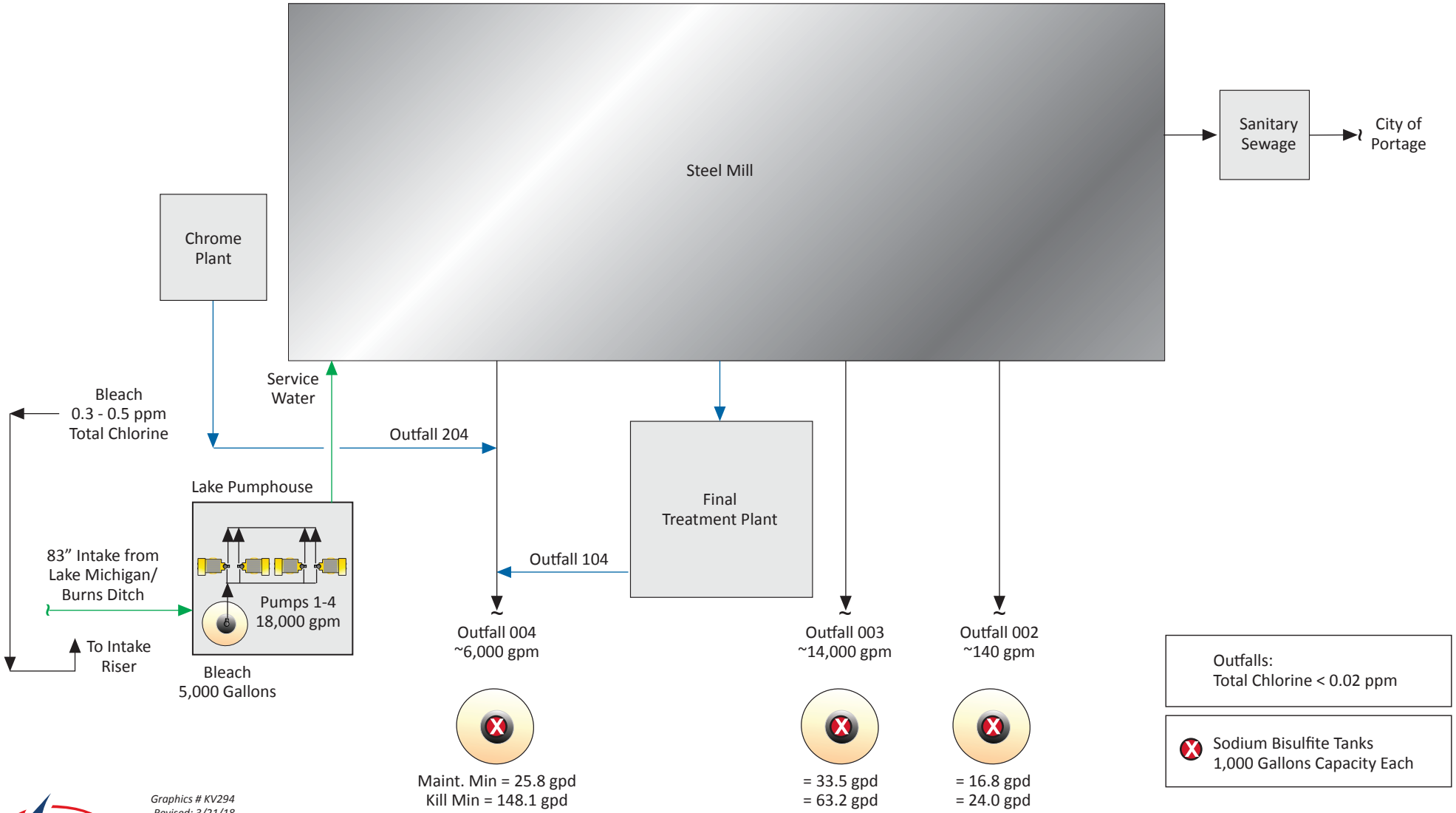
Graphics # KV293
Revised: 3/13/18

© 2018 ChemTreat, Inc.

** Drawing not to scale. For illustration purposes only.*

US STEEL
Midwest

OUTFALLS/SERVICE WATER TREATMENT (ZEBRA MUSSELS)



Graphics # KV294
Revised: 3/21/18

ChemTreat®

© 2018 ChemTreat, Inc.

** Drawing not to scale. For illustration purposes only.*

Appendix III
Laboratory Certifications

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Is hereby granting a Louisiana Environmental Laboratory Accreditation to

Ramboll Environ US Corp
201 Summit View Dr Ste 300
Brentwood, Tennessee 37027

Agency Interest No. 30735
Activity No. ACC20170001

According to the Louisiana Administrative Code, Title 33, Part I, Subpart 3, LABORATORY ACCREDITATION, the State of Louisiana formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed in the attachment.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part I, Subpart 3 requirements and agrees to adapt to any changes in the requirements. It also acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part I and the 2009 TNI Standard by which the laboratory was assessed. Please contact the Department of Environmental Quality, Louisiana Environmental Laboratory Accreditation Program (LELAP) to verify the laboratory's scope of accreditation and accreditation status.

Accreditation by the State of Louisiana is not an endorsement or a guarantee of validity of the data generated by the laboratory. To be accredited initially and maintain accreditation, the laboratory agrees to participate in two single-blind, single-concentration PT studies, where available, per year for each field of testing for which it seeks accreditation or maintains accreditation as required in LAC 33:I.4711.

Cheryl Sonnier Nolan
Administrator
Public Participation and Permit Support Services Division

Issued Date: 11 June 2017

Effective Date: **July 1, 2017**
Expiration Date: **June 30, 2018**
Certificate Number: **02061**

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Effective Date: July 1, 2017

Ramboll Environ US Corp
AI Number: 30735
Activity No.: ACC20170001
Expiration Date: June 30, 2018

201 Summit View Dr Ste 300, Brentwood, Tennessee 37027

Certificate Number: 02061

Air Emissions

Analyte	Method Name	Method Code	Type	AB
NONE	NONE	NONE	NONE	NONE

Non Potable Water

Analyte	Method Name	Method Code	Type	AB
3315 - Ceriodaphnia dubia	EPA 1002	10115001	NELAP	LA
3472 - IC25 Biomass	EPA 1003	10115205	NELAP	LA
3477 - NOEC Biomass	EPA 1003	10115205	NELAP	LA
3315 - Ceriodaphnia dubia	EPA 2000	10213602	NELAP	LA
3340 - Cyprinella leedsi	EPA 2000	10213602	NELAP	LA
3460 - LC50 Survival	EPA 2000	10213602	NELAP	LA
3410 - Pimephales promelas	EPA 2000	10213602	NELAP	LA
3470 - IC25 (ON) Growth	EPA 1000.0 - Fathead minnow, 7-day Chronic, daily renewal, MHSF 25°C	10214207	NELAP	LA
3482 - IC25 Survival	EPA 1000.0 - Fathead minnow, 7-day Chronic, daily renewal, MHSF 25°C	10214207	NELAP	LA
3475 - NOEC (ON) Growth	EPA 1000.0 - Fathead minnow, 7-day Chronic, daily renewal, MHSF 25°C	10214207	NELAP	LA
3465 - NOEC Survival	EPA 1000.0 - Fathead minnow, 7-day Chronic, daily renewal, MHSF 25°C	10214207	NELAP	LA
3460 - LC50 Survival	EPA 2002.0	10214581	NELAP	LA
3315 - Ceriodaphnia dubia	EPA 2002 Ceriodaphnia dubia Acute MHSF 25°C	10214809	NELAP	LA
3460 - LC50 Survival	EPA 2002 Ceriodaphnia dubia Acute MHSF 25°C	10214809	NELAP	LA
3480 - IC25 Reproduction	EPA 1002.0 - Ceriodaphnia dubia, 7-day Chronic, daily renewal, MHSF 25°C	10215006	NELAP	LA
3482 - IC25 Survival	EPA 1002.0 - Ceriodaphnia dubia, 7-day Chronic, daily renewal, MHSF 25°C	10215006	NELAP	LA
3485 - NOEC Reproduction	EPA 1002.0 - Ceriodaphnia dubia, 7-day Chronic, daily renewal, MHSF 25°C	10215006	NELAP	LA
3465 - NOEC Survival	EPA 1002.0 - Ceriodaphnia dubia, 7-day Chronic, daily renewal, MHSF 25°C	10215006	NELAP	LA
3460 - LC50 Survival	EPA 2021.0 - Daphnia magna, 48-hr Acute, nonrenewal, MHSF 25°C	10215415	NELAP	LA
3355 - Daphnia pulex	EPA 2021 Daphnia pulex Acute	10215608	NELAP	LA
3460 - LC50 Survival	EPA 2021.0 - Daphnia pulex, 48hr Acute, nonrenewal, MHSF 25°C	10215619	NELAP	LA
3325 - Chronic toxicity	EPA 1000.0	10252605	NELAP	LA
3470 - IC25 (ON) Growth	EPA 1000.0	10252605	NELAP	LA
3482 - IC25 Survival	EPA 1000.0	10252605	NELAP	LA
3475 - NOEC (ON) Growth	EPA 1000.0	10252605	NELAP	LA
3465 - NOEC Survival	EPA 1000.0	10252605	NELAP	LA
3410 - Pimephales promelas	EPA 1000.0	10252605	NELAP	LA
3325 - Chronic toxicity	EPA 1002.0	10253006	NELAP	LA
3480 - IC25 Reproduction	EPA 1002.0	10253006	NELAP	LA
3482 - IC25 Survival	EPA 1002.0	10253006	NELAP	LA

Clients and Customers are urged to verify the laboratory's current certification status with the Louisiana Environmental Laboratory Accreditation Program.

Non Potable Water

Analyte	Method Name	Method Code	Type	AB
3485 - NOEC Reproduction	EPA 1002.0	10253006	NELAP	LA
3465 - NOEC Survival	EPA 1002.0	10253006	NELAP	LA
3472 - IC25 Biomass	EPA 1003.0 - Green Algae, 4-day Chronic, nonrenewal, 20% DMW 25°C	10253200	NELAP	LA
3477 - NOEC Biomass	EPA 1003.0 - Green Algae, 4-day Chronic, nonrenewal, 20% DMW 25°C	10253200	NELAP	LA
3420 - Selenastrum capricornutum	EPA 1003.0 - Green Algae, 4-day Chronic, nonrenewal, 20% DMW 25°C	10253200	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
NONE	NONE	NONE	NONE	NONE

Biological Tissue

Analyte	Method Name	Method Code	Type	AB
NONE	NONE	NONE	NONE	NONE

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Is hereby granting a Louisiana Environmental Laboratory Accreditation to

Ramboll US Corporation
201 Summit View Dr Ste 300
Brentwood, Tennessee 37027

Agency Interest No. 30735
Activity No. ACC20180002

According to the Louisiana Administrative Code, Title 33, Part I, Subpart 3, LABORATORY ACCREDITATION, the State of Louisiana formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed in the attachment.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part I, Subpart 3 requirements and agrees to adapt to any changes in the requirements. It also acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part I and the 2009 TNI Standard by which the laboratory was assessed. Please contact the Department of Environmental Quality, Louisiana Environmental Laboratory Accreditation Program (LELAP) to verify the laboratory's scope of accreditation and accreditation status.

Accreditation by the State of Louisiana is not an endorsement or a guarantee of validity of the data generated by the laboratory. Accreditation of the environmental laboratory does not imply that a product, process, system, or person is approved by LELAP. To be accredited initially and maintain accreditation, the laboratory agrees to participate in two single-blind, single-concentration PT studies, where available, per year for each field of testing for which it seeks accreditation or maintains accreditation as required in LAC 33:I.4711.

Cheryl Sonnier Nolan
Administrator
Public Participation and Permit Support Services Division

Issued Date: 06 June 2018

Effective Date: **July 1, 2018**
Expiration Date: **June 30, 2019**
Certificate Number: **02061**

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Effective Date: July 1, 2018

Ramboll US Corporation
AI Number: 30735
Activity No.: ACC20180002
Expiration Date: June 30, 2019

201 Summit View Dr Ste 300, Brentwood, Tennessee 37027

Certificate Number: 02061

Air Emissions

Analyte	Method Name	Method Code	Type	AB
NONE	NONE	NONE	NONE	NONE

Non Potable Water

Analyte	Method Name	Method Code	Type	AB
3315 - Ceriodaphnia dubia	EPA 1002	10115001	NELAP	LA
3472 - IC25 Biomass	EPA 1003	10115205	NELAP	LA
3477 - NOEC Biomass	EPA 1003	10115205	NELAP	LA
3315 - Ceriodaphnia dubia	EPA 2000	10213602	NELAP	LA
3340 - Cyprinella leedsi	EPA 2000	10213602	NELAP	LA
3460 - LC50 Survival	EPA 2000	10213602	NELAP	LA
3410 - Pimephales promelas	EPA 2000	10213602	NELAP	LA
3470 - IC25 (ON) Growth	EPA 1000.0 - Fathead minnow, 7-day Chronic, daily renewal, MHSF 25°C	10214207	NELAP	LA
3482 - IC25 Survival	EPA 1000.0 - Fathead minnow, 7-day Chronic, daily renewal, MHSF 25°C	10214207	NELAP	LA
3475 - NOEC (ON) Growth	EPA 1000.0 - Fathead minnow, 7-day Chronic, daily renewal, MHSF 25°C	10214207	NELAP	LA
3465 - NOEC Survival	EPA 1000.0 - Fathead minnow, 7-day Chronic, daily renewal, MHSF 25°C	10214207	NELAP	LA
3460 - LC50 Survival	EPA 2002.0	10214581	NELAP	LA
3315 - Ceriodaphnia dubia	EPA 2002 Ceriodaphnia dubia Acute MHSF 25Â°C	10214809	NELAP	LA
3460 - LC50 Survival	EPA 2002 Ceriodaphnia dubia Acute MHSF 25Â°C	10214809	NELAP	LA
3480 - IC25 Reproduction	EPA 1002.0 - Ceriodaphnia dubia, 7-day Chronic, daily renewal, MHSF 25°C	10215006	NELAP	LA
3482 - IC25 Survival	EPA 1002.0 - Ceriodaphnia dubia, 7-day Chronic, daily renewal, MHSF 25°C	10215006	NELAP	LA
3485 - NOEC Reproduction	EPA 1002.0 - Ceriodaphnia dubia, 7-day Chronic, daily renewal, MHSF 25°C	10215006	NELAP	LA
3465 - NOEC Survival	EPA 1002.0 - Ceriodaphnia dubia, 7-day Chronic, daily renewal, MHSF 25°C	10215006	NELAP	LA
3460 - LC50 Survival	EPA 2021.0 - Daphnia magna, 48-hr Acute, nonrenewal, MHSF 25°C	10215415	NELAP	LA
3355 - Daphnia pulex	EPA 2021 Daphnia pulex Acute	10215608	NELAP	LA
3460 - LC50 Survival	EPA 2021.0 - Daphnia pulex, 48hr Acute, nonrenewal, MHSF 25°C	10215619	NELAP	LA
3325 - Chronic toxicity	EPA 1000.0	10252605	NELAP	LA
3470 - IC25 (ON) Growth	EPA 1000.0	10252605	NELAP	LA
3482 - IC25 Survival	EPA 1000.0	10252605	NELAP	LA
3475 - NOEC (ON) Growth	EPA 1000.0	10252605	NELAP	LA
3465 - NOEC Survival	EPA 1000.0	10252605	NELAP	LA
3410 - Pimephales promelas	EPA 1000.0	10252605	NELAP	LA
3325 - Chronic toxicity	EPA 1002.0	10253006	NELAP	LA
3480 - IC25 Reproduction	EPA 1002.0	10253006	NELAP	LA
3482 - IC25 Survival	EPA 1002.0	10253006	NELAP	LA

Clients and Customers are urged to verify the laboratory's current certification status with the Louisiana Environmental Laboratory Accreditation Program.

Non Potable Water

Analyte	Method Name	Method Code	Type	AB
3485 - NOEC Reproduction	EPA 1002.0	10253006	NELAP	LA
3465 - NOEC Survival	EPA 1002.0	10253006	NELAP	LA
3472 - IC25 Biomass	EPA 1003.0 - Green Algae, 4-day Chronic, nonrenewal, 20% DMW 25°C	10253200	NELAP	LA
3477 - NOEC Biomass	EPA 1003.0 - Green Algae, 4-day Chronic, nonrenewal, 20% DMW 25°C	10253200	NELAP	LA
3420 - Selenastrum capricornutum	EPA 1003.0 - Green Algae, 4-day Chronic, nonrenewal, 20% DMW 25°C	10253200	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
NONE	NONE	NONE	NONE	NONE

Biological Tissue

Analyte	Method Name	Method Code	Type	AB
NONE	NONE	NONE	NONE	NONE

State of Florida

Department of Health, Bureau of Public Health Laboratories

This is to certify that

E871119

ALS ENVIRONMENTAL - VALPARAISO
2400 CUMBERLAND DRIVE
VALPARAISO, IN 46383

has complied with Florida Administrative Code 64E-1,
for the examination of environmental samples in the following categories

NON-POTABLE WATER - GENERAL CHEMISTRY, NON-POTABLE WATER - METALS

Continued certification is contingent upon successful on-going compliance with the NELAC Standards and FAC Rule 64E-1 regulations. Specific methods and analytes certified are cited on the Laboratory Scope of Accreditation for this laboratory and are on file at the Bureau of Public Health Laboratories, P. O. Box 210, Jacksonville, Florida 32231. Clients and customers are urged to verify with this agency the laboratory's certification status in Florida for particular methods and analytes.

Date Issued: December 18, 2017 Expiration Date: June 30, 2018

Susanne Crowe

Susanne Crowe, MHA
Acting Chief, Bureau of Public Health Laboratories
DH Form 1697, 7/04
NON-TRANSFERABLE E871119-04-12/18/2017
Supersedes all previously issued certificates

Laboratory Scope of Accreditation

Attachment to Certificate #: E871119-04, expiration date June 30, 2018. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E871119 **EPA Lab Code: IN01817** **(616) 399-6070**

E871119
ALS Environmental - Valparaiso
2400 Cumberland Drive
Valparaiso, IN 46383

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Aluminum	EPA 200.8	Metals	NELAP	12/14/2017
Aluminum	EPA 6020	Metals	NELAP	12/14/2017
Ammonia as N	EPA 350.1	General Chemistry	NELAP	1/1/2016
Ammonia as N	SM 4500-NH3 G (19th,20th,21st Ed.)/UV-VIS	General Chemistry	NELAP	1/1/2016
Antimony	EPA 200.8	Metals	NELAP	12/14/2017
Antimony	EPA 6020	Metals	NELAP	12/14/2017
Arsenic	EPA 200.8	Metals	NELAP	1/1/2016
Arsenic	EPA 6020	Metals	NELAP	1/1/2016
Barium	EPA 200.8	Metals	NELAP	1/1/2016
Barium	EPA 6020	Metals	NELAP	1/1/2016
Beryllium	EPA 200.8	Metals	NELAP	1/1/2016
Beryllium	EPA 6020	Metals	NELAP	1/1/2016
Biochemical oxygen demand	SM 5210 B	General Chemistry	NELAP	1/1/2016
Cadmium	EPA 200.8	Metals	NELAP	1/1/2016
Cadmium	EPA 6020	Metals	NELAP	1/1/2016
Calcium	EPA 200.8	Metals	NELAP	1/1/2016
Calcium	EPA 6020	Metals	NELAP	1/1/2016
Carbonaceous BOD (CBOD)	SM 5210 B	General Chemistry	NELAP	1/1/2016
Chemical oxygen demand	EPA 410.4	General Chemistry	NELAP	12/14/2017
Chromium	EPA 200.8	Metals	NELAP	1/1/2016
Chromium	EPA 6020	Metals	NELAP	1/1/2016
Chromium VI	EPA 7196	General Chemistry	NELAP	1/1/2016
Chromium VI	SM 3500-Cr B (20th/21st/22nd Ed.)/UV-VIS	General Chemistry	NELAP	1/1/2016
Cobalt	EPA 200.8	Metals	NELAP	12/14/2017
Cobalt	EPA 6020	Metals	NELAP	12/14/2017
Copper	EPA 200.8	Metals	NELAP	1/1/2016
Copper	EPA 6020	Metals	NELAP	1/1/2016
Cyanide	SM 4500-CN E	General Chemistry	NELAP	1/1/2016
Iron	EPA 200.8	Metals	NELAP	1/1/2016
Iron	EPA 6020	Metals	NELAP	1/1/2016
Lead	EPA 200.8	Metals	NELAP	1/1/2016
Lead	EPA 6020	Metals	NELAP	1/1/2016
Magnesium	EPA 200.8	Metals	NELAP	1/1/2016
Magnesium	EPA 6020	Metals	NELAP	1/1/2016

