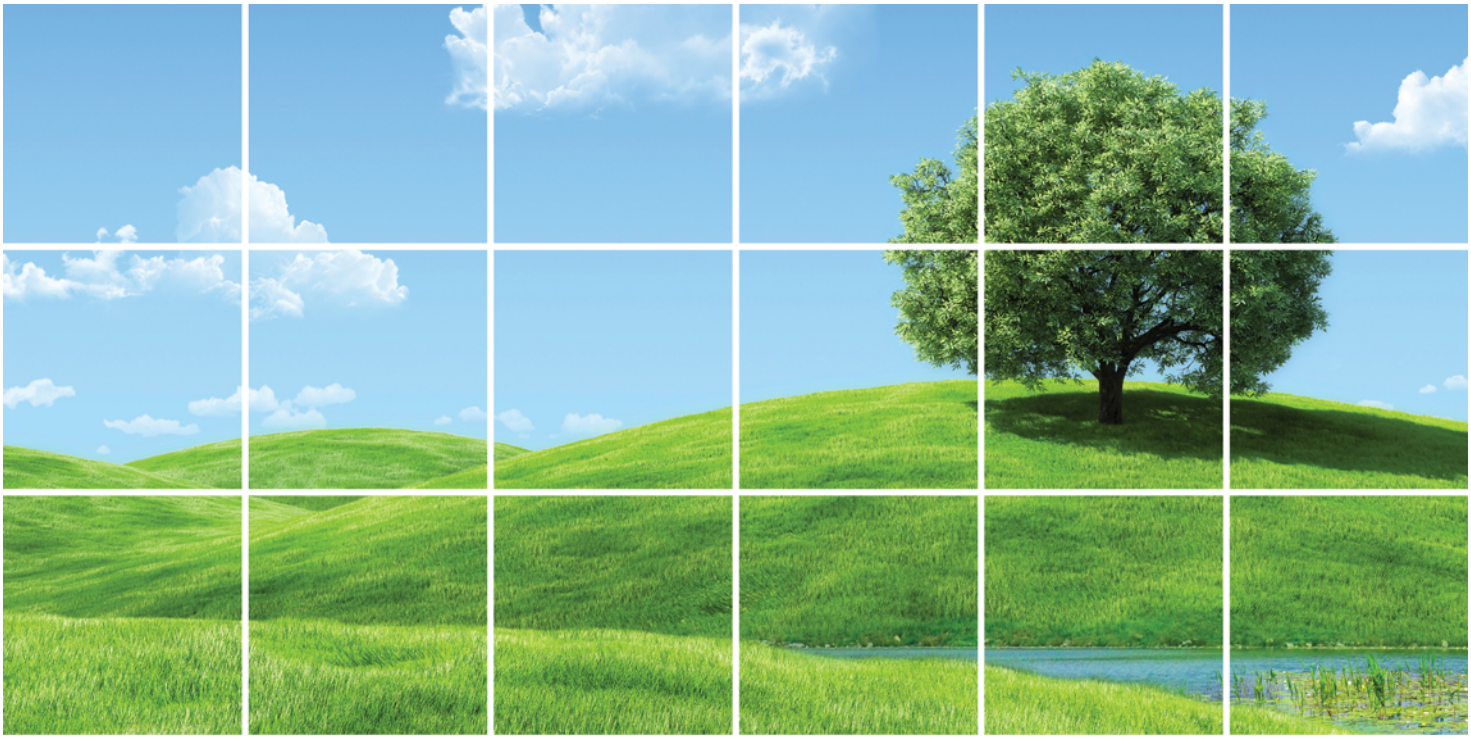
www.CRAworld.com



REPORT

Storm Water Pollution Prevention Plan (SWPPP)

Saginaw Nodular Industrial Land
Saginaw, MI

Prepared for: RACER

Conestoga-Rovers & Associates
14496 Sheldon Road, Suite 200
Plymouth, Michigan 48170

November 2012 • #058502-T02-002Y12
Report Number:007

FACILITY NAME:

SAGINAW NODULAR INDUSTRIAL LAND

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

DEQ SWPPP Template (Revised 6/15/2011)

TABLE OF CONTENTS

1.0 GENERAL FACILITY INFORMATION

Name of Facility: **Saginaw Nodular Industrial Land**

Facility Address: **2100 Veterans Memorial Parkway Saginaw, MI**

Standard Industrial Classification (SIC) Code: 6733 **(NAICS Code: 52590)**

Owner or Authorized Representative: **Revitalizing Auto Communities Environmental Response (RACER) Trust (authorized representative Dave Favero)**