Laboratory Scope of Accreditation

Attachment to Certificate #: E871119-04, expiration date June 30, 2018. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E871119 **EPA Lab Code: IN01817** **(616) 399-6070**

E871119
ALS Environmental - Valparaiso
2400 Cumberland Drive
Valparaiso, IN 46383

Matrix: Non-Potable Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Manganese	EPA 200.8	Metals	NELAP	12/14/2017
Manganese	EPA 6020	Metals	NELAP	12/14/2017
Molybdenum	EPA 200.8	Metals	NELAP	12/14/2017
Molybdenum	EPA 6020	Metals	NELAP	12/14/2017
Nickel	EPA 200.8	Metals	NELAP	1/1/2016
Nickel	EPA 6020	Metals	NELAP	1/1/2016
Nitrate as N	EPA 353.2	General Chemistry	NELAP	12/14/2017
Nitrate-nitrite	EPA 353.2	General Chemistry	NELAP	12/14/2017
Nitrite as N	EPA 353.2	General Chemistry	NELAP	12/14/2017
Oil & Grease	EPA 1664A	General Chemistry	NELAP	1/1/2016
Phosphorus, total	EPA 365.1	General Chemistry	NELAP	12/14/2017
Potassium	EPA 200.8	Metals	NELAP	1/1/2016
Potassium	EPA 6020	Metals	NELAP	1/1/2016
Residue-nonfilterable (TSS)	SM 2540 D	General Chemistry	NELAP	1/1/2016
Selenium	EPA 200.8	Metals	NELAP	1/1/2016
Selenium	EPA 6020	Metals	NELAP	1/1/2016
Silver	EPA 200.8	Metals	NELAP	1/1/2016
Silver	EPA 6020	Metals	NELAP	1/1/2016
Sodium	EPA 200.8	Metals	NELAP	1/1/2016
Sodium	EPA 6020	Metals	NELAP	1/1/2016
Thallium	EPA 200.8	Metals	NELAP	12/14/2017
Thallium	EPA 6020	Metals	NELAP	12/14/2017
Total phenolics	EPA 420.4	General Chemistry	NELAP	1/1/2016
Vanadium	EPA 200.8	Metals	NELAP	12/14/2017
Vanadium	EPA 6020	Metals	NELAP	12/14/2017
Weak acid dissociable cyanide	SM 4500 CN-I	General Chemistry	NELAP	1/1/2016
Zinc	EPA 200.8	Metals	NELAP	1/1/2016
Zinc	EPA 6020	Metals	NELAP	1/1/2016

State of Florida
Department of Health, Bureau of Public Health Laboratories
This is to certify that

E871119

ALS ENVIRONMENTAL - VALPARAISO
2400 CUMBERLAND DRIVE
VALPARAISO, IN 46383

has complied with Florida Administrative Code 64E-1,
for the examination of environmental samples in the following categories

NON-POTABLE WATER - GENERAL CHEMISTRY, NON-POTABLE WATER - METALS

Continued certification is contingent upon successful on-going compliance with the NELAC Standards and FAC Rule 64E-1 regulations. Specific methods and analytes certified are cited on the Laboratory Scope of Accreditation for this laboratory and are on file at the Bureau of Public Health Laboratories, P. O. Box 210, Jacksonville, Florida 32231. Clients and customers are urged to verify with this agency the laboratory's certification status in Florida for particular methods and analytes.

Date Issued: July 01, 2018 Expiration Date: June 30, 2019

Patty A. Lewandowski, MBA, MT(ASCP)
Chief Bureau of Public Health Laboratories
DH Form 1697, 7/04
NON-TRANSFERABLE E871119-05-07/01/2018
Supersedes all previously issued certificates

Rick Scott
Governor

Celeste Philip, MD, MPH
State Surgeon General

Laboratory Scope of Accreditation

Attachment to Certificate #: E871119-05, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: **E871119** EPA Lab Code: **IN01817** **(616) 399-6070**

E871119
ALS Environmental - Valparaiso
2400 Cumberland Drive
Valparaiso, IN 46383

Matrix: **Non-Potable Water**

Analyte	Method/Tech	Category	Certification Type	Effective Date
Aluminum	EPA 200.8	Metals	NELAP	12/14/2017
Aluminum	EPA 6020	Metals	NELAP	12/14/2017
Ammonia as N	EPA 350.1	General Chemistry	NELAP	1/1/2016
Ammonia as N	SM 4500-NH3 G (19th,20th,21st Ed.)/UV-VIS	General Chemistry	NELAP	1/1/2016
Antimony	EPA 200.8	Metals	NELAP	12/14/2017
Antimony	EPA 6020	Metals	NELAP	12/14/2017
Arsenic	EPA 200.8	Metals	NELAP	1/1/2016
Arsenic	EPA 6020	Metals	NELAP	1/1/2016
Barium	EPA 200.8	Metals	NELAP	1/1/2016
Barium	EPA 6020	Metals	NELAP	1/1/2016
Beryllium	EPA 200.8	Metals	NELAP	1/1/2016
Beryllium	EPA 6020	Metals	NELAP	1/1/2016
Biochemical oxygen demand	SM 5210 B	General Chemistry	NELAP	1/1/2016
Cadmium	EPA 200.8	Metals	NELAP	1/1/2016
Cadmium	EPA 6020	Metals	NELAP	1/1/2016
Calcium	EPA 200.8	Metals	NELAP	1/1/2016
Calcium	EPA 6020	Metals	NELAP	1/1/2016
Carbonaceous BOD (CBOD)	SM 5210 B	General Chemistry	NELAP	1/1/2016
Chemical oxygen demand	EPA 410.4	General Chemistry	NELAP	12/14/2017
Chromium	EPA 200.8	Metals	NELAP	1/1/2016
Chromium	EPA 6020	Metals	NELAP	1/1/2016
Chromium VI	EPA 7196	General Chemistry	NELAP	1/1/2016
Chromium VI	SM 3500-Cr B (20th/21st/22nd Ed.)/UV-VIS	General Chemistry	NELAP	1/1/2016
Cobalt	EPA 200.8	Metals	NELAP	12/14/2017
Cobalt	EPA 6020	Metals	NELAP	12/14/2017
Copper	EPA 200.8	Metals	NELAP	1/1/2016
Copper	EPA 6020	Metals	NELAP	1/1/2016
Cyanide	SM 4500-CN E	General Chemistry	NELAP	1/1/2016
Iron	EPA 200.8	Metals	NELAP	1/1/2016
Iron	EPA 6020	Metals	NELAP	1/1/2016
Lead	EPA 200.8	Metals	NELAP	1/1/2016
Lead	EPA 6020	Metals	NELAP	1/1/2016
Magnesium	EPA 200.8	Metals	NELAP	1/1/2016
Magnesium	EPA 6020	Metals	NELAP	1/1/2016

Clients and Customers are urged to verify the laboratory's current certification status with the Environmental Laboratory Certification Program.

Issue Date: 7/1/2018 **Expiration Date: 6/30/2019**

Laboratory Scope of Accreditation

Attachment to Certificate #: E871119-05, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: **E871119** EPA Lab Code: **IN01817** **(616) 399-6070**

E871119
ALS Environmental - Valparaiso
2400 Cumberland Drive
Valparaiso, IN 46383

Matrix: **Non-Potable Water**

Analyte	Method/Tech	Category	Certification Type	Effective Date
Manganese	EPA 200.8	Metals	NELAP	12/14/2017
Manganese	EPA 6020	Metals	NELAP	12/14/2017
Molybdenum	EPA 200.8	Metals	NELAP	12/14/2017
Molybdenum	EPA 6020	Metals	NELAP	12/14/2017
Nickel	EPA 200.8	Metals	NELAP	1/1/2016
Nickel	EPA 6020	Metals	NELAP	1/1/2016
Nitrate as N	EPA 353.2	General Chemistry	NELAP	12/14/2017
Nitrate-nitrite	EPA 353.2	General Chemistry	NELAP	12/14/2017
Nitrite as N	EPA 353.2	General Chemistry	NELAP	12/14/2017
Oil & Grease	EPA 1664A	General Chemistry	NELAP	1/1/2016
Phosphorus, total	EPA 365.1	General Chemistry	NELAP	12/14/2017
Potassium	EPA 200.8	Metals	NELAP	1/1/2016
Potassium	EPA 6020	Metals	NELAP	1/1/2016
Residue-nonfilterable (TSS)	SM 2540 D	General Chemistry	NELAP	1/1/2016
Selenium	EPA 200.8	Metals	NELAP	1/1/2016
Selenium	EPA 6020	Metals	NELAP	1/1/2016
Silver	EPA 200.8	Metals	NELAP	1/1/2016
Silver	EPA 6020	Metals	NELAP	1/1/2016
Sodium	EPA 200.8	Metals	NELAP	1/1/2016
Sodium	EPA 6020	Metals	NELAP	1/1/2016
Thallium	EPA 200.8	Metals	NELAP	12/14/2017
Thallium	EPA 6020	Metals	NELAP	12/14/2017
Total phenolics	EPA 420.4	General Chemistry	NELAP	1/1/2016
Vanadium	EPA 200.8	Metals	NELAP	12/14/2017
Vanadium	EPA 6020	Metals	NELAP	12/14/2017
Weak acid dissociable cyanide	SM 4500 CN-I	General Chemistry	NELAP	1/1/2016
Zinc	EPA 200.8	Metals	NELAP	1/1/2016
Zinc	EPA 6020	Metals	NELAP	1/1/2016

Minnesota Department of Health
Environmental Laboratory Accreditation Program

Issues accreditation to

State Laboratory ID: 026-999-449

EPA Lab Code: MI00028

ALS Environmental
3352 128th Avenue
Holland, MI 49424-9263

for fields of accreditation listed on the laboratory's accompanying Scope of Certification in accordance with the provisions in Minnesota Laws and Rules.

Continued accreditation is contingent upon successful on-going compliance with Minnesota Statutes 144.97 to 144.98, 2009 TNI Standard and applicable Minnesota Rules 4740.2010 to 4740.2120. The laboratory's Scope of Certification cites the specific programs, methods, analytes and matrices for which MDH issues this accreditation.

This certificate is valid proof of accreditation only when associated with its accompanying Scope of Certification.

The Scope of Certification and reports of on-site assessments are on file at the Minnesota Department of Health, 601 Robert Street North, Saint Paul, Minnesota. Customers may verify the laboratory's accreditation status in Minnesota by contacting MNELAP at (651) 201-5324.

Effective Date: 12/04/2017
Expires: 12/31/2018
Certificate Number: 1332528

Issued under the authority delegated by the Commissioner of Health, State of Minnesota

Environmental Laboratory Accreditation Program
Scope of Certification

THIS LISTING OF FIELDS OF ACCREDITATION MUST BE ACCOMPANIED BY CERTIFICATE NUMBER: 1332528

State Laboratory ID: 026-999-449 EPA Lab Code: MI00028 Issue Date: 12/4/2017
Expiration Date: 12/31/2018

ALS Environmental
3352 128th Avenue
Holland, MI 49424-9263

Clean Water Program

ASTM D7511-09

Preparation Techniques: Digestion, In-Line UV;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	ASTM D7511-09	Total Cyanide	NPW	MN	

EPA 120.1

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 120.1	Conductivity	NPW	MN	

EPA 160.4

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 160.4	Residue-volatile	NPW	MN	

EPA 1664A (HEM)

Preparation Techniques: Extraction, solid phase (SPE);

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 1664A (HEM)	Oil & Grease	NPW	MN	

EPA 1664A (SGT-HEM)

Preparation Techniques: Extraction, solid phase (SPE);

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 1664A (SGT-HEM)	Oil & Grease	NPW	MN	

EPA 300.0

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 300.0	Bromide	NPW	MN	
CWP	EPA 300.0	Chloride	NPW	MN	
CWP	EPA 300.0	Fluoride	NPW	MN	
CWP	EPA 300.0	Nitrate as N	NPW	MN	
CWP	EPA 300.0	Nitrate-nitrite	NPW	MN	
CWP	EPA 300.0	Nitrite as N	NPW	MN	
CWP	EPA 300.0	Sulfate	NPW	MN	

EPA 325.2

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 325.2	Chloride	NPW	MN	

EPA 335.4

Preparation Techniques: Distillation, micro;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 335.4	Total Cyanide	NPW	MN	

EPA 350.1

Preparation Techniques: Distillation, micro;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 350.1	Ammonia as N	NPW	MN	

EPA 351.2

Preparation Techniques: Digestion, hotplate or HotBlock;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 351.2	Kjeldahl nitrogen - total	NPW	MN	

EPA 353.2

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 353.2	Nitrate-nitrite	NPW	MN	
CWP	EPA 353.2	Nitrite as N	NPW	MN	

EPA 353.2 (calc.)

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 353.2 (calc.)	Nitrate as N	NPW	MN	

EPA 365.1

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 365.1	Orthophosphate as P	NPW	MN	
CWP	EPA 365.1	Total Phosphorus	NPW	MN	

EPA 410.4

Preparation Techniques: Digestion, hotplate or HotBlock;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 410.4	Chemical oxygen demand	NPW	MN	

EPA 420.4

Preparation Techniques: Distillation, MIDI;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 420.4	Total Phenolics	NPW	MN	

Hach 10360

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	Hach 10360	Biochemical oxygen demand	NPW	MN	
CWP	Hach 10360	Carbonaceous BOD, CBOD	NPW	MN	

OIA 1677-09

Preparation Techniques: Distillation, micro;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	OIA 1677-09	Free cyanide	NPW	MN	

SM 2130 B-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2130 B-2011	Turbidity	NPW	MN	

SM 2310 B-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2310 B-2011	Acidity, as CaCO3	NPW	MN	

SM 2320 B-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2320 B-2011	Alkalinity as CaCO3	NPW	MN	

SM 2340 C-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2340 C-2011	Total hardness as CaCO3	NPW	MN	

SM 2510 B-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2510 B-2011	Conductivity	NPW	MN	

SM 2540 B-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2540 B-2011	Residue-total	NPW	MN	

SM 2540 C-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2540 C-2011	Residue-filterable (TDS)	NPW	MN	

SM 2540 D-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2540 D-2011	Residue-nonfilterable (TSS)	NPW	MN	

SM 2540 E-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2540 E-2011	Residue-volatile	NPW	MN	

SM 2540 F-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2540 F-2011	Residue-settleable	NPW	MN	

SM 4500-Cl G-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-Cl G-2011	Total residual chlorine	NPW	MN	

SM 4500-Cl^- C-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-Cl^- C-2011	Chloride	NPW	MN	

SM 4500-Cl^- E-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-Cl⁻ E-2011	Chloride	NPW	MN	

SM 4500-CN⁻ E-2011

Preparation Techniques: Distillation, micro;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-CN⁻ E-2011	Total Cyanide	NPW	MN	

SM 4500-CN⁻ G-2011

Preparation Techniques: Distillation, micro;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-CN⁻ G-2011	Amenable cyanide	NPW	MN	

SM 4500-H+ B-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-H+ B-2011	pH	NPW	MN	

SM 4500-NH3 G-2011

Preparation Techniques: Distillation, micro;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-NH3 G-2011	Ammonia as N	NPW	MN	

SM 4500-NH3 G-97

Preparation Techniques: Distillation, micro;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-NH3 G-97	Kjeldahl nitrogen - total	NPW	MN	User Defined HN-WC-016-R10, TKN Rev. 10

SM 4500-NO2^{-} B-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-NO2^{-} B-2011	Nitrite as N	NPW	MN	

SM 4500-NO3^{-} F-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-NO3^{-} F-2011	Nitrate as N	NPW	MN	
CWP	SM 4500-NO3^{-} F-2011	Nitrate-nitrite	NPW	MN	

SM 4500-P E-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-P E-2011	Orthophosphate as P	NPW	MN	
CWP	SM 4500-P E-2011	Total Phosphorus	NPW	MN	

SM 4500-S2^{-} F-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-S2^{-} F-2011	Sulfide	NPW	MN	

SM 4500-SO4^{-} E-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-SO4^{-} E-2011	Sulfate	NPW	MN	

SM 5210 B-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 5210 B-2011	Biochemical oxygen demand	NPW	MN	
CWP	SM 5210 B-2011	Carbonaceous BOD, CBOD	NPW	MN	

SM 5310 C-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 5310 C-2011	Total Organic Carbon	NPW	MN	

SM 5540 C-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 5540 C-2011	Surfactants - MBAS	NPW	MN	

EPA 1631E

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 1631E	Mercury	NPW	MN	

EPA 200.7

Preparation Techniques: Digestion, hotplate or HotBlock; Digestion, microwave-assisted;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 200.7	Aluminum	NPW	MN	
CWP	EPA 200.7	Antimony	NPW	MN	
CWP	EPA 200.7	Arsenic	NPW	MN	
CWP	EPA 200.7	Barium	NPW	MN	
CWP	EPA 200.7	Beryllium	NPW	MN	
CWP	EPA 200.7	Boron	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 200.7	Cadmium	NPW	MN	
CWP	EPA 200.7	Calcium	NPW	MN	
CWP	EPA 200.7	Chromium	NPW	MN	
CWP	EPA 200.7	Cobalt	NPW	MN	
CWP	EPA 200.7	Copper	NPW	MN	
CWP	EPA 200.7	Iron	NPW	MN	
CWP	EPA 200.7	Lead	NPW	MN	
CWP	EPA 200.7	Magnesium	NPW	MN	
CWP	EPA 200.7	Manganese	NPW	MN	
CWP	EPA 200.7	Molybdenum	NPW	MN	
CWP	EPA 200.7	Nickel	NPW	MN	
CWP	EPA 200.7	Potassium	NPW	MN	
CWP	EPA 200.7	Selenium	NPW	MN	
CWP	EPA 200.7	Silver	NPW	MN	
CWP	EPA 200.7	Sodium	NPW	MN	
CWP	EPA 200.7	Thallium	NPW	MN	
CWP	EPA 200.7	Tin	NPW	MN	
CWP	EPA 200.7	Titanium	NPW	MN	
CWP	EPA 200.7	Total chromium	NPW	MN	
CWP	EPA 200.7	Total hardness as CaCO3	NPW	MN	
CWP	EPA 200.7	Vanadium	NPW	MN	
CWP	EPA 200.7	Zinc	NPW	MN	

EPA 200.8

Preparation Techniques: Digestion, hotplate or HotBlock; Extraction, EPA 1312 SPLP, non-volatiles; Extraction, EPA 1311 TCLP, non-volatiles; Digestion, microwave-assisted;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 200.8	Aluminum	NPW	MN	
CWP	EPA 200.8	Antimony	NPW	MN	
CWP	EPA 200.8	Arsenic	NPW	MN	
CWP	EPA 200.8	Barium	NPW	MN	
CWP	EPA 200.8	Beryllium	NPW	MN	
CWP	EPA 200.8	Boron	NPW	MN	
CWP	EPA 200.8	Cadmium	NPW	MN	
CWP	EPA 200.8	Calcium	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 200.8	Cobalt	NPW	MN	
CWP	EPA 200.8	Copper	NPW	MN	
CWP	EPA 200.8	Iron	NPW	MN	
CWP	EPA 200.8	Lead	NPW	MN	
CWP	EPA 200.8	Magnesium	NPW	MN	
CWP	EPA 200.8	Manganese	NPW	MN	
CWP	EPA 200.8	Molybdenum	NPW	MN	
CWP	EPA 200.8	Nickel	NPW	MN	
CWP	EPA 200.8	Potassium	NPW	MN	
CWP	EPA 200.8	Selenium	NPW	MN	
CWP	EPA 200.8	Silver	NPW	MN	
CWP	EPA 200.8	Sodium	NPW	MN	
CWP	EPA 200.8	Strontium	NPW	MN	
CWP	EPA 200.8	Thallium	NPW	MN	
CWP	EPA 200.8	Tin	NPW	MN	
CWP	EPA 200.8	Titanium	NPW	MN	
CWP	EPA 200.8	Total chromium	NPW	MN	
CWP	EPA 200.8	Vanadium	NPW	MN	
CWP	EPA 200.8	Zinc	NPW	MN	

EPA 245.1

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 245.1	Mercury	NPW	MN	

SM 2340 B-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2340 B-2011	Total hardness as CaCO3	NPW	MN	

SM 3500-Cr B-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 3500-Cr B-2011	Chromium VI	NPW	MN	

EPA 608

Preparation Techniques: Extraction, EPA 1312 SPLP, non-volatiles; Extraction, separatory funnel liquid-liquid (LLE); Extraction, EPA 1311 TCLP, non-volatiles;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 608	4,4'-DDD	NPW	MN	
CWP	EPA 608	4,4'-DDE	NPW	MN	
CWP	EPA 608	4,4'-DDT	NPW	MN	
CWP	EPA 608	Aldrin	NPW	MN	
CWP	EPA 608	alpha-BHC (alpha-Hexachlorocyclohexane)	NPW	MN	
CWP	EPA 608	Aroclor-1016 (PCB-1016)	NPW	MN	
CWP	EPA 608	Aroclor-1221 (PCB-1221)	NPW	MN	
CWP	EPA 608	Aroclor-1232 (PCB-1232)	NPW	MN	
CWP	EPA 608	Aroclor-1242 (PCB-1242)	NPW	MN	
CWP	EPA 608	Aroclor-1248 (PCB-1248)	NPW	MN	
CWP	EPA 608	Aroclor-1254 (PCB-1254)	NPW	MN	
CWP	EPA 608	Aroclor-1260 (PCB-1260)	NPW	MN	
CWP	EPA 608	beta-BHC (beta-Hexachlorocyclohexane)	NPW	MN	
CWP	EPA 608	Chlordane (tech.)	NPW	MN	
CWP	EPA 608	delta-BHC	NPW	MN	
CWP	EPA 608	Dieldrin	NPW	MN	
CWP	EPA 608	Endosulfan I	NPW	MN	
CWP	EPA 608	Endosulfan II	NPW	MN	
CWP	EPA 608	Endosulfan sulfate	NPW	MN	
CWP	EPA 608	Endrin	NPW	MN	
CWP	EPA 608	Endrin aldehyde	NPW	MN	
CWP	EPA 608	gamma-BHC (Lindane, gamma-HexachlorocyclohexanE)	NPW	MN	
CWP	EPA 608	Heptachlor	NPW	MN	
CWP	EPA 608	Heptachlor epoxide	NPW	MN	
CWP	EPA 608	Toxaphene (Chlorinated camphene)	NPW	MN	

EPA 625

Preparation Techniques: Extraction, EPA 1312 SPLP, non-volatiles; Extraction, separatory funnel liquid-liquid (LLE); Extraction, EPA 1311 TCLP, non-volatiles;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 625	1,2,4-Trichlorobenzene	NPW	MN	
CWP	EPA 625	2,4,5-Trichlorophenol	NPW	MN	
CWP	EPA 625	2,4,6-Trichlorophenol	NPW	MN	
CWP	EPA 625	2,4-Dichlorophenol	NPW	MN	
CWP	EPA 625	2,4-Dimethylphenol	NPW	MN	
CWP	EPA 625	2,4-Dinitrophenol	NPW	MN	
CWP	EPA 625	2,4-Dinitrotoluene (2,4-DNT)	NPW	MN	
CWP	EPA 625	2,6-Dinitrotoluene (2,6-DNT)	NPW	MN	
CWP	EPA 625	2-Chloronaphthalene	NPW	MN	
CWP	EPA 625	2-Chlorophenol	NPW	MN	
CWP	EPA 625	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	NPW	MN	
CWP	EPA 625	2-Nitrophenol	NPW	MN	
CWP	EPA 625	3,3'-Dichlorobenzidine	NPW	MN	
CWP	EPA 625	4-Bromophenyl phenyl ether	NPW	MN	
CWP	EPA 625	4-Chloro-3-methylphenol	NPW	MN	
CWP	EPA 625	4-Chlorophenyl phenylether	NPW	MN	
CWP	EPA 625	4-Nitrophenol	NPW	MN	
CWP	EPA 625	Acenaphthene	NPW	MN	
CWP	EPA 625	Acenaphthylene	NPW	MN	
CWP	EPA 625	Anthracene	NPW	MN	
CWP	EPA 625	Benzidine	NPW	MN	
CWP	EPA 625	Benzo(a)anthracene	NPW	MN	
CWP	EPA 625	Benzo(a)pyrene	NPW	MN	
CWP	EPA 625	Benzo(g,h,i)perylene	NPW	MN	
CWP	EPA 625	Benzo(k)fluoranthene	NPW	MN	
CWP	EPA 625	Benzo[b]fluoranthene	NPW	MN	
CWP	EPA 625	bis(2-Chloroethoxy)methane	NPW	MN	
CWP	EPA 625	bis(2-Chloroethyl) ether	NPW	MN	
CWP	EPA 625	bis(2-Chloroisopropyl) ether	NPW	MN	
CWP	EPA 625	Butyl benzyl phthalate	NPW	MN	
CWP	EPA 625	Chrysene	NPW	MN	
CWP	EPA 625	Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 625	Di-n-butyl phthalate	NPW	MN	
CWP	EPA 625	Di-n-octyl phthalate	NPW	MN	
CWP	EPA 625	Dibenz(a,h) anthracene	NPW	MN	
CWP	EPA 625	Diethyl phthalate	NPW	MN	
CWP	EPA 625	Dimethyl phthalate	NPW	MN	
CWP	EPA 625	Fluoranthene	NPW	MN	
CWP	EPA 625	Fluorene	NPW	MN	
CWP	EPA 625	Hexachlorobenzene	NPW	MN	
CWP	EPA 625	Hexachlorobutadiene	NPW	MN	
CWP	EPA 625	Hexachlorocyclopentadiene	NPW	MN	
CWP	EPA 625	Hexachloroethane	NPW	MN	
CWP	EPA 625	Indeno(1,2,3-cd) pyrene	NPW	MN	
CWP	EPA 625	Isophorone	NPW	MN	
CWP	EPA 625	n-Nitrosodi-n-propylamine	NPW	MN	
CWP	EPA 625	n-Nitrosodimethylamine	NPW	MN	
CWP	EPA 625	n-Nitrosodiphenylamine	NPW	MN	
CWP	EPA 625	Naphthalene	NPW	MN	
CWP	EPA 625	Nitrobenzene	NPW	MN	
CWP	EPA 625	Pentachlorophenol	NPW	MN	
CWP	EPA 625	Phenanthrene	NPW	MN	
CWP	EPA 625	Phenol	NPW	MN	
CWP	EPA 625	Pyrene	NPW	MN	

EPA 624

Preparation Techniques: Extraction, EPA 1311 TCLP, zero headspace (ZHE); Purge and trap; Extraction, EPA 1312 SPLP, zero headspace (ZHE);

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 624	1,1,1-Trichloroethane	NPW	MN	
CWP	EPA 624	1,1,2,2-Tetrachloroethane	NPW	MN	
CWP	EPA 624	1,1,2-Trichloroethane	NPW	MN	
CWP	EPA 624	1,1-Dichloroethane	NPW	MN	
CWP	EPA 624	1,1-Dichloroethylene	NPW	MN	
CWP	EPA 624	1,2-Dichlorobenzene	NPW	MN	
CWP	EPA 624	1,2-Dichloroethane (Ethylene dichloride)	NPW	MN	
CWP	EPA 624	1,2-Dichloropropane	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 624	1,3-Dichlorobenzene	NPW	MN	
CWP	EPA 624	1,4-Dichlorobenzene	NPW	MN	
CWP	EPA 624	1,4-Dioxane (1,4- Diethyleneoxide)	NPW	MN	
CWP	EPA 624	2-Chloroethyl vinyl ether	NPW	MN	
CWP	EPA 624	Acrylonitrile	NPW	MN	
CWP	EPA 624	Benzene	NPW	MN	
CWP	EPA 624	Bromodichloromethane	NPW	MN	
CWP	EPA 624	Bromoform	NPW	MN	
CWP	EPA 624	Carbon tetrachloride	NPW	MN	
CWP	EPA 624	Chlorobenzene	NPW	MN	
CWP	EPA 624	Chlorodibromomethane	NPW	MN	
CWP	EPA 624	Chloroethane (Ethyl chloride)	NPW	MN	
CWP	EPA 624	Chloroform	NPW	MN	
CWP	EPA 624	cis-1,3-Dichloropropene	NPW	MN	
CWP	EPA 624	Ethylbenzene	NPW	MN	
CWP	EPA 624	Methyl bromide (Bromomethane)	NPW	MN	
CWP	EPA 624	Methyl chloride (Chloromethane)	NPW	MN	
CWP	EPA 624	Methylene chloride (Dichloromethane)	NPW	MN	
CWP	EPA 624	Tetrachloroethylene (Perchloroethylene)	NPW	MN	
CWP	EPA 624	Toluene	NPW	MN	
CWP	EPA 624	trans-1,2-Dichloroethylene	NPW	MN	
CWP	EPA 624	trans-1,3-Dichloropropylene	NPW	MN	
CWP	EPA 624	Trichloroethene (Trichloroethylene)	NPW	MN	
CWP	EPA 624	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	NPW	MN	
CWP	EPA 624	Vinyl chloride	NPW	MN	

Resource Conservation Recovery Program

EPA 7.3.3.2

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 7.3.3.2	Reactive Cyanide	SCM	MN	

EPA 7.3.4.2

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 7.3.4.2	Reactive sulfide	SCM	MN	

EPA 7196A

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 7196A	Chromium VI	SCM	MN	
RCRP	EPA 7196A	Chromium VI	NPW	MN	

EPA 9012B

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 9012B	Amenable cyanide	SCM	MN	
RCRP	EPA 9012B	Amenable cyanide	NPW	MN	
RCRP	EPA 9012B	Cyanide	SCM	MN	
RCRP	EPA 9012B	Cyanide	NPW	MN	

EPA 9014

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 9014	Free cyanide	NPW	MN	

EPA 9030B

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 9030B	Sulfide	NPW	MN	
RCRP	EPA 9030B	Sulfide	SCM	MN	

EPA 9034

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 9034	Sulfide	SCM	MN	

EPA 9040C

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 9040C	pH	NPW	MN	

EPA 9045D

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 9045D	pH	NPW	MN	
RCRP	EPA 9045D	pH	SCM	MN	

EPA 9050A

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 9050A	Conductivity	NPW	MN	

EPA 9056A

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 9056A	Bromide	SCM	MN	
RCRP	EPA 9056A	Bromide	NPW	MN	
RCRP	EPA 9056A	Chloride	NPW	MN	
RCRP	EPA 9056A	Chloride	SCM	MN	
RCRP	EPA 9056A	Fluoride	NPW	MN	
RCRP	EPA 9056A	Fluoride	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 9056A	Nitrate	NPW	MN	
RCRP	EPA 9056A	Nitrate	SCM	MN	
RCRP	EPA 9056A	Nitrite	SCM	MN	
RCRP	EPA 9056A	Nitrite	NPW	MN	
RCRP	EPA 9056A	Sulfate	SCM	MN	
RCRP	EPA 9056A	Sulfate	NPW	MN	

EPA 9060A

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 9060A	Total Organic Carbon	NPW	MN	

EPA 9066

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 9066	Total Phenolics	NPW	MN	
RCRP	EPA 9066	Total Phenolics	SCM	MN	

EPA 9071B

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 9071B	Oil & Grease	SCM	MN	

SM 2540 G-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	SM 2540 G-2011	Residue-total	SCM	MN	
RCRP	SM 2540 G-2011	Residue-volatile	SCM	MN	

EPA 6010C

Preparation Techniques: Digestion, hotplate or HotBlock; Extraction, EPA 1312 SPLP, non-volatiles; Extraction, EPA 1311 TCLP, non-volatiles; Digestion, microwave-assisted;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 6010C	Aluminum	NPW	MN	
RCRP	EPA 6010C	Aluminum	SCM	MN	
RCRP	EPA 6010C	Antimony	NPW	MN	
RCRP	EPA 6010C	Antimony	SCM	MN	
RCRP	EPA 6010C	Arsenic	SCM	MN	
RCRP	EPA 6010C	Arsenic	NPW	MN	
RCRP	EPA 6010C	Barium	NPW	MN	
RCRP	EPA 6010C	Barium	SCM	MN	
RCRP	EPA 6010C	Beryllium	NPW	MN	
RCRP	EPA 6010C	Beryllium	SCM	MN	
RCRP	EPA 6010C	Boron	SCM	MN	
RCRP	EPA 6010C	Boron	NPW	MN	
RCRP	EPA 6010C	Cadmium	NPW	MN	
RCRP	EPA 6010C	Cadmium	SCM	MN	
RCRP	EPA 6010C	Calcium	NPW	MN	
RCRP	EPA 6010C	Calcium	SCM	MN	
RCRP	EPA 6010C	Chromium	SCM	MN	
RCRP	EPA 6010C	Chromium	NPW	MN	
RCRP	EPA 6010C	Cobalt	SCM	MN	
RCRP	EPA 6010C	Cobalt	NPW	MN	
RCRP	EPA 6010C	Copper	SCM	MN	
RCRP	EPA 6010C	Copper	NPW	MN	
RCRP	EPA 6010C	Iron	SCM	MN	
RCRP	EPA 6010C	Iron	NPW	MN	
RCRP	EPA 6010C	Lead	NPW	MN	
RCRP	EPA 6010C	Lead	SCM	MN	
RCRP	EPA 6010C	Lithium	NPW	MN	
RCRP	EPA 6010C	Lithium	SCM	MN	
RCRP	EPA 6010C	Magnesium	NPW	MN	
RCRP	EPA 6010C	Magnesium	SCM	MN	
RCRP	EPA 6010C	Manganese	SCM	MN	
RCRP	EPA 6010C	Manganese	NPW	MN	
RCRP	EPA 6010C	Molybdenum	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 6010C	Molybdenum	SCM	MN	
RCRP	EPA 6010C	Nickel	SCM	MN	
RCRP	EPA 6010C	Nickel	NPW	MN	
RCRP	EPA 6010C	Potassium	SCM	MN	
RCRP	EPA 6010C	Potassium	NPW	MN	
RCRP	EPA 6010C	Selenium	NPW	MN	
RCRP	EPA 6010C	Selenium	SCM	MN	
RCRP	EPA 6010C	Silver	NPW	MN	
RCRP	EPA 6010C	Silver	SCM	MN	
RCRP	EPA 6010C	Sodium	SCM	MN	
RCRP	EPA 6010C	Sodium	NPW	MN	
RCRP	EPA 6010C	Strontium	NPW	MN	
RCRP	EPA 6010C	Strontium	SCM	MN	
RCRP	EPA 6010C	Thallium	NPW	MN	
RCRP	EPA 6010C	Thallium	SCM	MN	
RCRP	EPA 6010C	Tin	NPW	MN	
RCRP	EPA 6010C	Tin	SCM	MN	
RCRP	EPA 6010C	Titanium	NPW	MN	
RCRP	EPA 6010C	Titanium	SCM	MN	
RCRP	EPA 6010C	Vanadium	SCM	MN	
RCRP	EPA 6010C	Vanadium	NPW	MN	
RCRP	EPA 6010C	Zinc	SCM	MN	
RCRP	EPA 6010C	Zinc	NPW	MN	

EPA 6020A

Preparation Techniques: Digestion, hotplate or HotBlock; Extraction, EPA 1312 SPLP, non-volatiles; Extraction, EPA 1311 TCLP, non-volatiles; Digestion, microwave-assisted;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 6020A	Aluminum	SCM	MN	
RCRP	EPA 6020A	Aluminum	NPW	MN	
RCRP	EPA 6020A	Antimony	NPW	MN	
RCRP	EPA 6020A	Antimony	SCM	MN	
RCRP	EPA 6020A	Arsenic	SCM	MN	
RCRP	EPA 6020A	Arsenic	NPW	MN	
RCRP	EPA 6020A	Barium	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 6020A	Barium	NPW	MN	
RCRP	EPA 6020A	Beryllium	SCM	MN	
RCRP	EPA 6020A	Beryllium	NPW	MN	
RCRP	EPA 6020A	Boron	NPW	MN	
RCRP	EPA 6020A	Boron	SCM	MN	
RCRP	EPA 6020A	Cadmium	SCM	MN	
RCRP	EPA 6020A	Cadmium	NPW	MN	
RCRP	EPA 6020A	Calcium	NPW	MN	
RCRP	EPA 6020A	Calcium	SCM	MN	
RCRP	EPA 6020A	Chromium	NPW	MN	
RCRP	EPA 6020A	Chromium	SCM	MN	
RCRP	EPA 6020A	Cobalt	SCM	MN	
RCRP	EPA 6020A	Cobalt	NPW	MN	
RCRP	EPA 6020A	Copper	SCM	MN	
RCRP	EPA 6020A	Copper	NPW	MN	
RCRP	EPA 6020A	Iron	NPW	MN	
RCRP	EPA 6020A	Iron	SCM	MN	
RCRP	EPA 6020A	Lead	SCM	MN	
RCRP	EPA 6020A	Lead	NPW	MN	
RCRP	EPA 6020A	Magnesium	SCM	MN	
RCRP	EPA 6020A	Magnesium	NPW	MN	
RCRP	EPA 6020A	Manganese	NPW	MN	
RCRP	EPA 6020A	Manganese	SCM	MN	
RCRP	EPA 6020A	Molybdenum	SCM	MN	
RCRP	EPA 6020A	Molybdenum	NPW	MN	
RCRP	EPA 6020A	Nickel	NPW	MN	
RCRP	EPA 6020A	Nickel	SCM	MN	
RCRP	EPA 6020A	Potassium	SCM	MN	
RCRP	EPA 6020A	Potassium	NPW	MN	
RCRP	EPA 6020A	Selenium	SCM	MN	
RCRP	EPA 6020A	Selenium	NPW	MN	
RCRP	EPA 6020A	Silver	NPW	MN	
RCRP	EPA 6020A	Silver	SCM	MN	
RCRP	EPA 6020A	Sodium	SCM	MN	
RCRP	EPA 6020A	Sodium	NPW	MN	
RCRP	EPA 6020A	Strontium	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 6020A	Strontium	NPW	MN	
RCRP	EPA 6020A	Thallium	SCM	MN	
RCRP	EPA 6020A	Thallium	NPW	MN	
RCRP	EPA 6020A	Tin	SCM	MN	
RCRP	EPA 6020A	Tin	NPW	MN	
RCRP	EPA 6020A	Titanium	SCM	MN	
RCRP	EPA 6020A	Titanium	NPW	MN	
RCRP	EPA 6020A	Vanadium	SCM	MN	
RCRP	EPA 6020A	Vanadium	NPW	MN	
RCRP	EPA 6020A	Zinc	SCM	MN	
RCRP	EPA 6020A	Zinc	NPW	MN	

EPA 7470A

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 7470A	Mercury	NPW	MN	

EPA 7471A

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 7471A	Mercury	SCM	MN	

EPA 7471B

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 7471B	Mercury	SCM	MN	

EPA 8011

Preparation Techniques: Extraction, micro;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8011	1,2-Dibromo-3-chloropropane (DBCP)	NPW	MN	
RCRP	EPA 8011	1,2-Dibromoethane (EDB, Ethylene dibromide)	NPW	MN	

EPA 8081A

Preparation Techniques: Extraction, soxhlet; Extraction, automated soxhlet; Extraction, EPA 1312 SPLP, non-volatiles; Extraction, microwave; Extraction, separatory funnel liquid-liquid (LLE); Extraction, EPA 1311 TCLP, non-volatiles; Extraction, ultrasonic; Extraction, Micro;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8081A	4,4'-DDD	SCM	MN	
RCRP	EPA 8081A	4,4'-DDD	NPW	MN	
RCRP	EPA 8081A	4,4'-DDE	SCM	MN	
RCRP	EPA 8081A	4,4'-DDE	NPW	MN	
RCRP	EPA 8081A	4,4'-DDT	NPW	MN	
RCRP	EPA 8081A	4,4'-DDT	SCM	MN	
RCRP	EPA 8081A	Aldrin	NPW	MN	
RCRP	EPA 8081A	Aldrin	SCM	MN	
RCRP	EPA 8081A	alpha-BHC (alpha-Hexachlorocyclohexane)	SCM	MN	
RCRP	EPA 8081A	alpha-BHC (alpha-Hexachlorocyclohexane)	NPW	MN	
RCRP	EPA 8081A	alpha-Chlordane	SCM	MN	
RCRP	EPA 8081A	alpha-Chlordane	NPW	MN	
RCRP	EPA 8081A	beta-BHC (beta-Hexachlorocyclohexane)	SCM	MN	
RCRP	EPA 8081A	beta-BHC (beta-Hexachlorocyclohexane)	NPW	MN	
RCRP	EPA 8081A	Chlordane (tech.)	SCM	MN	
RCRP	EPA 8081A	Chlordane (tech.)	NPW	MN	
RCRP	EPA 8081A	delta-BHC	NPW	MN	
RCRP	EPA 8081A	delta-BHC	SCM	MN	
RCRP	EPA 8081A	Dieldrin	SCM	MN	
RCRP	EPA 8081A	Dieldrin	NPW	MN	
RCRP	EPA 8081A	Endosulfan I	NPW	MN	
RCRP	EPA 8081A	Endosulfan I	SCM	MN	
RCRP	EPA 8081A	Endosulfan II	SCM	MN	
RCRP	EPA 8081A	Endosulfan II	NPW	MN	
RCRP	EPA 8081A	Endosulfan sulfate	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8081A	Endosulfan sulfate	NPW	MN	
RCRP	EPA 8081A	Endrin	NPW	MN	
RCRP	EPA 8081A	Endrin	SCM	MN	
RCRP	EPA 8081A	Endrin aldehyde	NPW	MN	
RCRP	EPA 8081A	Endrin aldehyde	SCM	MN	
RCRP	EPA 8081A	Endrin ketone	SCM	MN	
RCRP	EPA 8081A	Endrin ketone	NPW	MN	
RCRP	EPA 8081A	gamma-BHC (Lindane, gamma-HexachlorocyclohexanE)	NPW	MN	
RCRP	EPA 8081A	gamma-BHC (Lindane, gamma-HexachlorocyclohexanE)	SCM	MN	
RCRP	EPA 8081A	gamma-Chlordane	SCM	MN	
RCRP	EPA 8081A	gamma-Chlordane	NPW	MN	
RCRP	EPA 8081A	Heptachlor	NPW	MN	
RCRP	EPA 8081A	Heptachlor	SCM	MN	
RCRP	EPA 8081A	Heptachlor epoxide	NPW	MN	
RCRP	EPA 8081A	Heptachlor epoxide	SCM	MN	
RCRP	EPA 8081A	Methoxychlor	SCM	MN	
RCRP	EPA 8081A	Methoxychlor	NPW	MN	
RCRP	EPA 8081A	Toxaphene (Chlorinated camphene)	SCM	MN	
RCRP	EPA 8081A	Toxaphene (Chlorinated camphene)	NPW	MN	