Facility Contact

Name: **Dave Favero**

Title: **Deputy Cleanup Manager**

Telephone: **217-741-6235**

Mailing Address: **2930 Ecorse Road, Ypsilanti, MI 48198**

Name: **Tom Williams**

Title: **Site Manager**

Telephone: **989-245-1716**

Mailing Address: **780 Stoneham Road, Saginaw, MI 48638**

Certified Storm Water Operator

Name & Certification Number: **Steve Hoevemeyer (CRA) Industrial site certification # I-10477 expires 7/1/15**

Permit Information

Permit	Permit No.	Issue/Effective Date	Expiry Date
Certificate of Coverage	MIS 120003 (Appendix A-1)	August 16, 2006	-
NPDES	MI0059042 (Appendix A-2)	August 24, 2012	October 1, 2016
SESC	3196	November 8, 2012	November 7, 2013
Receiving Waters: **Saginaw River**			

Brief Industrial Activity Description

The Saginaw Nodular Industrial Land (Site) is located on an approximate 225-acre plot including an old wastewater treatment system and a clay soil stockpile area. The site is bounded by Veterans Memorial Parkway west, Hack Road to the north and North Outer Drive to the east in Saginaw, MI.

The wastewater treatment plant (WWTP) stopped receiving waters in September 2010 and is expected to be decommissioned.

Activities at the Site will be limited to decommissioning and area closure activities.

Storm water flows through a series of drainage ditches and discharges through 4 outfalls as identified on Figure 1 at the Site and eventually outlets to the Saginaw River. The four outfalls are identified below:

- Outfall 20 – Discharges surface runoff from a small portion of the Site in the southeast. The ditch is not expected to discharge contaminated storm water as Site related activities are not conducted in the vicinity of this area.
- Outfall 21 – Controlled overflow for the secondary pond – is a controlled outlet (pipe installed through the secondary pond embankment to discharge into nearby ditch, valve on outfall pipe is normally closed) from the secondary pond that allows the owner to discharge water from the secondary pond should freeboard be needed in the secondary pond. As of September 2010 the secondary pond stopped receiving waters from the WWTP and now only accumulates storm water. See Section 4.4 for a summary of the secondary pond water characterization and discharge characterization. Controlled discharges from the secondary pond are not expected to be contaminated.
- Outfall 22 – North Ditch Emergency Overflow – catchbasin located at the south end of the North Ditch, which is only utilized in the event that the water level in the North Ditch rises above a level that would flood the surrounding properties. The water exiting through the catchbasin is not expected to discharge contaminated storm water.
- Outfall 23 – Railroad sump – water that accumulates in the ditching beside the railroad from surface runoff is pumped and discharged into the ditch located north of the secondary pond. The water being pumped from the ditch is not expected to discharge contaminated storm water.

2.0 STORM WATER POLLUTION PREVENTION TEAM

The storm water pollution prevention team is responsible for developing, implementing, maintaining, and revising this SWPPP. The members of the team and their primary responsibilities (i.e. implementing, maintaining, record keeping, submitting reports, conducting inspections, employee training, conducting the annual compliance evaluation, testing for non-storm water discharges, signing the required certifications) are as follows:

NAME & TITLE	RESPONSIBILITY
Dave Favero (RACER Trust PM)	Director of works
Michael Tomka (CRA PM)	Coordinating inspections, training, evaluations, and record keep and reporting.
Steve Hoevemeyer (CRA Field Staff)	Conduct inspections and record keeping
Tom Williams (RACER)	Site Manager

3.0 SITE MAP

The facility's site map includes all applicable items listed in the permit, which include:

1) Buildings and other permanent structures
2) Storage or disposal areas for significant materials
3) Secondary containment structures and descriptions of what they contain in the primary containment structures (None)
4) Storm water discharge outfalls (numbered or other wise labeled for reference)
5) Location of storm water and non-storm water inlets contributing to each outfall (catch basins, roof drains, conduits, drain tiles, detention pond riser pipes, sump pumps, etc.) (numbered or other wise labeled for reference) (None)
6) Location of NPDES permitted discharges other than storm water
7) Outlines of the drainage areas contributing to each outfall
8) Structural runoff controls or storm water treatment facilities
9) Areas of vegetation (with brief description such as lawn, old field, marsh, wooded, etc.)
10) Areas of exposed and/or erodible soils
11) Impervious surfaces (roofs, asphalt, concrete, etc.)
12) Name and location of receiving waters
13) Areas of known or suspected impacts on surface waters as designated under Part 201 (Environmental Response) of the Michigan Act. (None)

See Figure 1 for the Site Map and Figure 2 for a 2009 aerial of the Site.