EPA 8081B

Preparation Techniques: Extraction, soxhlet; Extraction, EPA 1312 SPLP, non-volatiles; Extraction, microwave; Extraction, micro; Extraction, separatory funnel liquid-liquid (LLE); Extraction, EPA 1311 TCLP, non-volatiles; Extraction, ultrasonic;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8081B	4,4'-DDD	SCM	MN	
RCRP	EPA 8081B	4,4'-DDD	NPW	MN	
RCRP	EPA 8081B	4,4'-DDE	SCM	MN	
RCRP	EPA 8081B	4,4'-DDE	NPW	MN	
RCRP	EPA 8081B	4,4'-DDT	NPW	MN	
RCRP	EPA 8081B	4,4'-DDT	SCM	MN	
RCRP	EPA 8081B	alpha-BHC (alpha-Hexachlorocyclohexane)	NPW	MN	
RCRP	EPA 8081B	alpha-BHC (alpha-Hexachlorocyclohexane)	SCM	MN	
RCRP	EPA 8081B	alpha-Chlordane	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8081B	alpha-Chlordane	SCM	MN	
RCRP	EPA 8081B	beta-BHC (beta-Hexachlorocyclohexane)	NPW	MN	
RCRP	EPA 8081B	beta-BHC (beta-Hexachlorocyclohexane)	SCM	MN	
RCRP	EPA 8081B	Chlordane (tech.)	SCM	MN	
RCRP	EPA 8081B	Chlordane (tech.)	NPW	MN	
RCRP	EPA 8081B	delta-BHC	SCM	MN	
RCRP	EPA 8081B	delta-BHC	NPW	MN	
RCRP	EPA 8081B	Dieldrin	NPW	MN	
RCRP	EPA 8081B	Dieldrin	SCM	MN	
RCRP	EPA 8081B	Endosulfan I	SCM	MN	
RCRP	EPA 8081B	Endosulfan I	NPW	MN	
RCRP	EPA 8081B	Endosulfan II	NPW	MN	
RCRP	EPA 8081B	Endosulfan II	SCM	MN	
RCRP	EPA 8081B	Endosulfan sulfate	NPW	MN	
RCRP	EPA 8081B	Endosulfan sulfate	SCM	MN	
RCRP	EPA 8081B	Endrin	NPW	MN	
RCRP	EPA 8081B	Endrin	SCM	MN	
RCRP	EPA 8081B	Endrin aldehyde	SCM	MN	
RCRP	EPA 8081B	Endrin aldehyde	NPW	MN	
RCRP	EPA 8081B	Endrin ketone	NPW	MN	
RCRP	EPA 8081B	Endrin ketone	SCM	MN	
RCRP	EPA 8081B	gamma-BHC (Lindane, gamma-HexachlorocyclohexanE)	NPW	MN	
RCRP	EPA 8081B	gamma-BHC (Lindane, gamma-HexachlorocyclohexanE)	SCM	MN	
RCRP	EPA 8081B	gamma-Chlordane	SCM	MN	
RCRP	EPA 8081B	gamma-Chlordane	NPW	MN	
RCRP	EPA 8081B	Heptachlor	SCM	MN	
RCRP	EPA 8081B	Heptachlor	NPW	MN	
RCRP	EPA 8081B	Heptachlor epoxide	NPW	MN	
RCRP	EPA 8081B	Heptachlor epoxide	SCM	MN	
RCRP	EPA 8081B	Methoxychlor	NPW	MN	
RCRP	EPA 8081B	Methoxychlor	SCM	MN	
RCRP	EPA 8081B	Toxaphene (Chlorinated camphene)	NPW	MN	
RCRP	EPA 8081B	Toxaphene (Chlorinated camphene)	SCM	MN	

EPA 8082

Preparation Techniques: Extraction, soxhlet; Extraction, automated soxhlet; Extraction, EPA 1312 SPLP, non-volatiles; Extraction, microwave; Extraction, separatory funnel liquid-liquid (LLE); Extraction, EPA 1311 TCLP, non-volatiles; Extraction, ultrasonic; Extraction, Micro;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8082	Aroclor-1016 (PCB-1016)	SCM	MN	
RCRP	EPA 8082	Aroclor-1016 (PCB-1016)	NPW	MN	
RCRP	EPA 8082	Aroclor-1221 (PCB-1221)	SCM	MN	
RCRP	EPA 8082	Aroclor-1221 (PCB-1221)	NPW	MN	
RCRP	EPA 8082	Aroclor-1232 (PCB-1232)	SCM	MN	
RCRP	EPA 8082	Aroclor-1232 (PCB-1232)	NPW	MN	
RCRP	EPA 8082	Aroclor-1242 (PCB-1242)	SCM	MN	
RCRP	EPA 8082	Aroclor-1242 (PCB-1242)	NPW	MN	
RCRP	EPA 8082	Aroclor-1248 (PCB-1248)	NPW	MN	
RCRP	EPA 8082	Aroclor-1248 (PCB-1248)	SCM	MN	
RCRP	EPA 8082	Aroclor-1254 (PCB-1254)	SCM	MN	
RCRP	EPA 8082	Aroclor-1254 (PCB-1254)	NPW	MN	
RCRP	EPA 8082	Aroclor-1260 (PCB-1260)	SCM	MN	
RCRP	EPA 8082	Aroclor-1260 (PCB-1260)	NPW	MN	
RCRP	EPA 8082	Aroclor-1262 (PCB-1262)	NPW	MN	
RCRP	EPA 8082	Aroclor-1262 (PCB-1262)	SCM	MN	
RCRP	EPA 8082	Aroclor-1268 (PCB-1268)	NPW	MN	
RCRP	EPA 8082	Aroclor-1268 (PCB-1268)	SCM	MN	

EPA 8082A

Preparation Techniques: Extraction, soxhlet; Extraction, automated soxhlet; Waste Dilution (EPA 3580A); Extraction, EPA 1312 SPLP, non-volatiles; Extraction, microwave; Extraction, micro; Extraction, separatory funnel liquid-liquid (LLE); Extraction, EPA 1311 TCLP, non-volatiles; Extraction, ultrasonic;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8082A	Aroclor-1016 (PCB-1016)	NPW	MN	
RCRP	EPA 8082A	Aroclor-1016 (PCB-1016)	SCM	MN	
RCRP	EPA 8082A	Aroclor-1221 (PCB-1221)	NPW	MN	
RCRP	EPA 8082A	Aroclor-1221 (PCB-1221)	SCM	MN	
RCRP	EPA 8082A	Aroclor-1232 (PCB-1232)	SCM	MN	
RCRP	EPA 8082A	Aroclor-1232 (PCB-1232)	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8082A	Aroclor-1242 (PCB-1242)	NPW	MN	
RCRP	EPA 8082A	Aroclor-1242 (PCB-1242)	SCM	MN	
RCRP	EPA 8082A	Aroclor-1248 (PCB-1248)	SCM	MN	
RCRP	EPA 8082A	Aroclor-1248 (PCB-1248)	NPW	MN	
RCRP	EPA 8082A	Aroclor-1254 (PCB-1254)	NPW	MN	
RCRP	EPA 8082A	Aroclor-1254 (PCB-1254)	SCM	MN	
RCRP	EPA 8082A	Aroclor-1260 (PCB-1260)	SCM	MN	
RCRP	EPA 8082A	Aroclor-1260 (PCB-1260)	NPW	MN	

EPA 8082A (Rev 2007)

Preparation Techniques: Extraction, soxhlet; Extraction, automated soxhlet; Waste Dilution (EPA 3580A); Extraction, EPA 1312 SPLP, non-volatiles; Extraction, microwave; Extraction, micro; Extraction, separatory funnel liquid-liquid (LLE); Extraction, ultrasonic;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8082A (Rev 2007)	Aroclor-1262 (PCB-1262)	NPW	MN	
RCRP	EPA 8082A (Rev 2007)	Aroclor-1262 (PCB-1262)	SCM	MN	
RCRP	EPA 8082A (Rev 2007)	Aroclor-1268 (PCB-1268)	NPW	MN	
RCRP	EPA 8082A (Rev 2007)	Aroclor-1268 (PCB-1268)	SCM	MN	

EPA 8141A

Preparation Techniques: Extraction, soxhlet; Extraction, automated soxhlet; Extraction, EPA 1312 SPLP, non-volatiles; Extraction, separatory funnel liquid-liquid (LLE); Extraction, EPA 1311 TCLP, non-volatiles;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8141A	Dimethoate	NPW	MN	
RCRP	EPA 8141A	Disulfoton	NPW	MN	
RCRP	EPA 8141A	Famphur	NPW	MN	
RCRP	EPA 8141A	Methyl parathion (Parathion, methyl)	NPW	MN	
RCRP	EPA 8141A	Parathion, ethyl	NPW	MN	
RCRP	EPA 8141A	Phorate	NPW	MN	
RCRP	EPA 8141A	Sulfotepp	NPW	MN	
RCRP	EPA 8141A	Thionazin (Zinophos)	NPW	MN	

EPA 8151A

Preparation Techniques: Extraction, EPA 1312 SPLP, non-volatiles; Extraction, separatory funnel liquid-liquid (LLE); Extraction, EPA 1311 TCLP, non-volatiles; Extraction, ultrasonic;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8151A	2,4,5-T	SCM	MN	
RCRP	EPA 8151A	2,4,5-T	NPW	MN	
RCRP	EPA 8151A	2,4-D	SCM	MN	
RCRP	EPA 8151A	2,4-D	NPW	MN	
RCRP	EPA 8151A	Silvex (2,4,5-TP)	SCM	MN	
RCRP	EPA 8151A	Silvex (2,4,5-TP)	NPW	MN	

EPA 8270C

Preparation Techniques: Extraction, soxhlet; Extraction, automated soxhlet; Extraction, EPA 1312 SPLP, non-volatiles; Extraction, microwave; Extraction, separatory funnel liquid-liquid (LLE); Extraction, EPA 1311 TCLP, non-volatiles;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270C	1,2,4-Trichlorobenzene	NPW	MN	
RCRP	EPA 8270C	1,2,4-Trichlorobenzene	SCM	MN	
RCRP	EPA 8270C	1,2-Dichlorobenzene	NPW	MN	
RCRP	EPA 8270C	1,2-Dichlorobenzene	SCM	MN	
RCRP	EPA 8270C	1,3-Dichlorobenzene	SCM	MN	
RCRP	EPA 8270C	1,3-Dichlorobenzene	NPW	MN	
RCRP	EPA 8270C	1,4-Dichlorobenzene	SCM	MN	
RCRP	EPA 8270C	1,4-Dichlorobenzene	NPW	MN	
RCRP	EPA 8270C	1,4-Dioxane (1,4- Diethyleneoxide)	SCM	MN	
RCRP	EPA 8270C	1,4-Dioxane (1,4- Diethyleneoxide)	NPW	MN	
RCRP	EPA 8270C	2,4,5-Trichlorophenol	NPW	MN	
RCRP	EPA 8270C	2,4,5-Trichlorophenol	SCM	MN	
RCRP	EPA 8270C	2,4,6-Trichlorophenol	NPW	MN	
RCRP	EPA 8270C	2,4,6-Trichlorophenol	SCM	MN	
RCRP	EPA 8270C	2,4-Dichlorophenol	NPW	MN	
RCRP	EPA 8270C	2,4-Dichlorophenol	SCM	MN	
RCRP	EPA 8270C	2,4-Dimethylphenol	SCM	MN	
RCRP	EPA 8270C	2,4-Dimethylphenol	NPW	MN	
RCRP	EPA 8270C	2,4-Dinitrophenol	SCM	MN	
RCRP	EPA 8270C	2,4-Dinitrophenol	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270C	2,4-Dinitrotoluene (2,4-DNT)	NPW	MN	
RCRP	EPA 8270C	2,4-Dinitrotoluene (2,4-DNT)	SCM	MN	
RCRP	EPA 8270C	2,6-Dichlorophenol	NPW	MN	
RCRP	EPA 8270C	2,6-Dichlorophenol	SCM	MN	
RCRP	EPA 8270C	2,6-Dinitrotoluene (2,6-DNT)	SCM	MN	
RCRP	EPA 8270C	2,6-Dinitrotoluene (2,6-DNT)	NPW	MN	
RCRP	EPA 8270C	2-Chloronaphthalene	SCM	MN	
RCRP	EPA 8270C	2-Chloronaphthalene	NPW	MN	
RCRP	EPA 8270C	2-Chlorophenol	SCM	MN	
RCRP	EPA 8270C	2-Chlorophenol	NPW	MN	
RCRP	EPA 8270C	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	NPW	MN	
RCRP	EPA 8270C	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	SCM	MN	
RCRP	EPA 8270C	2-Methylaniline (o-Toluidine)	NPW	MN	
RCRP	EPA 8270C	2-Methylnaphthalene	SCM	MN	
RCRP	EPA 8270C	2-Methylnaphthalene	NPW	MN	
RCRP	EPA 8270C	2-Methylphenol (o-Cresol)	NPW	MN	
RCRP	EPA 8270C	2-Methylphenol (o-Cresol)	SCM	MN	
RCRP	EPA 8270C	2-Nitroaniline	SCM	MN	
RCRP	EPA 8270C	2-Nitroaniline	NPW	MN	
RCRP	EPA 8270C	2-Nitrophenol	NPW	MN	
RCRP	EPA 8270C	2-Nitrophenol	SCM	MN	
RCRP	EPA 8270C	3,3'-Dichlorobenzidine	SCM	MN	
RCRP	EPA 8270C	3,3'-Dichlorobenzidine	NPW	MN	
RCRP	EPA 8270C	3-Methylphenol (m-Cresol)	SCM	MN	
RCRP	EPA 8270C	3-Methylphenol (m-Cresol)	NPW	MN	
RCRP	EPA 8270C	3-Nitroaniline	SCM	MN	
RCRP	EPA 8270C	3-Nitroaniline	NPW	MN	
RCRP	EPA 8270C	4-Bromophenyl phenyl ether	NPW	MN	
RCRP	EPA 8270C	4-Bromophenyl phenyl ether	SCM	MN	
RCRP	EPA 8270C	4-Chloro-3-methylphenol	SCM	MN	
RCRP	EPA 8270C	4-Chloro-3-methylphenol	NPW	MN	
RCRP	EPA 8270C	4-Chloroaniline	NPW	MN	
RCRP	EPA 8270C	4-Chloroaniline	SCM	MN	
RCRP	EPA 8270C	4-Chlorophenyl phenylether	NPW	MN	
RCRP	EPA 8270C	4-Chlorophenyl phenylether	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270C	4-Methylphenol (p-Cresol)	SCM	MN	
RCRP	EPA 8270C	4-Methylphenol (p-Cresol)	NPW	MN	
RCRP	EPA 8270C	4-Nitroaniline	NPW	MN	
RCRP	EPA 8270C	4-Nitroaniline	SCM	MN	
RCRP	EPA 8270C	4-Nitrophenol	NPW	MN	
RCRP	EPA 8270C	4-Nitrophenol	SCM	MN	
RCRP	EPA 8270C	Acenaphthene	NPW	MN	
RCRP	EPA 8270C	Acenaphthene	SCM	MN	
RCRP	EPA 8270C	Acenaphthylene	NPW	MN	
RCRP	EPA 8270C	Acenaphthylene	SCM	MN	
RCRP	EPA 8270C	Aniline	SCM	MN	
RCRP	EPA 8270C	Aniline	NPW	MN	
RCRP	EPA 8270C	Anthracene	SCM	MN	
RCRP	EPA 8270C	Anthracene	NPW	MN	
RCRP	EPA 8270C	Benzo(a)anthracene	NPW	MN	
RCRP	EPA 8270C	Benzo(a)anthracene	SCM	MN	
RCRP	EPA 8270C	Benzo(a)pyrene	SCM	MN	
RCRP	EPA 8270C	Benzo(a)pyrene	NPW	MN	
RCRP	EPA 8270C	Benzo(g,h,i)perylene	NPW	MN	
RCRP	EPA 8270C	Benzo(g,h,i)perylene	SCM	MN	
RCRP	EPA 8270C	Benzo(k)fluoranthene	SCM	MN	
RCRP	EPA 8270C	Benzo(k)fluoranthene	NPW	MN	
RCRP	EPA 8270C	Benzo[b]fluoranthene	SCM	MN	
RCRP	EPA 8270C	Benzo[b]fluoranthene	NPW	MN	
RCRP	EPA 8270C	bis(2-Chloroethoxy)methane	SCM	MN	
RCRP	EPA 8270C	bis(2-Chloroethoxy)methane	NPW	MN	
RCRP	EPA 8270C	bis(2-Chloroethyl) ether	NPW	MN	
RCRP	EPA 8270C	bis(2-Chloroethyl) ether	SCM	MN	
RCRP	EPA 8270C	bis(2-Chloroisopropyl) ether	SCM	MN	
RCRP	EPA 8270C	bis(2-Chloroisopropyl) ether	NPW	MN	
RCRP	EPA 8270C	Butyl benzyl phthalate	NPW	MN	
RCRP	EPA 8270C	Butyl benzyl phthalate	SCM	MN	
RCRP	EPA 8270C	Chrysene	NPW	MN	
RCRP	EPA 8270C	Chrysene	SCM	MN	
RCRP	EPA 8270C	Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270C	Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	SCM	MN	
RCRP	EPA 8270C	Di-n-butyl phthalate	NPW	MN	
RCRP	EPA 8270C	Di-n-butyl phthalate	SCM	MN	
RCRP	EPA 8270C	Di-n-octyl phthalate	SCM	MN	
RCRP	EPA 8270C	Di-n-octyl phthalate	NPW	MN	
RCRP	EPA 8270C	Dibenz(a,h) anthracene	SCM	MN	
RCRP	EPA 8270C	Dibenz(a,h) anthracene	NPW	MN	
RCRP	EPA 8270C	Dibenzofuran	SCM	MN	
RCRP	EPA 8270C	Dibenzofuran	NPW	MN	
RCRP	EPA 8270C	Diethyl phthalate	NPW	MN	
RCRP	EPA 8270C	Diethyl phthalate	SCM	MN	
RCRP	EPA 8270C	Dimethyl phthalate	SCM	MN	
RCRP	EPA 8270C	Dimethyl phthalate	NPW	MN	
RCRP	EPA 8270C	Fluoranthene	SCM	MN	
RCRP	EPA 8270C	Fluoranthene	NPW	MN	
RCRP	EPA 8270C	Fluorene	SCM	MN	
RCRP	EPA 8270C	Fluorene	NPW	MN	
RCRP	EPA 8270C	Hexachlorobenzene	NPW	MN	
RCRP	EPA 8270C	Hexachlorobenzene	SCM	MN	
RCRP	EPA 8270C	Hexachlorobutadiene	SCM	MN	
RCRP	EPA 8270C	Hexachlorobutadiene	NPW	MN	
RCRP	EPA 8270C	Hexachlorocyclopentadiene	NPW	MN	
RCRP	EPA 8270C	Hexachlorocyclopentadiene	SCM	MN	
RCRP	EPA 8270C	Hexachloroethane	NPW	MN	
RCRP	EPA 8270C	Hexachloroethane	SCM	MN	
RCRP	EPA 8270C	Indeno(1,2,3-cd) pyrene	NPW	MN	
RCRP	EPA 8270C	Indeno(1,2,3-cd) pyrene	SCM	MN	
RCRP	EPA 8270C	Isophorone	SCM	MN	
RCRP	EPA 8270C	Isophorone	NPW	MN	
RCRP	EPA 8270C	n-Nitrosodi-n-propylamine	NPW	MN	
RCRP	EPA 8270C	n-Nitrosodi-n-propylamine	SCM	MN	
RCRP	EPA 8270C	n-Nitrosodimethylamine	NPW	MN	
RCRP	EPA 8270C	n-Nitrosodimethylamine	SCM	MN	
RCRP	EPA 8270C	n-Nitrosodiphenylamine	NPW	MN	
RCRP	EPA 8270C	n-Nitrosodiphenylamine	SCM	MN	
RCRP	EPA 8270C	Naphthalene	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270C	Naphthalene	SCM	MN	
RCRP	EPA 8270C	Nitrobenzene	SCM	MN	
RCRP	EPA 8270C	Nitrobenzene	NPW	MN	
RCRP	EPA 8270C	Pentachlorophenol	NPW	MN	
RCRP	EPA 8270C	Pentachlorophenol	SCM	MN	
RCRP	EPA 8270C	Phenanthrene	NPW	MN	
RCRP	EPA 8270C	Phenanthrene	SCM	MN	
RCRP	EPA 8270C	Phenol	SCM	MN	
RCRP	EPA 8270C	Phenol	NPW	MN	
RCRP	EPA 8270C	Pyrene	SCM	MN	
RCRP	EPA 8270C	Pyrene	NPW	MN	
RCRP	EPA 8270C	Pyridine	SCM	MN	
RCRP	EPA 8270C	Pyridine	NPW	MN	