4.0 SIGNIFICANT MATERIALS

Definition: Significant materials are any material which could degrade or impair water quality, including but not limited to:

- ✓ Raw Materials
- ✓ Fuels
- ✓ Solvents
- ✓ Detergents
- ✓ Plastic pellets
- ✓ Finished materials (i.e. metallic products)
- ✓ Hazardous Substances designated under section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), see 40 CFR 372.65
- ✓ Any chemical the facility is required to report pursuant to section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA)
- ✓ Polluting Materials – Oil and any material, in solid or liquid form, identified as polluting material under the Part 5 Rules (Rules 324.2001 through 324.2009 of the Michigan Administrative Code)
- ✓ Hazardous Wastes as defined in Part 111 of the Michigan Act
- ✓ Fertilizers
- ✓ Pesticides
- ✓ Waste Products (i.e. ashes, slag, sludge, plant waste, animal waste)

Significant materials were identified for all sources of potential storm water contamination including both inside and outside of the facility. Please note the process of identifying significant materials included residual contaminants which may be found on items stored outside.

4.1 Inventory of Exposed Significant Materials

The permit requires a general inventory of significant materials that could enter storm water. For each material listed, the SWPPP includes the ways in which each type of material has been or has reasonable potential to become exposed to storm water (e.g. spillage during handling; leaks from pipes, pumps, or vessels; contact with storage piles, contaminated materials or soils; waste handling and disposal; deposits from dust or overspray; etc.). In addition, the SWPPP identifies the inlet(s) spilled significant materials may enter and the outfall(s) through which the spilled significant material may be discharged.

See Table 1 for the Significant Material Inventory.

4.2 Description of Industrial Activities & Significant Material Storage Areas

The facility was evaluated for reasonable potential for contribution of significant materials to storm water runoff from at least the following areas or activities:

1) Loading, unloading, and other material handling operations
2) Outdoor storage including secondary containment structures
3) Outdoor manufacturing or processing activities
4) Significant dust or particulate generating processes
5) Discharge from vents, stacks, and air emission controls

6) On-site waste disposal practices
7) Maintenance and cleaning of vehicles, machines, and equipment
8) Areas of exposed and/or erodible soils
9) Sites of Environmental Contamination listed under Part 201 (Environmental Response) of the Michigan Act
10) Areas of significant material residues
11) Areas where animals congregate (wild or domestic) and deposit wastes
12) Other areas where storm water may contact significant materials

For each applicable item, the permit requires a written description of the specific activity or storage area. Along with the written description of the activities or storage areas, a description of the significant materials associated with those items must be included.

See Table 1 for a list of industrial activities and a description of the significant materials associated with those activities.

4.3 List of Significant Spills

No spills have been identified, however Table 2 is provided in the report as a placeholder for if and when a spill occurs.

4.4 Summary of Sampling Data

The permit requires a summary of existing storm water discharge sampling data (if available) describing pollutants in storm water discharges associated with industrial activity at the facility. The following is a summary of data that has been recently collected from the secondary pond:

- In June 2011 the secondary pond water and surrounding water features were characterized further. Appendix B.1 includes the characterization results. The data were compared to Michigan Groundwater Surface Water Interface (GSI) Criteria and Rule 57. One sample marginally exceeded the GSI criteria for mercury and one sample marginally exceeded GSI and Rule 57 for cyanide (total). The majority of the samples exceeded GSI and Rule 57 for unionized ammonia, the source of which is unknown. As ammonia degrades naturally, regular measurements of ammonia were collected which confirmed the degradation of ammonia.

- Since June 2011, there have been 3 controlled discharges from the secondary pond in order to maintain adequate freeboard. Appendix B.2 includes the results of sampling associated with the discharges. The data were compared to Rule 57 and there were no exceedances.

5.0 NON-STRUCTURAL CONTROLS

Non-structural controls are practices that are relatively simple, fairly inexpensive, and applicable to a wide variety of industries or activities. Non-structural controls are intended to reduce the amount of pollution getting into the surface waters of the state and are generally implemented to address the problem at the source. They do not require any structural changes to the facility. The following non-structural controls have been selected for implementation

5.1 Preventative Maintenance Program (Routine Inspection Program)

Preventative maintenance involves regular inspection of facility equipment (if any) and operational systems. The intent of the inspections are to identify conditions that could lead to the release of materials and allow for maintenance to prevent such a release.