EPA 8270C SIM

Preparation Techniques: Extraction, automated soxhlet; Extraction, separatory funnel liquid-liquid (LLE); Extraction, ultrasonic;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270C SIM	2-Methylnaphthalene	NPW	MN	
RCRP	EPA 8270C SIM	2-Methylnaphthalene	SCM	MN	
RCRP	EPA 8270C SIM	Acenaphthene	SCM	MN	
RCRP	EPA 8270C SIM	Acenaphthene	NPW	MN	
RCRP	EPA 8270C SIM	Acenaphthylene	NPW	MN	
RCRP	EPA 8270C SIM	Acenaphthylene	SCM	MN	
RCRP	EPA 8270C SIM	Anthracene	SCM	MN	
RCRP	EPA 8270C SIM	Anthracene	NPW	MN	
RCRP	EPA 8270C SIM	Benzo(a)anthracene	NPW	MN	
RCRP	EPA 8270C SIM	Benzo(a)anthracene	SCM	MN	
RCRP	EPA 8270C SIM	Benzo(a)pyrene	SCM	MN	
RCRP	EPA 8270C SIM	Benzo(a)pyrene	NPW	MN	
RCRP	EPA 8270C SIM	Benzo(g,h,i)perylene	NPW	MN	
RCRP	EPA 8270C SIM	Benzo(g,h,i)perylene	SCM	MN	
RCRP	EPA 8270C SIM	Benzo(k)fluoranthene	SCM	MN	
RCRP	EPA 8270C SIM	Benzo(k)fluoranthene	NPW	MN	
RCRP	EPA 8270C SIM	Benzo[b]fluoranthene	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270C SIM	Benzo[b]fluoranthene	SCM	MN	
RCRP	EPA 8270C SIM	Chrysene	NPW	MN	
RCRP	EPA 8270C SIM	Chrysene	SCM	MN	
RCRP	EPA 8270C SIM	Dibenz(a,h) anthracene	SCM	MN	
RCRP	EPA 8270C SIM	Dibenz(a,h) anthracene	NPW	MN	
RCRP	EPA 8270C SIM	Fluoranthene	NPW	MN	
RCRP	EPA 8270C SIM	Fluoranthene	SCM	MN	
RCRP	EPA 8270C SIM	Fluorene	NPW	MN	
RCRP	EPA 8270C SIM	Fluorene	SCM	MN	
RCRP	EPA 8270C SIM	Indeno(1,2,3-cd) pyrene	SCM	MN	
RCRP	EPA 8270C SIM	Indeno(1,2,3-cd) pyrene	NPW	MN	
RCRP	EPA 8270C SIM	Naphthalene	SCM	MN	
RCRP	EPA 8270C SIM	Naphthalene	NPW	MN	
RCRP	EPA 8270C SIM	Phenanthrene	SCM	MN	
RCRP	EPA 8270C SIM	Phenanthrene	NPW	MN	
RCRP	EPA 8270C SIM	Pyrene	SCM	MN	
RCRP	EPA 8270C SIM	Pyrene	NPW	MN	

EPA 8270D

Preparation Techniques: Extraction, soxhlet; Extraction, automated soxhlet; Extraction, EPA 1312 SPLP, non-volatiles; Extraction, microwave; Extraction, separatory funnel liquid-liquid (LLE); Extraction, EPA 1311 TCLP, non-volatiles;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270D	1,1'-Biphenyl (BZ-0)	NPW	MN	
RCRP	EPA 8270D	1,1'-Biphenyl (BZ-0)	SCM	MN	
RCRP	EPA 8270D	1,2,4,5-Tetrachlorobenzene	NPW	MN	
RCRP	EPA 8270D	1,2,4,5-Tetrachlorobenzene	SCM	MN	
RCRP	EPA 8270D	1,2,4-Trichlorobenzene	NPW	MN	
RCRP	EPA 8270D	1,2,4-Trichlorobenzene	SCM	MN	
RCRP	EPA 8270D	1,2-Dichlorobenzene	SCM	MN	
RCRP	EPA 8270D	1,2-Dichlorobenzene	NPW	MN	
RCRP	EPA 8270D	1,2-Dinitrobenzene	SCM	MN	
RCRP	EPA 8270D	1,2-Dinitrobenzene	NPW	MN	
RCRP	EPA 8270D	1,2-Diphenylhydrazine	SCM	MN	
RCRP	EPA 8270D	1,2-Diphenylhydrazine	NPW	MN	
RCRP	EPA 8270D	1,3,5-Trinitrobenzene (1,3,5-TNB)	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270D	1,3,5-Trinitrobenzene (1,3,5-TNB)	NPW	MN	
RCRP	EPA 8270D	1,3-Dichlorobenzene	SCM	MN	
RCRP	EPA 8270D	1,3-Dichlorobenzene	NPW	MN	
RCRP	EPA 8270D	1,3-Dinitrobenzene (1,3-DNB)	SCM	MN	
RCRP	EPA 8270D	1,3-Dinitrobenzene (1,3-DNB)	NPW	MN	
RCRP	EPA 8270D	1,4-Dichlorobenzene	NPW	MN	
RCRP	EPA 8270D	1,4-Dichlorobenzene	SCM	MN	
RCRP	EPA 8270D	1,4-Dinitrobenzene	NPW	MN	
RCRP	EPA 8270D	1,4-Dinitrobenzene	SCM	MN	
RCRP	EPA 8270D	1,4-Dioxane (1,4- Diethyleneoxide)	SCM	MN	
RCRP	EPA 8270D	1,4-Dioxane (1,4- Diethyleneoxide)	NPW	MN	
RCRP	EPA 8270D	1,4-Naphthoquinone	SCM	MN	
RCRP	EPA 8270D	1,4-Naphthoquinone	NPW	MN	
RCRP	EPA 8270D	1-Methylnaphthalene	SCM	MN	
RCRP	EPA 8270D	1-Methylnaphthalene	NPW	MN	
RCRP	EPA 8270D	1-Naphthylamine	SCM	MN	
RCRP	EPA 8270D	1-Naphthylamine	NPW	MN	
RCRP	EPA 8270D	2,2'-Oxybis(1-chloropropane)	SCM	MN	
RCRP	EPA 8270D	2,3,4,6-Tetrachlorophenol	SCM	MN	
RCRP	EPA 8270D	2,3,4,6-Tetrachlorophenol	NPW	MN	
RCRP	EPA 8270D	2,3,5,6-Tetrachlorophenol	SCM	MN	
RCRP	EPA 8270D	2,3,5,6-Tetrachlorophenol	NPW	MN	
RCRP	EPA 8270D	2,4,5-Trichlorophenol	SCM	MN	
RCRP	EPA 8270D	2,4,5-Trichlorophenol	NPW	MN	
RCRP	EPA 8270D	2,4,6-Trichlorophenol	SCM	MN	
RCRP	EPA 8270D	2,4,6-Trichlorophenol	NPW	MN	
RCRP	EPA 8270D	2,4-Dichlorophenol	SCM	MN	
RCRP	EPA 8270D	2,4-Dichlorophenol	NPW	MN	
RCRP	EPA 8270D	2,4-Dimethylphenol	SCM	MN	
RCRP	EPA 8270D	2,4-Dimethylphenol	NPW	MN	
RCRP	EPA 8270D	2,4-Dinitrophenol	NPW	MN	
RCRP	EPA 8270D	2,4-Dinitrophenol	SCM	MN	
RCRP	EPA 8270D	2,4-Dinitrotoluene (2,4-DNT)	SCM	MN	
RCRP	EPA 8270D	2,4-Dinitrotoluene (2,4-DNT)	NPW	MN	
RCRP	EPA 8270D	2,6-Dichlorophenol	NPW	MN	
RCRP	EPA 8270D	2,6-Dichlorophenol	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270D	2,6-Dinitrotoluene (2,6-DNT)	NPW	MN	
RCRP	EPA 8270D	2,6-Dinitrotoluene (2,6-DNT)	SCM	MN	
RCRP	EPA 8270D	2-Acetylaminofluorene	NPW	MN	
RCRP	EPA 8270D	2-Acetylaminofluorene	SCM	MN	
RCRP	EPA 8270D	2-Chloronaphthalene	SCM	MN	
RCRP	EPA 8270D	2-Chloronaphthalene	NPW	MN	
RCRP	EPA 8270D	2-Chlorophenol	NPW	MN	
RCRP	EPA 8270D	2-Chlorophenol	SCM	MN	
RCRP	EPA 8270D	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	SCM	MN	
RCRP	EPA 8270D	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	NPW	MN	
RCRP	EPA 8270D	2-Methylaniline (o-Toluidine)	SCM	MN	
RCRP	EPA 8270D	2-Methylnaphthalene	SCM	MN	
RCRP	EPA 8270D	2-Methylnaphthalene	NPW	MN	
RCRP	EPA 8270D	2-Methylphenol (o-Cresol)	SCM	MN	
RCRP	EPA 8270D	2-Methylphenol (o-Cresol)	NPW	MN	
RCRP	EPA 8270D	2-Naphthylamine	SCM	MN	
RCRP	EPA 8270D	2-Naphthylamine	NPW	MN	
RCRP	EPA 8270D	2-Nitroaniline	SCM	MN	
RCRP	EPA 8270D	2-Nitroaniline	NPW	MN	
RCRP	EPA 8270D	2-Nitrophenol	NPW	MN	
RCRP	EPA 8270D	2-Nitrophenol	SCM	MN	
RCRP	EPA 8270D	2-Picoline (2-Methylpyridine)	NPW	MN	
RCRP	EPA 8270D	2-Picoline (2-Methylpyridine)	SCM	MN	
RCRP	EPA 8270D	3,3'-Dichlorobenzidine	SCM	MN	
RCRP	EPA 8270D	3,3'-Dichlorobenzidine	NPW	MN	
RCRP	EPA 8270D	3,3'-Dimethylbenzidine	SCM	MN	
RCRP	EPA 8270D	3,3'-Dimethylbenzidine	NPW	MN	
RCRP	EPA 8270D	3-Methylcholanthrene	SCM	MN	
RCRP	EPA 8270D	3-Methylcholanthrene	NPW	MN	
RCRP	EPA 8270D	3-Methylphenol (m-Cresol)	NPW	MN	
RCRP	EPA 8270D	3-Methylphenol (m-Cresol)	SCM	MN	
RCRP	EPA 8270D	3-Nitroaniline	SCM	MN	
RCRP	EPA 8270D	3-Nitroaniline	NPW	MN	
RCRP	EPA 8270D	4,6-Dinitro-2-methylphenol	NPW	MN	
RCRP	EPA 8270D	4,6-Dinitro-2-methylphenol	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270D	4-Aminobiphenyl	SCM	MN	
RCRP	EPA 8270D	4-Aminobiphenyl	NPW	MN	
RCRP	EPA 8270D	4-Bromophenyl phenyl ether	NPW	MN	
RCRP	EPA 8270D	4-Bromophenyl phenyl ether	SCM	MN	
RCRP	EPA 8270D	4-Chloro-3-methylphenol	NPW	MN	
RCRP	EPA 8270D	4-Chloro-3-methylphenol	SCM	MN	
RCRP	EPA 8270D	4-Chloroaniline	SCM	MN	
RCRP	EPA 8270D	4-Chloroaniline	NPW	MN	
RCRP	EPA 8270D	4-Chlorophenyl phenylether	NPW	MN	
RCRP	EPA 8270D	4-Chlorophenyl phenylether	SCM	MN	
RCRP	EPA 8270D	4-Dimethyl aminoazobenzene	SCM	MN	
RCRP	EPA 8270D	4-Dimethyl aminoazobenzene	NPW	MN	
RCRP	EPA 8270D	4-Methylphenol (p-Cresol)	NPW	MN	
RCRP	EPA 8270D	4-Methylphenol (p-Cresol)	SCM	MN	
RCRP	EPA 8270D	4-Nitroaniline	NPW	MN	
RCRP	EPA 8270D	4-Nitroaniline	SCM	MN	
RCRP	EPA 8270D	4-Nitrophenol	SCM	MN	
RCRP	EPA 8270D	4-Nitrophenol	NPW	MN	
RCRP	EPA 8270D	4-Nitroquinoline 1-oxide	SCM	MN	
RCRP	EPA 8270D	5-Nitro-o-toluidine	NPW	MN	
RCRP	EPA 8270D	5-Nitro-o-toluidine	SCM	MN	
RCRP	EPA 8270D	7,12-Dimethylbenz(a) anthracene	SCM	MN	
RCRP	EPA 8270D	7,12-Dimethylbenz(a) anthracene	NPW	MN	
RCRP	EPA 8270D	a-a-Dimethylphenethylamine	SCM	MN	
RCRP	EPA 8270D	a-a-Dimethylphenethylamine	NPW	MN	
RCRP	EPA 8270D	Acenaphthene	SCM	MN	
RCRP	EPA 8270D	Acenaphthene	NPW	MN	
RCRP	EPA 8270D	Acenaphthylene	SCM	MN	
RCRP	EPA 8270D	Acenaphthylene	NPW	MN	
RCRP	EPA 8270D	Acetophenone	NPW	MN	
RCRP	EPA 8270D	Acetophenone	SCM	MN	
RCRP	EPA 8270D	Aniline	NPW	MN	
RCRP	EPA 8270D	Aniline	SCM	MN	
RCRP	EPA 8270D	Anthracene	SCM	MN	
RCRP	EPA 8270D	Anthracene	NPW	MN	
RCRP	EPA 8270D	Aramite	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270D	Aramite	NPW	MN	
RCRP	EPA 8270D	Atrazine	SCM	MN	
RCRP	EPA 8270D	Atrazine	NPW	MN	
RCRP	EPA 8270D	Benzal chloride	SCM	MN	
RCRP	EPA 8270D	Benzaldehyde	SCM	MN	
RCRP	EPA 8270D	Benzaldehyde	NPW	MN	
RCRP	EPA 8270D	Benzidine	SCM	MN	
RCRP	EPA 8270D	Benzidine	NPW	MN	
RCRP	EPA 8270D	Benzo(a)anthracene	SCM	MN	
RCRP	EPA 8270D	Benzo(a)anthracene	NPW	MN	
RCRP	EPA 8270D	Benzo(a)pyrene	NPW	MN	
RCRP	EPA 8270D	Benzo(a)pyrene	SCM	MN	
RCRP	EPA 8270D	Benzo(g,h,i)perylene	SCM	MN	
RCRP	EPA 8270D	Benzo(g,h,i)perylene	NPW	MN	
RCRP	EPA 8270D	Benzo(k)fluoranthene	NPW	MN	
RCRP	EPA 8270D	Benzo(k)fluoranthene	SCM	MN	
RCRP	EPA 8270D	Benzo[b]fluoranthene	NPW	MN	
RCRP	EPA 8270D	Benzo[b]fluoranthene	SCM	MN	
RCRP	EPA 8270D	Benzoic acid	SCM	MN	
RCRP	EPA 8270D	Benzoic acid	NPW	MN	
RCRP	EPA 8270D	Benzyl alcohol	SCM	MN	
RCRP	EPA 8270D	Benzyl alcohol	NPW	MN	
RCRP	EPA 8270D	bis(2-Chloroethoxy)methane	SCM	MN	
RCRP	EPA 8270D	bis(2-Chloroethoxy)methane	NPW	MN	
RCRP	EPA 8270D	bis(2-Chloroethyl) ether	NPW	MN	
RCRP	EPA 8270D	bis(2-Chloroethyl) ether	SCM	MN	
RCRP	EPA 8270D	bis(2-Chloroisopropyl) ether	NPW	MN	
RCRP	EPA 8270D	bis(2-Chloroisopropyl) ether	SCM	MN	
RCRP	EPA 8270D	Butyl benzyl phthalate	NPW	MN	
RCRP	EPA 8270D	Butyl benzyl phthalate	SCM	MN	
RCRP	EPA 8270D	Caprolactam	NPW	MN	
RCRP	EPA 8270D	Caprolactam	SCM	MN	
RCRP	EPA 8270D	Carbazole	NPW	MN	
RCRP	EPA 8270D	Carbazole	SCM	MN	
RCRP	EPA 8270D	Chlorobenzilate	NPW	MN	
RCRP	EPA 8270D	Chlorobenzilate	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270D	Chrysene	NPW	MN	
RCRP	EPA 8270D	Chrysene	SCM	MN	
RCRP	EPA 8270D	Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	NPW	MN	
RCRP	EPA 8270D	Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	SCM	MN	
RCRP	EPA 8270D	Di-n-butyl phthalate	NPW	MN	
RCRP	EPA 8270D	Di-n-butyl phthalate	SCM	MN	
RCRP	EPA 8270D	Di-n-octyl phthalate	SCM	MN	
RCRP	EPA 8270D	Di-n-octyl phthalate	NPW	MN	
RCRP	EPA 8270D	Diallate	SCM	MN	
RCRP	EPA 8270D	Diallate	NPW	MN	
RCRP	EPA 8270D	Dibenz(a, h) acridine	SCM	MN	
RCRP	EPA 8270D	Dibenz(a,h) anthracene	SCM	MN	
RCRP	EPA 8270D	Dibenz(a,h) anthracene	NPW	MN	
RCRP	EPA 8270D	Dibenzofuran	NPW	MN	
RCRP	EPA 8270D	Dibenzofuran	SCM	MN	
RCRP	EPA 8270D	Diethyl phthalate	NPW	MN	
RCRP	EPA 8270D	Diethyl phthalate	SCM	MN	
RCRP	EPA 8270D	Dimethyl phthalate	SCM	MN	
RCRP	EPA 8270D	Dimethyl phthalate	NPW	MN	
RCRP	EPA 8270D	Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)	NPW	MN	
RCRP	EPA 8270D	Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)	SCM	MN	
RCRP	EPA 8270D	Diphenylamine	NPW	MN	
RCRP	EPA 8270D	Diphenylamine	SCM	MN	
RCRP	EPA 8270D	Ethyl methanesulfonate	SCM	MN	
RCRP	EPA 8270D	Ethyl methanesulfonate	NPW	MN	
RCRP	EPA 8270D	Fluoranthene	SCM	MN	
RCRP	EPA 8270D	Fluoranthene	NPW	MN	
RCRP	EPA 8270D	Fluorene	SCM	MN	
RCRP	EPA 8270D	Fluorene	NPW	MN	
RCRP	EPA 8270D	Hexachlorobenzene	NPW	MN	
RCRP	EPA 8270D	Hexachlorobenzene	SCM	MN	
RCRP	EPA 8270D	Hexachlorobutadiene	NPW	MN	
RCRP	EPA 8270D	Hexachlorobutadiene	SCM	MN	
RCRP	EPA 8270D	Hexachlorocyclopentadiene	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270D	Hexachlorocyclopentadiene	NPW	MN	
RCRP	EPA 8270D	Hexachloroethane	SCM	MN	
RCRP	EPA 8270D	Hexachloroethane	NPW	MN	
RCRP	EPA 8270D	Hexachloropropene	SCM	MN	
RCRP	EPA 8270D	Hexachloropropene	NPW	MN	
RCRP	EPA 8270D	Indeno(1,2,3-cd) pyrene	NPW	MN	
RCRP	EPA 8270D	Indeno(1,2,3-cd) pyrene	SCM	MN	
RCRP	EPA 8270D	Isodrin	NPW	MN	
RCRP	EPA 8270D	Isodrin	SCM	MN	
RCRP	EPA 8270D	Isophorone	NPW	MN	
RCRP	EPA 8270D	Isophorone	SCM	MN	
RCRP	EPA 8270D	Isosafrole	NPW	MN	
RCRP	EPA 8270D	Isosafrole	SCM	MN	
RCRP	EPA 8270D	Kepone	SCM	MN	
RCRP	EPA 8270D	Kepone	NPW	MN	
RCRP	EPA 8270D	Methapyrilene	NPW	MN	
RCRP	EPA 8270D	Methapyrilene	SCM	MN	
RCRP	EPA 8270D	Methyl methanesulfonate	NPW	MN	
RCRP	EPA 8270D	Methyl methanesulfonate	SCM	MN	
RCRP	EPA 8270D	n-Nitroso-di-n-butylamine	NPW	MN	
RCRP	EPA 8270D	n-Nitroso-di-n-butylamine	SCM	MN	
RCRP	EPA 8270D	n-Nitrosodi-n-propylamine	NPW	MN	
RCRP	EPA 8270D	n-Nitrosodi-n-propylamine	SCM	MN	
RCRP	EPA 8270D	n-Nitrosodiethylamine	NPW	MN	
RCRP	EPA 8270D	n-Nitrosodiethylamine	SCM	MN	
RCRP	EPA 8270D	n-Nitrosodimethylamine	NPW	MN	
RCRP	EPA 8270D	n-Nitrosodimethylamine	SCM	MN	
RCRP	EPA 8270D	n-Nitrosodiphenylamine	NPW	MN	
RCRP	EPA 8270D	n-Nitrosodiphenylamine	SCM	MN	
RCRP	EPA 8270D	n-Nitrosomethylethalamine	SCM	MN	
RCRP	EPA 8270D	n-Nitrosomethylethalamine	NPW	MN	
RCRP	EPA 8270D	n-Nitrosomorpholine	SCM	MN	
RCRP	EPA 8270D	n-Nitrosomorpholine	NPW	MN	
RCRP	EPA 8270D	n-Nitrosopiperidine	SCM	MN	
RCRP	EPA 8270D	n-Nitrosopiperidine	NPW	MN	
RCRP	EPA 8270D	n-Nitrosopyrrolidine	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270D	n-Nitrosopyrrolidine	NPW	MN	
RCRP	EPA 8270D	Naphthalene	NPW	MN	
RCRP	EPA 8270D	Naphthalene	SCM	MN	
RCRP	EPA 8270D	Nitrobenzene	NPW	MN	
RCRP	EPA 8270D	Nitrobenzene	SCM	MN	
RCRP	EPA 8270D	Pentachlorobenzene	NPW	MN	
RCRP	EPA 8270D	Pentachlorobenzene	SCM	MN	
RCRP	EPA 8270D	Pentachloroethane	SCM	MN	
RCRP	EPA 8270D	Pentachloroethane	NPW	MN	
RCRP	EPA 8270D	Pentachloronitrobenzene	SCM	MN	
RCRP	EPA 8270D	Pentachloronitrobenzene	NPW	MN	
RCRP	EPA 8270D	Pentachlorophenol	SCM	MN	
RCRP	EPA 8270D	Pentachlorophenol	NPW	MN	
RCRP	EPA 8270D	Phenacetin	NPW	MN	
RCRP	EPA 8270D	Phenacetin	SCM	MN	
RCRP	EPA 8270D	Phenanthrene	NPW	MN	
RCRP	EPA 8270D	Phenanthrene	SCM	MN	
RCRP	EPA 8270D	Phenol	NPW	MN	
RCRP	EPA 8270D	Phenol	SCM	MN	
RCRP	EPA 8270D	Pronamide (Kerb)	SCM	MN	
RCRP	EPA 8270D	Pronamide (Kerb)	NPW	MN	
RCRP	EPA 8270D	Pyrene	NPW	MN	
RCRP	EPA 8270D	Pyrene	SCM	MN	
RCRP	EPA 8270D	Pyridine	SCM	MN	
RCRP	EPA 8270D	Pyridine	NPW	MN	
RCRP	EPA 8270D	Quinoline	NPW	MN	
RCRP	EPA 8270D	Quinoline	SCM	MN	
RCRP	EPA 8270D	Safrole	SCM	MN	
RCRP	EPA 8270D	Safrole	NPW	MN	

EPA 8270D SIM

Preparation Techniques: Extraction, automated soxhlet; Extraction, separatory funnel liquid-liquid (LLE); Extraction, ultrasonic;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270D SIM	1-Methylnaphthalene	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8270D SIM	1-Methylnaphthalene	NPW	MN	
RCRP	EPA 8270D SIM	2-Methylnaphthalene	NPW	MN	
RCRP	EPA 8270D SIM	2-Methylnaphthalene	SCM	MN	
RCRP	EPA 8270D SIM	Acenaphthene	SCM	MN	
RCRP	EPA 8270D SIM	Acenaphthene	NPW	MN	
RCRP	EPA 8270D SIM	Acenaphthylene	NPW	MN	
RCRP	EPA 8270D SIM	Acenaphthylene	SCM	MN	
RCRP	EPA 8270D SIM	Anthracene	SCM	MN	
RCRP	EPA 8270D SIM	Anthracene	NPW	MN	
RCRP	EPA 8270D SIM	Benzo(a)anthracene	SCM	MN	
RCRP	EPA 8270D SIM	Benzo(a)anthracene	NPW	MN	
RCRP	EPA 8270D SIM	Benzo(a)pyrene	NPW	MN	
RCRP	EPA 8270D SIM	Benzo(a)pyrene	SCM	MN	
RCRP	EPA 8270D SIM	Benzo(g,h,i)perylene	SCM	MN	
RCRP	EPA 8270D SIM	Benzo(g,h,i)perylene	NPW	MN	
RCRP	EPA 8270D SIM	Benzo(k)fluoranthene	NPW	MN	
RCRP	EPA 8270D SIM	Benzo(k)fluoranthene	SCM	MN	
RCRP	EPA 8270D SIM	Benzo[b]fluoranthene	SCM	MN	
RCRP	EPA 8270D SIM	Benzo[b]fluoranthene	NPW	MN	
RCRP	EPA 8270D SIM	Chrysene	NPW	MN	
RCRP	EPA 8270D SIM	Chrysene	SCM	MN	
RCRP	EPA 8270D SIM	Dibenz(a,h) anthracene	NPW	MN	
RCRP	EPA 8270D SIM	Dibenz(a,h) anthracene	SCM	MN	
RCRP	EPA 8270D SIM	Fluoranthene	SCM	MN	
RCRP	EPA 8270D SIM	Fluoranthene	NPW	MN	
RCRP	EPA 8270D SIM	Fluorene	SCM	MN	
RCRP	EPA 8270D SIM	Fluorene	NPW	MN	
RCRP	EPA 8270D SIM	Indeno(1,2,3-cd) pyrene	SCM	MN	
RCRP	EPA 8270D SIM	Indeno(1,2,3-cd) pyrene	NPW	MN	
RCRP	EPA 8270D SIM	Naphthalene	NPW	MN	
RCRP	EPA 8270D SIM	Naphthalene	SCM	MN	
RCRP	EPA 8270D SIM	Phenanthrene	NPW	MN	
RCRP	EPA 8270D SIM	Phenanthrene	SCM	MN	
RCRP	EPA 8270D SIM	Pyrene	SCM	MN	
RCRP	EPA 8270D SIM	Pyrene	NPW	MN	

EPA 1010A

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 1010A	Ignitability	SCM	MN	

EPA 9095B

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 9095B	Paint Filter Liquids Test	SCM	MN	

EPA 8015C

Preparation Techniques: Extraction, micro; Extraction, separatory funnel liquid-liquid (LLE); Extraction, ultrasonic;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8015C	Ethanol	NPW	MN	
RCRP	EPA 8015C	Isobutyl alcohol (2-Methyl-1-propanol)	NPW	MN	
RCRP	EPA 8015C	Isopropyl alcohol (2-Propanol, Isopropanol)	NPW	MN	
RCRP	EPA 8015C	Methanol	NPW	MN	
RCRP	EPA 8015C	n-Butyl alcohol (1-Butanol, n-Butanol)	NPW	MN	
RCRP	EPA 8015C	tert-Butyl alcohol	NPW	MN	

EPA 8015D

Preparation Techniques: Extraction, soxhlet; Extraction, micro; Extraction, separatory funnel liquid-liquid (LLE); Purge and trap; Extraction, ultrasonic; Extraction, Microwave;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8015D	Diesel range organics (DRO)	NPW	MN	
RCRP	EPA 8015D	Diesel range organics (DRO)	SCM	MN	
RCRP	EPA 8015D	Ethylene glycol	NPW	MN	
RCRP	EPA 8015D	Gasoline range organics (GRO)	NPW	MN	
RCRP	EPA 8015D	Gasoline range organics (GRO)	SCM	MN	
RCRP	EPA 8015D	Propylene Glycol	NPW	MN	

EPA 8260B

Preparation Techniques: Extraction, EPA 1311 TCLP, zero headspace (ZHE); Purge and trap; Extraction, EPA 1312 SPLP, zero headspace (ZHE);

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260B	1,1,1,2-Tetrachloroethane	NPW	MN	
RCRP	EPA 8260B	1,1,1,2-Tetrachloroethane	SCM	MN	
RCRP	EPA 8260B	1,1,1-Trichloroethane	NPW	MN	
RCRP	EPA 8260B	1,1,1-Trichloroethane	SCM	MN	
RCRP	EPA 8260B	1,1,2,2-Tetrachloroethane	SCM	MN	
RCRP	EPA 8260B	1,1,2,2-Tetrachloroethane	NPW	MN	
RCRP	EPA 8260B	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	SCM	MN	
RCRP	EPA 8260B	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NPW	MN	
RCRP	EPA 8260B	1,1,2-Trichloroethane	NPW	MN	
RCRP	EPA 8260B	1,1,2-Trichloroethane	SCM	MN	
RCRP	EPA 8260B	1,1-Dichloroethane	SCM	MN	
RCRP	EPA 8260B	1,1-Dichloroethane	NPW	MN	
RCRP	EPA 8260B	1,1-Dichloroethylene	NPW	MN	
RCRP	EPA 8260B	1,1-Dichloroethylene	SCM	MN	
RCRP	EPA 8260B	1,1-Dichloropropene	NPW	MN	
RCRP	EPA 8260B	1,1-Dichloropropene	SCM	MN	
RCRP	EPA 8260B	1,2,3-Trichlorobenzene	SCM	MN	
RCRP	EPA 8260B	1,2,3-Trichlorobenzene	NPW	MN	
RCRP	EPA 8260B	1,2,3-Trichloropropane	SCM	MN	
RCRP	EPA 8260B	1,2,3-Trichloropropane	NPW	MN	
RCRP	EPA 8260B	1,2,3-Trimethylbenzene	NPW	MN	
RCRP	EPA 8260B	1,2,3-Trimethylbenzene	SCM	MN	
RCRP	EPA 8260B	1,2,4-Trichlorobenzene	SCM	MN	
RCRP	EPA 8260B	1,2,4-Trichlorobenzene	NPW	MN	
RCRP	EPA 8260B	1,2,4-Trimethylbenzene	NPW	MN	
RCRP	EPA 8260B	1,2,4-Trimethylbenzene	SCM	MN	
RCRP	EPA 8260B	1,2-Dibromo-3-chloropropane (DBCP)	NPW	MN	
RCRP	EPA 8260B	1,2-Dibromo-3-chloropropane (DBCP)	SCM	MN	
RCRP	EPA 8260B	1,2-Dibromoethane (EDB, Ethylene dibromide)	NPW	MN	
RCRP	EPA 8260B	1,2-Dibromoethane (EDB, Ethylene dibromide)	SCM	MN	
RCRP	EPA 8260B	1,2-Dichlorobenzene	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260B	1,2-Dichlorobenzene	NPW	MN	
RCRP	EPA 8260B	1,2-Dichloroethane (Ethylene dichloride)	SCM	MN	
RCRP	EPA 8260B	1,2-Dichloroethane (Ethylene dichloride)	NPW	MN	
RCRP	EPA 8260B	1,2-Dichloropropane	NPW	MN	
RCRP	EPA 8260B	1,2-Dichloropropane	SCM	MN	
RCRP	EPA 8260B	1,3,5-Trichlorobenzene	SCM	MN	
RCRP	EPA 8260B	1,3,5-Trimethylbenzene	NPW	MN	
RCRP	EPA 8260B	1,3,5-Trimethylbenzene	SCM	MN	
RCRP	EPA 8260B	1,3-Dichlorobenzene	SCM	MN	
RCRP	EPA 8260B	1,3-Dichlorobenzene	NPW	MN	
RCRP	EPA 8260B	1,3-Dichloropropane	SCM	MN	
RCRP	EPA 8260B	1,3-Dichloropropane	NPW	MN	
RCRP	EPA 8260B	1,4-Dichlorobenzene	SCM	MN	
RCRP	EPA 8260B	1,4-Dichlorobenzene	NPW	MN	
RCRP	EPA 8260B	1,4-Dioxane (1,4- Diethyleneoxide)	SCM	MN	
RCRP	EPA 8260B	1,4-Dioxane (1,4- Diethyleneoxide)	NPW	MN	
RCRP	EPA 8260B	2,2-Dichloropropane	SCM	MN	
RCRP	EPA 8260B	2,2-Dichloropropane	NPW	MN	
RCRP	EPA 8260B	2-Butanone (Methyl ethyl ketone, MEK)	NPW	MN	
RCRP	EPA 8260B	2-Butanone (Methyl ethyl ketone, MEK)	SCM	MN	
RCRP	EPA 8260B	2-Chloroethyl vinyl ether	NPW	MN	
RCRP	EPA 8260B	2-Chloroethyl vinyl ether	SCM	MN	
RCRP	EPA 8260B	2-Chlorotoluene	SCM	MN	
RCRP	EPA 8260B	2-Chlorotoluene	NPW	MN	
RCRP	EPA 8260B	2-Hexanone	NPW	MN	
RCRP	EPA 8260B	2-Hexanone	SCM	MN	
RCRP	EPA 8260B	2-Methylnaphthalene	NPW	MN	
RCRP	EPA 8260B	2-Methylnaphthalene	SCM	MN	
RCRP	EPA 8260B	4-Chlorotoluene	NPW	MN	
RCRP	EPA 8260B	4-Chlorotoluene	SCM	MN	
RCRP	EPA 8260B	4-Isopropyltoluene (p-Cymene)	SCM	MN	
RCRP	EPA 8260B	4-Isopropyltoluene (p-Cymene)	NPW	MN	
RCRP	EPA 8260B	4-Methyl-2-pentanone (MIBK)	SCM	MN	
RCRP	EPA 8260B	4-Methyl-2-pentanone (MIBK)	NPW	MN	
RCRP	EPA 8260B	Acetone	SCM	MN	
RCRP	EPA 8260B	Acetone	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260B	Acetonitrile	NPW	MN	
RCRP	EPA 8260B	Acetonitrile	SCM	MN	
RCRP	EPA 8260B	Acrolein (Propenal)	NPW	MN	
RCRP	EPA 8260B	Acrolein (Propenal)	SCM	MN	
RCRP	EPA 8260B	Acrylonitrile	SCM	MN	
RCRP	EPA 8260B	Acrylonitrile	NPW	MN	
RCRP	EPA 8260B	Allyl chloride (3-Chloropropene)	NPW	MN	
RCRP	EPA 8260B	Allyl chloride (3-Chloropropene)	SCM	MN	
RCRP	EPA 8260B	Benzene	SCM	MN	
RCRP	EPA 8260B	Benzene	NPW	MN	
RCRP	EPA 8260B	Benzyl chloride	NPW	MN	
RCRP	EPA 8260B	Benzyl chloride	SCM	MN	
RCRP	EPA 8260B	Bromobenzene	NPW	MN	
RCRP	EPA 8260B	Bromobenzene	SCM	MN	
RCRP	EPA 8260B	Bromochloromethane	SCM	MN	
RCRP	EPA 8260B	Bromochloromethane	NPW	MN	
RCRP	EPA 8260B	Bromodichloromethane	NPW	MN	
RCRP	EPA 8260B	Bromodichloromethane	SCM	MN	
RCRP	EPA 8260B	Bromoform	NPW	MN	
RCRP	EPA 8260B	Bromoform	SCM	MN	
RCRP	EPA 8260B	Carbon disulfide	NPW	MN	
RCRP	EPA 8260B	Carbon disulfide	SCM	MN	
RCRP	EPA 8260B	Carbon tetrachloride	NPW	MN	
RCRP	EPA 8260B	Carbon tetrachloride	SCM	MN	
RCRP	EPA 8260B	Chlorobenzene	NPW	MN	
RCRP	EPA 8260B	Chlorobenzene	SCM	MN	
RCRP	EPA 8260B	Chlorodibromomethane	NPW	MN	
RCRP	EPA 8260B	Chlorodibromomethane	SCM	MN	
RCRP	EPA 8260B	Chloroethane (Ethyl chloride)	NPW	MN	
RCRP	EPA 8260B	Chloroethane (Ethyl chloride)	SCM	MN	
RCRP	EPA 8260B	Chloroform	NPW	MN	
RCRP	EPA 8260B	Chloroform	SCM	MN	
RCRP	EPA 8260B	Chloroprene (2-Chloro-1,3-butadiene)	NPW	MN	
RCRP	EPA 8260B	Chloroprene (2-Chloro-1,3-butadiene)	SCM	MN	
RCRP	EPA 8260B	cis-1,2-Dichloroethylene	SCM	MN	
RCRP	EPA 8260B	cis-1,2-Dichloroethylene	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260B	cis-1,3-Dichloropropene	NPW	MN	
RCRP	EPA 8260B	cis-1,3-Dichloropropene	SCM	MN	
RCRP	EPA 8260B	Cyclohexane	NPW	MN	
RCRP	EPA 8260B	Cyclohexane	SCM	MN	
RCRP	EPA 8260B	Di-isopropylether (DIPE)	NPW	MN	
RCRP	EPA 8260B	Di-isopropylether (DIPE)	SCM	MN	
RCRP	EPA 8260B	Dibromomethane (Methylene bromide)	NPW	MN	
RCRP	EPA 8260B	Dibromomethane (Methylene bromide)	SCM	MN	
RCRP	EPA 8260B	Dichlorodifluoromethane (Freon-12)	SCM	MN	
RCRP	EPA 8260B	Dichlorodifluoromethane (Freon-12)	NPW	MN	
RCRP	EPA 8260B	Diethyl ether	SCM	MN	
RCRP	EPA 8260B	Diethyl ether	NPW	MN	
RCRP	EPA 8260B	Ethyl acetate	SCM	MN	
RCRP	EPA 8260B	Ethyl acetate	NPW	MN	
RCRP	EPA 8260B	Ethyl methacrylate	NPW	MN	
RCRP	EPA 8260B	Ethyl methacrylate	SCM	MN	
RCRP	EPA 8260B	Ethylbenzene	NPW	MN	
RCRP	EPA 8260B	Ethylbenzene	SCM	MN	
RCRP	EPA 8260B	Hexachlorobutadiene	NPW	MN	
RCRP	EPA 8260B	Hexachlorobutadiene	SCM	MN	
RCRP	EPA 8260B	Hexachloroethane	SCM	MN	
RCRP	EPA 8260B	Hexachloroethane	NPW	MN	
RCRP	EPA 8260B	Iodomethane (Methyl iodide)	SCM	MN	
RCRP	EPA 8260B	Iodomethane (Methyl iodide)	NPW	MN	
RCRP	EPA 8260B	Isobutyl alcohol (2-Methyl-1-propanol)	SCM	MN	
RCRP	EPA 8260B	Isobutyl alcohol (2-Methyl-1-propanol)	NPW	MN	
RCRP	EPA 8260B	Isopropylbenzene	NPW	MN	
RCRP	EPA 8260B	Isopropylbenzene	SCM	MN	
RCRP	EPA 8260B	m+p-xylene	SCM	MN	
RCRP	EPA 8260B	m+p-xylene	NPW	MN	
RCRP	EPA 8260B	Methacrylonitrile	SCM	MN	
RCRP	EPA 8260B	Methacrylonitrile	NPW	MN	
RCRP	EPA 8260B	Methyl acetate	SCM	MN	
RCRP	EPA 8260B	Methyl acetate	NPW	MN	
RCRP	EPA 8260B	Methyl bromide (Bromomethane)	SCM	MN	
RCRP	EPA 8260B	Methyl bromide (Bromomethane)	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260B	Methyl chloride (Chloromethane)	NPW	MN	
RCRP	EPA 8260B	Methyl chloride (Chloromethane)	SCM	MN	
RCRP	EPA 8260B	Methyl methacrylate	NPW	MN	
RCRP	EPA 8260B	Methyl methacrylate	SCM	MN	
RCRP	EPA 8260B	Methyl tert-butyl ether (MTBE)	SCM	MN	
RCRP	EPA 8260B	Methyl tert-butyl ether (MTBE)	NPW	MN	
RCRP	EPA 8260B	Methylcyclohexane	SCM	MN	
RCRP	EPA 8260B	Methylcyclohexane	NPW	MN	
RCRP	EPA 8260B	Methylene chloride (Dichloromethane)	NPW	MN	
RCRP	EPA 8260B	Methylene chloride (Dichloromethane)	SCM	MN	
RCRP	EPA 8260B	n-Butyl alcohol (1-Butanol, n-Butanol)	SCM	MN	
RCRP	EPA 8260B	n-Butyl alcohol (1-Butanol, n-Butanol)	NPW	MN	
RCRP	EPA 8260B	n-Butylbenzene	NPW	MN	
RCRP	EPA 8260B	n-Butylbenzene	SCM	MN	
RCRP	EPA 8260B	n-Heptane	NPW	MN	
RCRP	EPA 8260B	n-Heptane	SCM	MN	
RCRP	EPA 8260B	n-Hexane	SCM	MN	
RCRP	EPA 8260B	n-Hexane	NPW	MN	
RCRP	EPA 8260B	n-Propylbenzene	NPW	MN	
RCRP	EPA 8260B	n-Propylbenzene	SCM	MN	
RCRP	EPA 8260B	Naphthalene	NPW	MN	
RCRP	EPA 8260B	Naphthalene	SCM	MN	
RCRP	EPA 8260B	o-Xylene	NPW	MN	
RCRP	EPA 8260B	o-Xylene	SCM	MN	
RCRP	EPA 8260B	sec-Butylbenzene	NPW	MN	
RCRP	EPA 8260B	sec-Butylbenzene	SCM	MN	
RCRP	EPA 8260B	Styrene	NPW	MN	
RCRP	EPA 8260B	Styrene	SCM	MN	
RCRP	EPA 8260B	T-amylmethylether (TAME)	NPW	MN	
RCRP	EPA 8260B	T-amylmethylether (TAME)	SCM	MN	
RCRP	EPA 8260B	tert-Butyl alcohol	NPW	MN	
RCRP	EPA 8260B	tert-Butyl alcohol	SCM	MN	
RCRP	EPA 8260B	tert-Butylbenzene	SCM	MN	
RCRP	EPA 8260B	tert-Butylbenzene	NPW	MN	
RCRP	EPA 8260B	Tetrachloroethylene (Perchloroethylene)	SCM	MN	
RCRP	EPA 8260B	Tetrachloroethylene (Perchloroethylene)	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260B	Tetrahydrofuran (THF)	SCM	MN	
RCRP	EPA 8260B	Tetrahydrofuran (THF)	NPW	MN	
RCRP	EPA 8260B	Toluene	NPW	MN	
RCRP	EPA 8260B	Toluene	SCM	MN	
RCRP	EPA 8260B	trans-1,2-Dichloroethylene	NPW	MN	
RCRP	EPA 8260B	trans-1,2-Dichloroethylene	SCM	MN	
RCRP	EPA 8260B	trans-1,3-Dichloropropylene	SCM	MN	
RCRP	EPA 8260B	trans-1,3-Dichloropropylene	NPW	MN	
RCRP	EPA 8260B	trans-1,4-Dichloro-2-butene	SCM	MN	
RCRP	EPA 8260B	trans-1,4-Dichloro-2-butene	NPW	MN	
RCRP	EPA 8260B	Trichloroethene (Trichloroethylene)	SCM	MN	
RCRP	EPA 8260B	Trichloroethene (Trichloroethylene)	NPW	MN	
RCRP	EPA 8260B	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	SCM	MN	
RCRP	EPA 8260B	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	NPW	MN	
RCRP	EPA 8260B	Vinyl acetate	SCM	MN	
RCRP	EPA 8260B	Vinyl acetate	NPW	MN	
RCRP	EPA 8260B	Vinyl chloride	SCM	MN	
RCRP	EPA 8260B	Vinyl chloride	NPW	MN	
RCRP	EPA 8260B	Xylene (total)	NPW	MN	
RCRP	EPA 8260B	Xylene (total)	SCM	MN	