The treatment plant is no longer operational and all materials used for treatment have been removed. There are no significant sources that could affect the stormwater with the exception of areas prone to erosion and vehicle fluids.

Preventative maintenance inspections are conducted at the Site in industrial areas exposed to storm water including drainage ditches, secondary pond, material storage areas, and outfalls. During periods of Site inactivity inspections will be completed monthly and if possible within 24 hours of a major storm event. See Appendix C for the preventative maintenance inspection form.

During periods of activity at the Site (eg. primary settling basins closure, storm water drainage improvements, and North Ditch closure) routine inspection of vehicles and vehicle parking and fueling areas will be conducted to identify/reduce the likelihood of leaks/spills. In addition, the number of preventative maintenance inspections will increase from monthly to weekly during periods of activity and within 24 hours of a major storm event. See Appendix C for the routine inspection of vehicles, vehicle parking and vehicle fueling areas.

A log of the inspection and corrective actions shall be maintained on file and shall be retained for three years

5.2 Comprehensive Site Inspection

The permit requires a schedule for comprehensive site inspection including but not limited to equipment, drainage areas, and structural controls. The inspection includes a review of the routine preventive maintenance/good housekeeping inspections, and any other paperwork associated with the SWPPP. The comprehensive site inspection is conducted by the Certified Storm Water Operator quarterly (March, June, September, and December). The comprehensive site inspection results are retained for three years. The inspections will identify any incidents of non-compliance with the SWPPP or this permit. If there are no reportable incidents of non-compliance, the report shall contain a certification that the facility is in compliance with this permit. The Comprehensive Site Inspection Form is in Appendix C.

5.3 Housekeeping Procedures

The permit requires that the SWPPP include a description of good housekeeping procedures to maintain a clean, orderly facility. Housekeeping procedures are intended to reduce the potential for significant materials to come in contact with storm water. The housekeeping procedures have been incorporated into the preventative maintenance inspection form provided in Appendix C.

Location	Equipment/Area	Task	Frequency
Site	- Dumpster at WWTP - contractor supplied waste bins for specific activities	Waste inspection – identify waste to go off-Site and keep drum inventory	Monthly during inactivity and weekly during activity and within 24 hours of a major storm event
Site	Designated construction vehicle parking area identified at the start of proposed activity	Inspect for fluid leaks	Weekly during activity and within 24 hours of a major storm event
Site	Construction vehicles	Vehicle inspection – fluid leaks and dirt	Weekly during activity and within 24 hours of a major storm event

5.4 Material Handling & Spill Prevention / Clean-Up Procedures

5.4.1 Material Handling –Discharge from Outfalls 021/022

Periodically, discharges may be necessary from Outfall 021 (Controlled Overflow Secondary Pond) to maintain sufficient freeboard in the secondary pond and from Outfall 022 (Emergency Outfall North Ditch) if the level in the North Ditch is too high. Should discharges occur from Outfall 021 and Outfall 022, sampling and reporting will be completed in accordance with the NPDES permit herein attached as Appendix A-2. Please note that the NPDES permit does not require sampling for the other two outfalls; Outfall 020 (located in the southeast corner for the property) and Outfall 023 (railroad sump).

5.4.2 Material Handling – Temporary Construction Activities

There are currently no industrial operations being conducted at the Site. Activity at the Site is limited to those activities related to stormwater drainage improvements and environmental remediation/closure of the Site, which will include but is not limited to the stabilization of the primary settling basins and the north ditch.

Stormwater drainage improvements include:

- Clearing and grubbing of vegetation
- Cleaning out existing ditches and creating new ditches to eliminate the need for pumping storm water
- Removal and disposal of pump
- Installation of drive culverts at driveways
- Abandoning existing sewer lines by filling existing sewers with flowable fill

The scope of the primary settling basins stabilization includes the following:

- Installation of erosion control measures in accordance with the county SESC (see Appendix D) including silt fence installed along the north and west face of the primary settling basins. See Figure 1 which identifies the proposed silt fencing location
- Clearing and grubbing of vegetation
- Remove and dispose/recycle existing inlet/outlet structures from primary settling basins
- Dig, haul, and place classified sand and clay in primary settling basins
- Grade surface of primary settling basins for positive drainage
- Place 3-inches of topsoil and seed

The scope of the north ditch stabilization is to be determined.

5.4.3 Material Handling – Waste

There are two waste streams generated at the Site; miscellaneous waste generated from inspections/annual sampling and waste generated from temporary construction activities. The certified storm water operator will dispose of miscellaneous waste generated at the Site and the contractor hired to conduct work at the Site will be responsible for the disposal of waste generated through construction activities.

Inspections of waste bins are included as part of the routine maintenance inspections.

5.4.4 Spill Prevention / Clean-Up Procedures

Spills and leaks together are the largest industrial source of storm water pollution. Thus, this SWPPP specifies material handling procedures and storage requirements for significant materials. In the event of a spill, personnel are trained to respond in a safe and effective manner. An employee may determine that a spill or release has occurred through obvious visible signs, such as a substance on the ground or leaking out of a container, a visible sheen on the water, and/or through odor detection. While maintaining personal safety, the immediate objectives are stopping the release of the oil and containing the release to prevent its migration to a pathway off the property. Any storm drains in the immediate vicinity will be covered. Personal protective equipment shall be worn during all spill response efforts. All employees have been made aware of the proper procedures.

For small spills, all pollutants are to be recovered and stored in drums, characterized, and disposed of as appropriate. In the event of a large spill, sand is to be used to contain the spill. If a spill were to reach areas that drain storm water (ie. Storm water ditching, secondary pond) sand should be used to block the exit of the drain (if appropriate) before it enters the Saginaw River.
In the event of a spill, notification must be made immediately to:

- Facility Contact - Dave Favero (217-741-6235)
- Storm water operator – Steve Hoevemeyer (616-437-7734)
- The facility contact will make the necessary phone calls to the MDEQ district contact (Keith Noble - 989-894-6282). The after hours pollution emergency alert system number is 1-800-292-4706

See Table 3 for the material handling & spill prevention clean-up procedures and Table 4 for the spill kit inventory. See Appendix C-3 for the MDEQ Spill or Release Report

THE FOLLOWING PLANS ARE ON FILE AT THE FACILITY:
SWPPP Due Care Plan Health and Safety Plan

5.5 Soil Erosion & Sedimentation Control Measures

Although erosion has not generally been a concern at the Site, certain areas around the drainage ditches and material piles (classified sand and clay) could become prone to soil erosion and erosion may be a concern after construction activities until a vegetative cover is established. These areas are included in the regular preventative maintenance inspections. The following are recommended control measures for specific tasks that are to be completed and specific areas of the Site prone to erosion.

AREA OF CONCERN:	**CONTROL MEASURE:**
Future work: - Closure of the primary settling basins - transport materials from the classified sand and clay stockpiles to the primary lagoons, across roadway - fill the primary settling basins in 12-inch lifts with classified sand and clay, with top two feet to be only clay	• Silt fencing, vegetation barriers, diversions/channels dust suppression measures, erosion control inspections following rainfall, and re-vegetate disturbed area following completion of work or 30-days of inactivity; obtain Soil Erosion Sedimentation Control Permit from Saginaw County Public Works Commission. Following completion of closure activities stabilize disturbed area by placing topsoil and seed
Classified Sand Area	• During periods of inactivity, conduct periodic preventative maintenance inspections (minimum one per month) and/or following a rainfall event to identify whether erosion is occurring • During closure activities conduct weekly inspections of erosion/sedimentation controls, as necessary. Following completion of closure activities stabilize disturbed area by placing topsoil and seed
Clay Stockpile	• During periods of inactivity, conduct periodic preventative maintenance inspections (minimum one per month) and/or following a rainfall event to identify whether erosion is occurring

AREA OF CONCERN:	CONTROL MEASURE:
	• During closure activities conduct weekly inspections of erosion/sedimentation controls, as necessary. Following completion of closure activities stabilize disturbed area by placing topsoil and seed

If during the preventative maintenance inspections erosion affects are reported, the Storm Water Operator will assess the situation and develop appropriate measures to reduce and eliminate the erosion. Common erosion control measures implemented include but are not limited to:

- Silt fence
- Diversions/channels
- Check dams
- Use of barriers to prevent vehicles from destroying vegetation
- Stabilization measures including seeding, vegetation mats, or rocks (depending on the severity of the erosion)
- Construction of temporary settling basin

See Appendix D for the proposed sediment and erosion controls for the primary settling basin stabilization.