EPA 8260C

Preparation Techniques: Extraction, EPA 1311 TCLP, zero headspace (ZHE); Purge and trap; Extraction, EPA 1312 SPLP, zero headspace (ZHE);

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260C	1,1,1,2-Tetrachloroethane	NPW	MN	
RCRP	EPA 8260C	1,1,1,2-Tetrachloroethane	SCM	MN	
RCRP	EPA 8260C	1,1,1-Trichloroethane	NPW	MN	
RCRP	EPA 8260C	1,1,1-Trichloroethane	SCM	MN	
RCRP	EPA 8260C	1,1,2,2-Tetrachloroethane	SCM	MN	
RCRP	EPA 8260C	1,1,2,2-Tetrachloroethane	NPW	MN	
RCRP	EPA 8260C	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	SCM	MN	
RCRP	EPA 8260C	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260C	1,1,2-Trichloroethane	NPW	MN	
RCRP	EPA 8260C	1,1,2-Trichloroethane	SCM	MN	
RCRP	EPA 8260C	1,1-Dichloroethane	SCM	MN	
RCRP	EPA 8260C	1,1-Dichloroethane	NPW	MN	
RCRP	EPA 8260C	1,1-Dichloroethylene	SCM	MN	
RCRP	EPA 8260C	1,1-Dichloroethylene	NPW	MN	
RCRP	EPA 8260C	1,1-Dichloropropene	NPW	MN	
RCRP	EPA 8260C	1,1-Dichloropropene	SCM	MN	
RCRP	EPA 8260C	1,2,3-Trichlorobenzene	SCM	MN	
RCRP	EPA 8260C	1,2,3-Trichlorobenzene	NPW	MN	
RCRP	EPA 8260C	1,2,3-Trichloropropane	NPW	MN	
RCRP	EPA 8260C	1,2,3-Trichloropropane	SCM	MN	
RCRP	EPA 8260C	1,2,3-Trimethylbenzene	NPW	MN	
RCRP	EPA 8260C	1,2,3-Trimethylbenzene	SCM	MN	
RCRP	EPA 8260C	1,2,4-Trichlorobenzene	SCM	MN	
RCRP	EPA 8260C	1,2,4-Trichlorobenzene	NPW	MN	
RCRP	EPA 8260C	1,2,4-Trimethylbenzene	NPW	MN	
RCRP	EPA 8260C	1,2,4-Trimethylbenzene	SCM	MN	
RCRP	EPA 8260C	1,2-Dibromo-3-chloropropane (DBCP)	SCM	MN	
RCRP	EPA 8260C	1,2-Dibromo-3-chloropropane (DBCP)	NPW	MN	
RCRP	EPA 8260C	1,2-Dibromoethane (EDB, Ethylene dibromide)	SCM	MN	
RCRP	EPA 8260C	1,2-Dibromoethane (EDB, Ethylene dibromide)	NPW	MN	
RCRP	EPA 8260C	1,2-Dichlorobenzene	SCM	MN	
RCRP	EPA 8260C	1,2-Dichlorobenzene	NPW	MN	
RCRP	EPA 8260C	1,2-Dichloroethane (Ethylene dichloride)	SCM	MN	
RCRP	EPA 8260C	1,2-Dichloroethane (Ethylene dichloride)	NPW	MN	
RCRP	EPA 8260C	1,2-Dichloropropane	NPW	MN	
RCRP	EPA 8260C	1,2-Dichloropropane	SCM	MN	
RCRP	EPA 8260C	1,3,5-Trimethylbenzene	NPW	MN	
RCRP	EPA 8260C	1,3,5-Trimethylbenzene	SCM	MN	
RCRP	EPA 8260C	1,3-Dichlorobenzene	SCM	MN	
RCRP	EPA 8260C	1,3-Dichlorobenzene	NPW	MN	
RCRP	EPA 8260C	1,3-Dichloropropane	SCM	MN	
RCRP	EPA 8260C	1,3-Dichloropropane	NPW	MN	
RCRP	EPA 8260C	1,4-Dichlorobenzene	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260C	1,4-Dichlorobenzene	SCM	MN	
RCRP	EPA 8260C	1,4-Dioxane (1,4- Diethyleneoxide)	NPW	MN	
RCRP	EPA 8260C	1,4-Dioxane (1,4- Diethyleneoxide)	SCM	MN	
RCRP	EPA 8260C	2,2-Dichloropropane	SCM	MN	
RCRP	EPA 8260C	2,2-Dichloropropane	NPW	MN	
RCRP	EPA 8260C	2-Butanone (Methyl ethyl ketone, MEK)	NPW	MN	
RCRP	EPA 8260C	2-Butanone (Methyl ethyl ketone, MEK)	SCM	MN	
RCRP	EPA 8260C	2-Chloroethyl vinyl ether	NPW	MN	
RCRP	EPA 8260C	2-Chloroethyl vinyl ether	SCM	MN	
RCRP	EPA 8260C	2-Chlorotoluene	NPW	MN	
RCRP	EPA 8260C	2-Chlorotoluene	SCM	MN	
RCRP	EPA 8260C	2-Hexanone	NPW	MN	
RCRP	EPA 8260C	2-Hexanone	SCM	MN	
RCRP	EPA 8260C	2-Methylnaphthalene	NPW	MN	
RCRP	EPA 8260C	2-Methylnaphthalene	SCM	MN	
RCRP	EPA 8260C	2-Nitropropane	SCM	MN	
RCRP	EPA 8260C	2-Nitropropane	NPW	MN	
RCRP	EPA 8260C	4-Chlorotoluene	SCM	MN	
RCRP	EPA 8260C	4-Chlorotoluene	NPW	MN	
RCRP	EPA 8260C	4-Isopropyltoluene (p-Cymene)	NPW	MN	
RCRP	EPA 8260C	4-Isopropyltoluene (p-Cymene)	SCM	MN	
RCRP	EPA 8260C	4-Methyl-2-pentanone (MIBK)	NPW	MN	
RCRP	EPA 8260C	4-Methyl-2-pentanone (MIBK)	SCM	MN	
RCRP	EPA 8260C	Acetone	NPW	MN	
RCRP	EPA 8260C	Acetone	SCM	MN	
RCRP	EPA 8260C	Acetonitrile	NPW	MN	
RCRP	EPA 8260C	Acetonitrile	SCM	MN	
RCRP	EPA 8260C	Acrolein (Propenal)	NPW	MN	
RCRP	EPA 8260C	Acrolein (Propenal)	SCM	MN	
RCRP	EPA 8260C	Acrylonitrile	NPW	MN	
RCRP	EPA 8260C	Acrylonitrile	SCM	MN	
RCRP	EPA 8260C	Allyl chloride (3-Chloropropene)	SCM	MN	
RCRP	EPA 8260C	Allyl chloride (3-Chloropropene)	NPW	MN	
RCRP	EPA 8260C	Benzene	SCM	MN	
RCRP	EPA 8260C	Benzene	NPW	MN	
RCRP	EPA 8260C	Benzyl chloride	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260C	Benzyl chloride	SCM	MN	
RCRP	EPA 8260C	Bromobenzene	NPW	MN	
RCRP	EPA 8260C	Bromobenzene	SCM	MN	
RCRP	EPA 8260C	Bromochloromethane	SCM	MN	
RCRP	EPA 8260C	Bromochloromethane	NPW	MN	
RCRP	EPA 8260C	Bromodichloromethane	NPW	MN	
RCRP	EPA 8260C	Bromodichloromethane	SCM	MN	
RCRP	EPA 8260C	Bromoform	NPW	MN	
RCRP	EPA 8260C	Bromoform	SCM	MN	
RCRP	EPA 8260C	Carbon disulfide	NPW	MN	
RCRP	EPA 8260C	Carbon disulfide	SCM	MN	
RCRP	EPA 8260C	Carbon tetrachloride	SCM	MN	
RCRP	EPA 8260C	Carbon tetrachloride	NPW	MN	
RCRP	EPA 8260C	Chlorobenzene	SCM	MN	
RCRP	EPA 8260C	Chlorobenzene	NPW	MN	
RCRP	EPA 8260C	Chlorodibromomethane	SCM	MN	
RCRP	EPA 8260C	Chlorodibromomethane	NPW	MN	
RCRP	EPA 8260C	Chloroethane (Ethyl chloride)	NPW	MN	
RCRP	EPA 8260C	Chloroethane (Ethyl chloride)	SCM	MN	
RCRP	EPA 8260C	Chloroform	SCM	MN	
RCRP	EPA 8260C	Chloroform	NPW	MN	
RCRP	EPA 8260C	Chloroprene (2-Chloro-1,3-butadiene)	NPW	MN	
RCRP	EPA 8260C	Chloroprene (2-Chloro-1,3-butadiene)	SCM	MN	
RCRP	EPA 8260C	cis-1,2-Dichloroethylene	SCM	MN	
RCRP	EPA 8260C	cis-1,2-Dichloroethylene	NPW	MN	
RCRP	EPA 8260C	cis-1,3-Dichloropropene	NPW	MN	
RCRP	EPA 8260C	cis-1,3-Dichloropropene	SCM	MN	
RCRP	EPA 8260C	Di-isopropylether (DIPE)	NPW	MN	
RCRP	EPA 8260C	Di-isopropylether (DIPE)	SCM	MN	
RCRP	EPA 8260C	Dibromochloromethane	NPW	MN	
RCRP	EPA 8260C	Dibromochloromethane	SCM	MN	
RCRP	EPA 8260C	Dibromomethane (Methylene bromide)	NPW	MN	
RCRP	EPA 8260C	Dibromomethane (Methylene bromide)	SCM	MN	
RCRP	EPA 8260C	Dichlorodifluoromethane (Freon-12)	SCM	MN	
RCRP	EPA 8260C	Dichlorodifluoromethane (Freon-12)	NPW	MN	
RCRP	EPA 8260C	Diethyl ether	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260C	Diethyl ether	NPW	MN	
RCRP	EPA 8260C	Ethyl acetate	SCM	MN	
RCRP	EPA 8260C	Ethyl acetate	NPW	MN	
RCRP	EPA 8260C	Ethyl methacrylate	NPW	MN	
RCRP	EPA 8260C	Ethyl methacrylate	SCM	MN	
RCRP	EPA 8260C	Ethyl-t-butylether (ETBE) (2-Ethoxy-2-methylpropane)	SCM	MN	
RCRP	EPA 8260C	Ethylbenzene	NPW	MN	
RCRP	EPA 8260C	Ethylbenzene	SCM	MN	
RCRP	EPA 8260C	Hexachlorobutadiene	SCM	MN	
RCRP	EPA 8260C	Hexachlorobutadiene	NPW	MN	
RCRP	EPA 8260C	Hexachloroethane	SCM	MN	
RCRP	EPA 8260C	Hexachloroethane	NPW	MN	
RCRP	EPA 8260C	Iodomethane (Methyl iodide)	NPW	MN	
RCRP	EPA 8260C	Iodomethane (Methyl iodide)	SCM	MN	
RCRP	EPA 8260C	Isobutyl alcohol (2-Methyl-1-propanol)	NPW	MN	
RCRP	EPA 8260C	Isobutyl alcohol (2-Methyl-1-propanol)	SCM	MN	
RCRP	EPA 8260C	Isopropylbenzene	SCM	MN	
RCRP	EPA 8260C	Isopropylbenzene	NPW	MN	
RCRP	EPA 8260C	m+p-xylene	NPW	MN	
RCRP	EPA 8260C	m+p-xylene	SCM	MN	
RCRP	EPA 8260C	Methacrylonitrile	SCM	MN	
RCRP	EPA 8260C	Methacrylonitrile	NPW	MN	
RCRP	EPA 8260C	Methyl bromide (Bromomethane)	NPW	MN	
RCRP	EPA 8260C	Methyl bromide (Bromomethane)	SCM	MN	
RCRP	EPA 8260C	Methyl chloride (Chloromethane)	NPW	MN	
RCRP	EPA 8260C	Methyl chloride (Chloromethane)	SCM	MN	
RCRP	EPA 8260C	Methyl methacrylate	NPW	MN	
RCRP	EPA 8260C	Methyl methacrylate	SCM	MN	
RCRP	EPA 8260C	Methyl tert-butyl ether (MTBE)	NPW	MN	
RCRP	EPA 8260C	Methyl tert-butyl ether (MTBE)	SCM	MN	
RCRP	EPA 8260C	Methylcyclohexane	NPW	MN	
RCRP	EPA 8260C	Methylcyclohexane	SCM	MN	
RCRP	EPA 8260C	Methylene chloride (Dichloromethane)	SCM	MN	
RCRP	EPA 8260C	Methylene chloride (Dichloromethane)	NPW	MN	
RCRP	EPA 8260C	n-Butylbenzene	SCM	MN	
RCRP	EPA 8260C	n-Butylbenzene	NPW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260C	n-Heptane	NPW	MN	
RCRP	EPA 8260C	n-Heptane	SCM	MN	
RCRP	EPA 8260C	n-Hexane	SCM	MN	
RCRP	EPA 8260C	n-Hexane	NPW	MN	
RCRP	EPA 8260C	n-Propylbenzene	SCM	MN	
RCRP	EPA 8260C	n-Propylbenzene	NPW	MN	
RCRP	EPA 8260C	Naphthalene	NPW	MN	
RCRP	EPA 8260C	Naphthalene	SCM	MN	
RCRP	EPA 8260C	o-Xylene	SCM	MN	
RCRP	EPA 8260C	o-Xylene	NPW	MN	
RCRP	EPA 8260C	p-Isopropyltoluene	SCM	MN	
RCRP	EPA 8260C	p-Isopropyltoluene	NPW	MN	
RCRP	EPA 8260C	Propionitrile (Ethyl cyanide)	NPW	MN	
RCRP	EPA 8260C	Propionitrile (Ethyl cyanide)	SCM	MN	
RCRP	EPA 8260C	sec-Butylbenzene	SCM	MN	
RCRP	EPA 8260C	sec-Butylbenzene	NPW	MN	
RCRP	EPA 8260C	Styrene	NPW	MN	
RCRP	EPA 8260C	Styrene	SCM	MN	
RCRP	EPA 8260C	T-amylmethylether (TAME)	NPW	MN	
RCRP	EPA 8260C	T-amylmethylether (TAME)	SCM	MN	
RCRP	EPA 8260C	tert-Butyl alcohol	NPW	MN	
RCRP	EPA 8260C	tert-Butyl alcohol	SCM	MN	
RCRP	EPA 8260C	tert-Butylbenzene	SCM	MN	
RCRP	EPA 8260C	tert-Butylbenzene	NPW	MN	
RCRP	EPA 8260C	Tetrachloroethylene (Perchloroethylene)	NPW	MN	
RCRP	EPA 8260C	Tetrachloroethylene (Perchloroethylene)	SCM	MN	
RCRP	EPA 8260C	Tetrahydrofuran (THF)	SCM	MN	
RCRP	EPA 8260C	Tetrahydrofuran (THF)	NPW	MN	
RCRP	EPA 8260C	Toluene	NPW	MN	
RCRP	EPA 8260C	Toluene	SCM	MN	
RCRP	EPA 8260C	trans-1,2-Dichloroethylene	SCM	MN	
RCRP	EPA 8260C	trans-1,2-Dichloroethylene	NPW	MN	
RCRP	EPA 8260C	trans-1,3-Dichloropropylene	NPW	MN	
RCRP	EPA 8260C	trans-1,3-Dichloropropylene	SCM	MN	
RCRP	EPA 8260C	trans-1,4-Dichloro-2-butene	NPW	MN	
RCRP	EPA 8260C	trans-1,4-Dichloro-2-butene	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260C	Trichloroethene (Trichloroethylene)	NPW	MN	
RCRP	EPA 8260C	Trichloroethene (Trichloroethylene)	SCM	MN	
RCRP	EPA 8260C	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	SCM	MN	
RCRP	EPA 8260C	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	NPW	MN	
RCRP	EPA 8260C	Vinyl acetate	NPW	MN	
RCRP	EPA 8260C	Vinyl acetate	SCM	MN	
RCRP	EPA 8260C	Vinyl chloride	SCM	MN	
RCRP	EPA 8260C	Vinyl chloride	NPW	MN	
RCRP	EPA 8260C	Xylene (total)	SCM	MN	
RCRP	EPA 8260C	Xylene (total)	NPW	MN	

EPA RSK-175 (GC/FID)

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA RSK-175 (GC/FID)	Ethane	NPW	MN	
RCRP	EPA RSK-175 (GC/FID)	Ethene	NPW	MN	
RCRP	EPA RSK-175 (GC/FID)	Methane	NPW	MN	

Underground Storage Tank Program

WI(95) DRO

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
USTP	WI(95) DRO	Diesel range organics (DRO)	NPW	MN	
USTP	WI(95) DRO	Diesel range organics (DRO)	SCM	MN	

WI(95) GRO

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
USTP	WI(95) GRO	Gasoline range organics (GRO)	SCM	MN	

Program	Method	Analyte	Matrix	Primary	SOP
USTP	WI(95) GRO	Gasoline range organics (GRO)	NPW	MN	

WI(95) GRO

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
USTP	WI(95) GRO	Petroleum Volatile Organic Compounds (PVOC)	NPW	MN	
USTP	WI(95) GRO	Petroleum Volatile Organic Compounds (PVOC)	SCM	MN	

Note: Method beginning with "SM" refer to the approved editions of Standard methods for the Examination of Water and Wastes. Approved methods are listed in the applicable parts of Title 40 of the Code of Federal Regulations (including its subsequent Federal Register updates), MN Statutes and Rules, and state-issued permits.