5.6 Employee Training Program

Employee training is a major component in ensuring the success of the facility's SWPPP since the more knowledgeable the employees are about the facility's SWPPP and what is expected of them, the greater the chance that the plan will be effective. The following is a description of the employee training programs to be implemented to inform appropriate personnel at all levels of responsibility of the components and goals of the SWPPP (i.e. good housekeeping practices, spill prevention and response procedures, waste minimization practices, informing customers of facility policies, etc.). The Employee Training Form is in Appendix E.

EMPLOYEE TRAINING DESCRIPTION & FREQUENCY:
- Annual review of video on the MDEQ Website (http://www.michigan.gov/deq/0,1607,7-135-3308_3333_4168---,00.html) - New Employees to the Site must review and sign off on the Site documents including the SWPPP (good housekeeping practices, spill prevention and response procedures), Due Care Plan and HASP

5.7 TMDL Requirements

The Total Maximum Daily Load (TMDL) is the amount of pollutant load a water body can assimilate and still meet water quality standards. If a receiving water body does not meet the water quality standards for a specific pollutant, the MDEQ will establish the appropriate daily maximum load for that pollutant to allow the water body to again meet water quality standards. If a permitted facility is expected to discharge that specific pollutant in its storm water to that water body, the General Permit requires the facility to list actions it will take to meet that TMDL requirement.

According to the MDEQ website, there are no TMDL requirements for the Saginaw River.

5.8 List of Significant Materials Still Present

Following implementation of non-structural preventative measures and source controls, the potential for fuel or other significant materials at the facility to impact storm water is minimal. Any remaining risk is addressed through the use of structural controls.

Potential significant materials that may be in the storm water runoff after implementation of the other nonstructural controls include:

- Fuels
- Eroding soils (soil, classified sands, clay pile)

6.0 STRUCTURAL CONTROLS

The permit requires that where implementation of non-structural controls does not control storm water discharges in accordance with water quality standards, the SWPPP shall provide a description of the location, function, and design criteria of structural controls for prevention and treatment. Structural controls may be necessary to prevent uncontaminated storm water from contacting or being contacted by significant materials; or if preventive measures are not feasible or are inadequate to keep significant materials at the site from contaminating storm water. Structural controls shall be used to treat, divert, isolate, recycle, reuse, or otherwise manage storm water in a manner that reduces the level of significant materials in the storm water and provides compliance with the Water Quality Standards. Table 5 presents the structural measures in place at the Site. At this time no additional structural controls are needed beyond those already in place, however, during temporary construction activities sediment and erosion control measures will be put in place in accordance with SESC permit that is obtained for the activity, which includes silt fencing along the north and west sides of the primary settling basins.

7.0 NON-STORM WATER DISCHARGES

The permit requires that all discharge locations be evaluated for the presence of non-storm water discharges. Any unauthorized storm water discharges must be eliminated, or covered under another NPDES permit.

Storm water shall be defined to include all of the following non-storm water discharges provided pollution prevention controls for the non-storm water component are identified in the SWPPP:

1) Discharges from fire hydrant flushing
2) Potable water sources including water line flushing
3) Fire system test water
4) Irrigation drainage
5) Lawn watering
6) Routine building wash down which does not use detergents or other compounds
7) Pavement wash waters where contamination by toxic or hazardous materials have not occurred (unless all contamination by toxic or hazardous materials have been removed) and where detergents are not used
8) Air conditioning condensate
9) Springs
10) Uncontaminated ground water
11) Foundations or footing drains where flows are not contaminated with process materials such as solvents

Discharges from fire fighting activities are authorized by the permit, but are exempted from the requirement to be identified in the SWPPP.

8.0 ANNUAL REVIEW

The permit requires that the permittee shall review the SWPPP annually after it is developed and maintain written summaries of the reviews. Based on the review, the permittee shall amend the SWPPP as needed to ensure continued compliance with the terms and conditions of the permit. The annual review is to be retained on site. It does not need to be submitted to the DEQ. The Annual Review Form is in Appendix F. However, it is noted that Permit MI0059042 requires that an annual certification be submitted to the MDEQ by January 10 of each year.

In addition, should any changes be made to Site conditions or work being conducted at the Site, the SWPPP will be reviewed and modified as appropriate.

9.0 CERTIFIED STORM WATER OPERATOR UPDATE

The permit requires that if the Certified Storm Water Operator is changed or an additional Certified Storm Water Operator is added, the permittee shall provide the name and certification number of the new Certified Storm Water Operator to the Department. If a facility has multiple Certified Storm Water Operators, the name and certification number of the Certified Storm Water Operators shall be included in the SWPPP.

10.0 RECORD KEEPING

The permit requires that the permittee shall maintain records of all SWPPP related inspection and maintenance activities. Records shall also be kept describing incidents such as spills or other discharges that can affect the quality of storm water runoff. The following forms/records are to be retained for three years.

- Preventative maintenance inspections
- Comprehensive inspections
- Spill or Release report
- Non-Storm Water Inspection Report
- Record of Plan Revisions
- Employee Training Record

Record of Plan Revisions

Revision Date	Version No.	Revision Author	Modifications	Revision Authorized by	Revision Approved by
October 2012	1	CRA	Created original document		

SWPPP CERTIFICATION

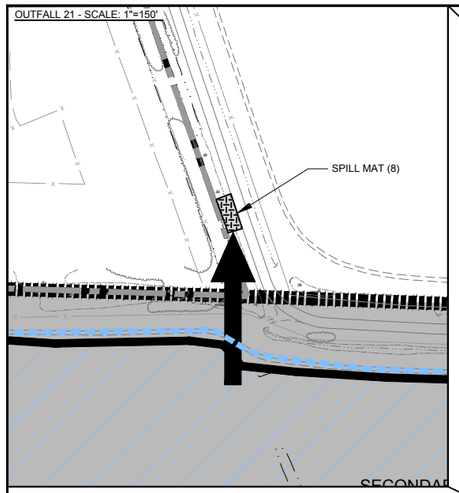
The permit requires that the SWPPP shall be reviewed and signed by the Certified Storm Water Operator(s) and by either the permittee or an authorized representative in accordance with 40 CFR 122.22. The SWPPP shall be retained on-site at the facility which generates the storm water discharge.

I certify under penalty of law that the storm water drainage system in this SWPPP has been tested or evaluated for the presence of non-storm water discharges either by me, or under my direction and supervision. I certify under penalty of law that this SWPPP has been developed in accordance with the General Permit and with good engineering practices. To the best of my knowledge and belief, the information submitted is true, accurate, and complete. At the time this plan was completed no unauthorized discharges were present. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

Permittee or Authorized Representative
Printed Name & Title: **David Favero - Deputy Cleanup Manager - Michigan**
Signature & Date: David Favero Nov 12, 2012

Certified Storm Water Operator
Printed Name & Certification Number: **Steve Hoevemeyer - Industrial site certification #: I-10477 expires 7/1/15**
Signature & Date: 11/12/2012

OUTFALL 21 - SCALE: 1"=150'



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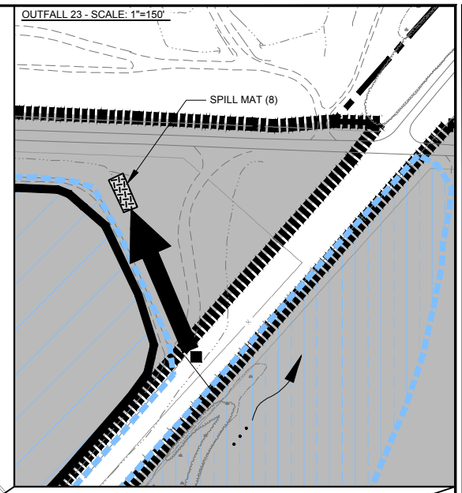


OUTFALL 021 (4)
(CONTROLLED OVERFLOW FOR SECONDARY POND)

OUTFALL 022 (4)
(NORTH DITCH EMERGENCY OVERFLOW)

OUTFALL 023 (4)
(RAILROAD SUMP)

OUTFALL
020 (4)

OUTFALL
020 (4)

GAGE DRAIN (12)

KOEHLER DRAIN (12)

PUMPHOUSE (1)

SILT FENCE (8)

SECONDARY POND

FIRE LAGOON RESERVOIR

PRIMARY LAGOONS (4)

BUILDING

EXISTING RAILROAD SUMP THAT CURRENTLY DISCHARGES INTO EAST DITCH (8)

DRAINAGE PIPE THAT CONNECTS DRAINAGE AREA 3, UNDERNEATH RAILROAD TO RAILROAD SUMP

IMPERVIOUS AREA (11)

NON-OPERATING TREATMENT PLANT (1)

CLAY SOIL PILE (10/2)

CLASSIFIED SAND PILE (10/2)