Appendix IV
Job Qualification Records (JQRs)

Midwest Plant
Job Qualification Record
Utility – Final Treat Operator LG2

Employee Name: _____ **Division:** _____

Payroll Number: _____ **Areas:** _____

Job Functions: **Final Treat Operator**

Specific training requirements for each function are listed below.

==========

	Trainer's Initials	Date:
(Final Treat Operator)		
Technical Skills		
Final Treat Process Flow Drwg	_____	_____
Outfalls Process Flow Drwg	_____	_____
Legal Responsibilities	_____	_____
Standard Operating Procedures (SOP'S)		
NSCS-M-P-7093-02-32 Hexavalent Chrome Test (HACH)	_____	_____
NSCS-M-P-7091-01 Final Treat Process Overview	_____	_____
NSCS-M-P-7091-02 Routine Inspection	_____	_____
NSCS-M-P-7091-03 Mill Dump	_____	_____
NSCS-M-P-7091-04 Settleable Solids Test	_____	_____
NSCS-M-P-7091-06 Iron and Turbidity Test	_____	_____
NSCS-M-P-7091-07 pH Testing, pH Bird Baths, pH Cross Checks	_____	_____
NSCS-M-P-7091-09 Equalization Basins	_____	_____
NSCS-M-P-7091-10 Mix Tank and Coagulant Aid	_____	_____
NSCS-M-P-7091-12 Sedimentation Tank	_____	_____
NSCS-M-P-7091-14 Antifoam	_____	_____
NSCS-M-P-7091-15 Lime Slurry Tanks	_____	_____
NSCS-M-P-7091-17 Sulfuric Acid Storage Tank	_____	_____
NSCS-M-P-7091-18 Winterization	_____	_____
NSCS-M-P-7091-21 High Turbidity @ Outfall 104/004	_____	_____
NSCS-M-P-7091-22 Polymer System	_____	_____
NSCS-M-P-7091-27 Fisher Computer	_____	_____
NSCS-M-P-7091-30 Wastewater Flow Control	_____	_____
NSCS-M-P-7091-32 Chemtreat P817E…Unloading	_____	_____
NSCS-M-G-7091-01 Receiving Sulfuric Acid	_____	_____
NSCS-M-G-7091-02 Receiving Bulk Lime Slurry	_____	_____
NSCS-M-G-7091-04 Receiving Antifoam	_____	_____
NSCS-M-P-7093-02-47 Final Treat Process Control Practices	_____	_____

Midwest Plant
Job Qualification Record
Utility – Final Treat Operator LG2

	Trainer's Initials	Date:
Safe Job Procedures (SJP'S, SJG'S)		
UT02-01 Lime Slurry Rotodips	_____	_____
UT02-03 Lime Truck Unloading	_____	_____
UT02-25 Making Up Polymer Tank	_____	_____
UT02-28 Unloading Acid	_____	_____
UT02-29 Securing Sludge Sample	_____	_____
On The Job Training		
Work safely with an environmental awareness and concern in an industrial work Environment.	_____	_____
Observe, monitor and maintain all treatment plant conditions, and other UT facilities and review test information and make decisions on the proper operation and control of the various processes.	_____	_____
Handle sludges, oils, chemicals, and perform clean up, housekeeping, general labor duties.	_____	_____
Perform lab tests, secure samples of waste water, sludges, and chemicals and related monitoring.	_____	_____
Operate Fisher Computer System	_____	_____
Operate/ maintain mechanical equipment at North Final Treat.	_____	_____
Written Reports		
Log Sheet 7010-01 Mill Dumps	_____	_____
Log Sheet 7091-01 Final Treat Daily Operating Report	_____	_____
Log Sheet 7091-10 Equal Basin and North End Skimming	_____	_____
Safety 0011 – Lock Placement and Verification Form	_____	_____
Log Sheet 7010-14 Utilities WWT Report	_____	_____

Midwest Plant
Job Qualification Record
Utility – Final Treat Operator LG2

	Trainer's Initials	Date:
Supplemental Training		
Basic Operator/Assist Maintenance Skills Training	_____	_____
Must be qualified and signed off as a UT Helper	_____	_____
Environmental Training for Final Treatment Operations	_____	_____

==========

I verify that I have received the above training for the function of UT Final Treat Operator

Employee's Signature _____ **Date** _____

This employee has been observed performing the above job and is qualified to perform the function of UT Final Treat Operator

Area Manager or Designee Signature _____ **Date** _____

Midwest Plant
Job Qualification Record
Utility – Chrome Treatment Plant LG 3

Employee Name: _____ **Division:** _____

Payroll Number: _____ **Areas:** _____

Job Functions: **Pretreat Plant**

Upon completion of training for each function, check appropriate box and sign-off when employee has been observed performing a function above and is qualified/competent to perform this function.

Specific training requirements for each function are listed below.

==========

	Trainer's Initials	Date:
(Operator Tech 1)		
Technical Skills		
Oil Waste Process Flow Drwg	_____	_____
Chrome Treat Process Flow Drwg	_____	_____
Outfalls Process Flow Drwg	_____	_____
Chemtreat Drawings Chrome	_____	_____
Standard Operating Procedures (SOP'S)		
NSCS-M-P-7093-02-01 Permission to Dump	_____	_____
NSCS-M-P-7093-02-03 Chrome Wastewater Treatment Plant Overview	_____	_____
NSCS-M-P-7093-02-08 pH Testing - Chrome Plant	_____	_____
NSCS-M-P-7093-02-11 Trench System	_____	_____
NSCS-M-P-7093-02-13 Oil Recovery System	_____	_____
NSCS-M-P-7093-02-17 ORP Analysis and Testing	_____	_____
NSCS-M-P-7093-02-18 Sulfuric Acid Unloading at Pretreat	_____	_____
NSCS-M-P-7093-02-19 Housekeeping	_____	_____
NSCS-M-P-7093-02-20 Winterizing Pretreat	_____	_____
NSCS-M-P-7093-02-26 Testing Conductivity	_____	_____
NSCS-M-P-7093-02-27 Vac Trucks Delivery Wastewater	_____	_____
NSCS-M-P-7093-02-32 Hexavalent Chrome Test Hach DR	_____	_____
NSCS-M-P-7093-02-35 Sodium Bisulfite, Unloading	_____	_____
NSCS-M-P-7093-02-39 Unloading-ChemTreat P841L, Tannin	_____	_____
NSCS-M-P-7093-02-40 Unloading-ChemTreat P8905L, PAC	_____	_____
NSCS-M-P-7093-02-41 Unloading-Chemtreat Inc BL126	_____	_____
NSCS-M-P-7093-02-42 Unknown High or Low Incoming pH, Strong Chrome, Unusual Wastewater	_____	_____
NSCS-M-G-7093-02-01 Receiving 66 Baumee Sulfuric Acid	_____	_____
NSCS-M-G-7093-02-04 Receiving 50% Caustic Soda	_____	_____
NSCS-M-G-7093-02-09 50% Caustic Soda Safety Handling	_____	_____
NSCS-M-G-7093-02-13 Receiving -ChemTreat P841L Tannin	_____	_____
NSCS-M-G-7093-02-14 Receiving - ChemTreat P8905L, PAC	_____	_____
NSCS-M-G-7093-02-15 Receiving - Sodium Bisulfite, Chemtreat BL-126	_____	_____
NSCS-M-P-7093-02-48 Chrome Treatment Process Control Practices	_____	_____

Midwest Plant
Job Qualification Record
Utility – Chrome Treatment Plant LG 3

	Trainer's Initials	Date:
Safe Job Procedures (SJP'S)		
UT04-09 First Response To A Virgin Acid Leak	_____	_____
UT04-10 Chrome Treat with Sodium Bisulfite	_____	_____
UT05-04 Closing 480 Volt Switch	_____	_____
UT05-05 Indexing Sludge Cake From Sludge Presses	_____	_____
UT05-07 Plate Washing	_____	_____
UT05-08 Cloth Washing Pump	_____	_____
UT05-09 Filter Press Lockout Procedure for Drip Trays	_____	_____
UT05-11 E-Stops	_____	_____
UT05-12 Filter Press Chute Cleaning	_____	_____
UT05-13 Filter Press Trough Cleaning	_____	_____
UT05-17 Changing Press Filter Cloths And Membranes	_____	_____
UT05-18 Indexing Sludge Cake From Sludge Presses	_____	_____
On The Job Training		
Work safely with an environmental awareness and concern in an industrial work Environment.	_____	_____
Function as lead treatment plant operator and provide decision making, problem solving, And leadership, to all of the treatment plant job positions on an as needed basis.	_____	_____
Observe, monitor and maintain all treatment plant conditions, other UT facilities and review test information and make decisions on the proper operation and control of the various processes.	_____	_____
Handle sludges, oils, chemicals, and perform clean up, housekeeping, general labor duties.	_____	_____
Perform lab tests, secure samples of waste water, sludges, and chemicals, and related monitoring.	_____	_____
Operate Fisher Provox Computer in manual and automatic control.	_____	_____
Operate/ maintain mechanical equipment at Pretreat.	_____	_____
Maintain records, interpret them, change and read chart recorders and respond to alarms.	_____	_____
Written Reports		
Form 7093-03 Pretreat Log Sheet	_____	_____
Form 7093-10 Pretreat API Oily Wastewater Interceptor Log Sheet	_____	_____
Form 7093-15 Pretreat Chrome Press	_____	_____
Form 7010-14 Utilities WWT Report	_____	_____

Midwest Plant
Job Qualification Record
Utility – Chrome Treatment Plant LG 3

Supplemental Training

Basic Operator/Assist Maintenance Skills Training	_____	_____
Must be Qualified as UT Helper	_____	_____
Must be Qualified as Final Treat Operator	_____	_____
Environmental Training Pretreatment Operations	_____	_____

==========

I verify that I have received the above training for the function of UT Pretreat Plant Operator.

Employee's Signature _____ **Date** _____

This employee has been observed performing the above job and is qualified to perform the function of UT Pretreat Plant Operator.

Area Manager or Designee Signature _____ **Date** _____

Midwest Plant
Job Qualification Record
Utility – Sludge Dewater Plant LG 3

Employee Name: _____ **Division:** _____

Payroll Number: _____ **Areas:** _____

Job Functions: **Sludge Dewater Plant**

Upon completion of training for each function, check appropriate box and sign-off when employee has been observed performing a function above and is qualified/competent to perform this function.

Specific training requirements for each function are listed below.
==========

(Operator Tech 1)

Technical Skills	**Trainer's Initials**	**Date:**
Final Treat Process Flow Drwg	_____	_____
Sludge Dewater Process Flow Drwg	_____	_____
Chemtreat Drwg	_____	_____
Legal Responsibilities	_____	_____
Standard Operating Procedures (SOP'S)		
NSCS-M-P-7094-01 Gravity Thickening	_____	_____
NSCS-M-P-7094-02 Filter Presses	_____	_____
NSCS-M-P-7094-03 Recording Turn Information	_____	_____
NSCS-M-P-7094-04 Basement Sludge Pumps	_____	_____
NSCS-M-P-7094-05 Safety	_____	_____
NSCS-M-P-7094-06 Testing pH	_____	_____
NSCS-M-P-7094-07 Percent Solids Test	_____	_____
NSCS-M-P-7094-09 Sludge Hauling	_____	_____
NSCS-M-P-7094-10 #1 and #2 Gravity Thickeners	_____	_____
NSCS-M-P-7094-11 Cake Thickness	_____	_____
NSCS-M-P-7094-14 Sludge Dewatering – Routine Inspection	_____	_____
NSCS-M-P-7094-16 Filter Cloth Replacement & Plate Clean.	_____	_____
NSCS-M-P-7094-18 Landfill Operation Perm. Waste Types	_____	_____
NSCS-M-P-7094-21 Bulk Hydrated Lime Unloading in Silo	_____	_____
NSCS-M-P-7094-24 Bulk Hydrated Lime Silo and Mix Tank	_____	_____
NSCS-M-G-7094-01 Receiving Bulk Hydrated Lime	_____	_____
NSCS-M-G-7094-02 Flow Meter for GPM from Final Treat	_____	_____
NSCS-M-P-7093-02-49 Sludge Dewatering Process Control Practices	_____	_____

Form #: JQR-Utility LG 3 SDP
Revised: 8-23-18

Midwest Plant
Job Qualification Record
Utility – Sludge Dewater Plant LG 3

	Trainer's Initials	Date:
Safe Job Procedures (SJP'S, SJG'S)		
UT05-02 Entering Dewatering Pit, Thickener Valve Pits	_____	_____
UT05-03 Sludge Dewatering PLT - Hoists and Cranes	_____	_____
UT05-05 Indexing Sludge Cake From Sludge Presses	_____	_____
UT05-07 Plate Washing	_____	_____
UT05-08 Cloth Washing Pump	_____	_____
UT05-09 Filter Press Lockout Procedure for Drip Trays	_____	_____
UT05-10 Determining Sludge Levels in Thickeners	_____	_____
UT05-11 E-Stops	_____	_____
UT05-12 Filter Press Chute Cleaning	_____	_____
UT05-13 Filter Press Trough Cleaning	_____	_____
UT05-14 Valve Changes in Dewatering Plant Basement	_____	_____
UT05-17 Changing Press Filter Cloths And Membranes	_____	_____
UT05-18 Indexing Sludge Cake From Sludge Presses	_____	_____
UT05-19 North or South Press Bombay Doors	_____	_____

<u>On The Job Training</u>

Work safely with an environmental awareness and concern in an industrial work Environment.	_____	_____
Function as lead treatment plant operator and provide decision making, problem solving, And leadership, to all of the treatment plant job positions on an as needed basis.	_____	_____
Observe, monitor and maintain all treatment plant conditions, other UT facilities and review test information and make decisions on the proper operation and control of the various processes.	_____	_____
Handle sludges, oils, chemicals, and perform clean up, housekeeping, general labor duties.	_____	_____
Perform lab tests, secure samples of waste water, sludges, chemicals, and related monitoring.	_____	_____
Operate/maintain mechanical equipment at Sludge Dewater or Assist Maintenance as required.	_____	_____

Midwest Plant
Job Qualification Record
Utility – Sludge Dewater Plant LG 3

	Trainer's Initials	Date:
Maintain records, interpret them, change and read chart recorders and respond to alarms.	_____	_____

Written Reports

Form 7094-02 Sludge Dewatering Plant Log Sheet	_____	_____

Supplemental Training

Basic Operator/Assist Maintenance Skills Training	_____	_____
Environmental Training as UT Helper	_____	_____
Environmental Training Final Treatment Operator	_____	_____
Environmental Training Sludge Dewatering Operator	_____	_____

==========

I verify that I have received the above training for the function of UT Sledge Dewater Plant

Employee's Signature _____ **Date** _____

This employee has been observed performing the above job and is qualified to perform the function of UT Sledge Dewater Plant

Area Manager or Designee Signature _____ **Date** _____

Form #: JQR-Utility LG 3 SDP
Revised: 8-23-18

Midwest Plant
Job Qualification Record
Utilities – UT Helper - Labor Grade 2

Employee Name: _____ **Division:** _____

Payroll Number: _____ **Areas:** _____

Job Functions: **UT Helper**

Specific training requirements for each function are listed below.

==========

	Trainer's Initials	Date:
(UT Helper – Utilities Department)		
Technical Skills		
Oil Separation Process Flow Drwg	_____	_____
Final Treat Process Flow Drwg	_____	_____
Outfalls - (Chemtreat/Drawings)	_____	_____
Legal Responsibilities	_____	_____
Standard Operating Procedures (SOP'S)		
NSCS-M-P-7093-02-13 Oil Recovery System	_____	_____
NSCS-M-P-7093-02-45 Oil Separation Process Overview	_____	_____
NSCS-M-P-7093-02-46 Oil Separation Process Control Practices	_____	_____
NSCS-M-P-7010-46 Alarms AE-1 and 2 Sewage Stations	_____	_____
NSCS-M-G-7091-04 Receiving Chemtreat FO120 Antifoam	_____	_____
NSCS-M-G-7091-06 Sulfuric Acid Safety and Handling	_____	_____
NSCS-M-P-7091-35 Unloading Chemtreat FO120 Antifoam	_____	_____
NSCS-M-P-7091-51 Barrel Pad Procedures	_____	_____
NSCS-M-P-7091-52 Cleaning with Safety Clean or Solvent	_____	_____
NSCS-M-P-7091-55 Chemtreat BL126 Unloading	_____	_____
NSCS-M-P-7091-56 Handling Oils and Chemicals Shipped	_____	_____
NSCS-M-P-7094-19 Greenbelt Landfill, Oily Waste Pad	_____	_____
Safe Job Procedures (SJP'S, SJG'S)		
UT01-01 Closing Large Valve	_____	_____
UT01-02 Closing Plug Valve	_____	_____
UT01-03 Shutting Steam Valves	_____	_____
UT01-04 Opening/ Closing Main Steam Valves	_____	_____
UT01-15 Notification of Chemical Spill	_____	_____
UT01-16 Clean Up of Chemical Spill	_____	_____
UT01-21 Operation of Snow Blower	_____	_____
UT03-08 Cleaning with Solvent	_____	_____
UT03-09 Handling a Heavy Drum	_____	_____
UT03-10 Floor Washing	_____	_____
UT03-15 Fueling a Gasoline Driven Pump	_____	_____
UT03-17 Incompatible Wastes	_____	_____

Midwest Plant
Job Qualification Record
Utilities – UT Helper - Labor Grade 2

	Trainer's Initials	Date:
On The Job Training		
Skimming the Equalization Basins	_____	_____
Operate/ maintain mechanical equipment at Barrel Pad	_____	_____
Skimming the Pre-Treat Interceptor	_____	_____
Skimming the Sedimentation Basins	_____	_____
Equalization Basin Level Management	_____	_____
Chemical Handling	_____	_____
Chemtreat S101 Dilution and Mixing of Buk Delivery	_____	_____
Blowing out the Lime Lines to the Storage Tanks	_____	_____
Oily waste pad decanting	_____	_____
Cleaning the Scum and Oil Strainer	_____	_____
Greenbelt Flow Control/Valve Positioning	_____	_____
Decant Oil Storage Tank Final Treat	_____	_____
Decant Oil Storage Tank(s) Pre-Treat	_____	_____
Loading the Oil Tanker	_____	_____
Assist in miscellaneous duties assign by managers. (i.e. … fire watch)	_____	_____
Miscellaneous Requirements		
Work safely with an environmental awareness and concern in an industrial work environment.	_____	_____
Investigate production units and the Utilities Department for leaks and other anomalies.	_____	_____
Assist with monitoring all treatment plant conditions. Maintain all UT facilities by review of information and make decisions on proper operation and control of the various processes.	_____	_____

Information for consideration:

Sludge Samples, Blower Amp's, Iron Content, Mix Tank Air, Turbidity,
Chemical Feeds Pumps, EQ Basin pH (Basement), Lift Pumps, Mix Tank pH (Basement)
Cross Collectors, 104 Effluent, Skimmer Flight Drives, Final Effluent,
Wiers/Water Levels, Sludge Flow, Antifoam, Roto-Dips, Floc/Floculator Drives

Assist in miscellaneous duties assigned by managers and perform housekeeping duties including: _____ _____

- Roll up hoses,
- Assist Maintenance
- Empty Trash as needed
- Sweep as needed
- Replace oil socks as needed
- Maintain inventory as needed (Bottled water, paper towels, cups, etc)
- Weed/Plant control as needed
- Snow control as needed
- Painting as directed

Midwest Plant
Job Qualification Record
Utilities – UT Helper - Labor Grade 2

	Trainer's Initials	Date:
Written Reports		
Form 7010-01 Dump Log Sheet	_____	_____
Form 7091-10 Basin Skimming Log Sheet	_____	_____
Form 7093-10 Interceptor Log Sheet	_____	_____
Form 7010-14 Utilities WWT Report	_____	_____
Supplemental Training		
Basic Operator/Assist Maintenance Skills Training	_____	_____
Environmental Training for UT Helper Operations	_____	_____

==========

I verify that I have received the above training for the function of UT HELPER

Employee's Signature _____ **Date** _____

This employee has been observed performing the above job and is qualified to perform the function of UT HELPER

Area Manager or Designee Signature _____ **Date** _____