MISCELLANEOUS BUILDING (1)

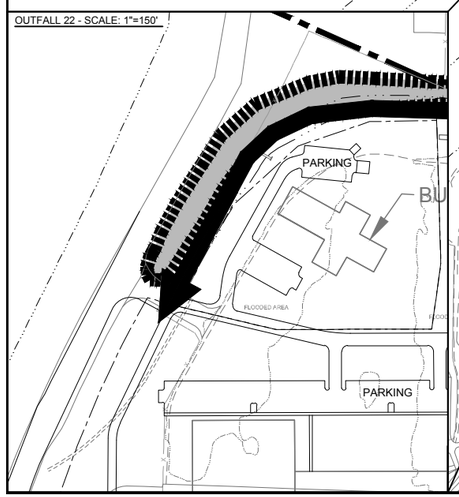
FINDLEY ROAD SUMP (8)

DIEKMAN DRAIN

SAGINAW RIVER (12)

I 75

OUTFALL 22 - SCALE: 1"=150'



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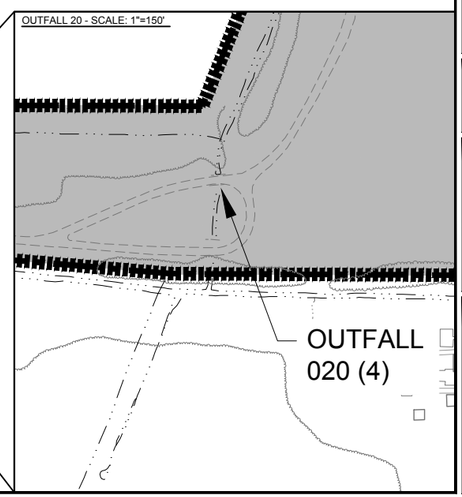
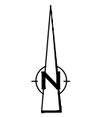




LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE LIMITS OF RACER PROPERTY
- DRAINAGE AREA 1 (54.1 ACRES)
- DRAINAGE AREA 2 (5.8 ACRES)
- DRAINAGE AREA 3 (32.6 ACRES)
- FLOW DIRECTION

DRAINAGE SUMMARY

STORMWATER IN DRAINAGE AREA 1 OVERLAND FLOWS FROM THE SOUTHWEST TO THE NORTHEAST. AN EMERGENCY OVERFLOW FROM THE SECONDARY POND HAS BEEN INSTALLED THAT DISCHARGES INTO A DITCH TO THE NORTH.

STORMWATER IN DRAINAGE AREA 2 PREVIOUSLY DRAINED TO A SUMP IN THE VICINITY OF DRAINAGE AREA 2 THAT WAS DIRECTED TO THE SECONDARY POND, HOWEVER, THE SUMP IS NO LONGER OPERATIONAL. STORMWATER CURRENTLY PONDS ALONG THE RAILROAD DITCH AND EVENTUALLY DRAINS NORTHEAST TO THE RAILROAD SUMP AT THE NORTHEAST CORNER OF THE SECONDARY POND.

STORMWATER IN DRAINAGE AREA 3 OVERLAND FLOWS TO THE DITCH ALONG THE RAILROAD TRACKS. A DRAINAGE PIPE DIRECTS THE STORMWATER BENEATH THE RAILROAD TRACK AND INTO THE RAILROAD SUMP AT THE NORTHEAST CORNER OF THE SECONDARY POND.

1. Buildings and other permanent structures
2. Storage or Disposal areas for significant materials
3. Secondary containment structures and descriptions of what they contain (NONE)
4. Storm water discharge outfalls
5. Location of storm water and non-storm water inlets contributing to each outfall (NONE)
6. Location of NDPES permitted discharges other than storm water (NONE)
7. Outlines of the drainage areas contributing to each outfall
8. Structural runoff controls or storm water treatment facilities
9. Areas of vegetation (SEE FIGURE 2)
10. Areas of exposed and/or erodible soils (SEE FIGURE 2)
11. Impervious Surfaces (SEE FIGURE 2)
12. Name and location of receiving waters
13. Areas of known or suspected impacts on surface waters as designated under Part 201 (Environmental Response) of the Michigan Act (NONE)

NOTE: TOPO - SANBORN, 1996

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

REVITALIZING AUTO COMMUNITIES
ENVIRONMENTAL RESPONSE (RACER)
SAGINAW NODULAR INDUSTRIAL LAND

SAGINAW, MICHIGAN

SITE MAP
FOR SWPPP

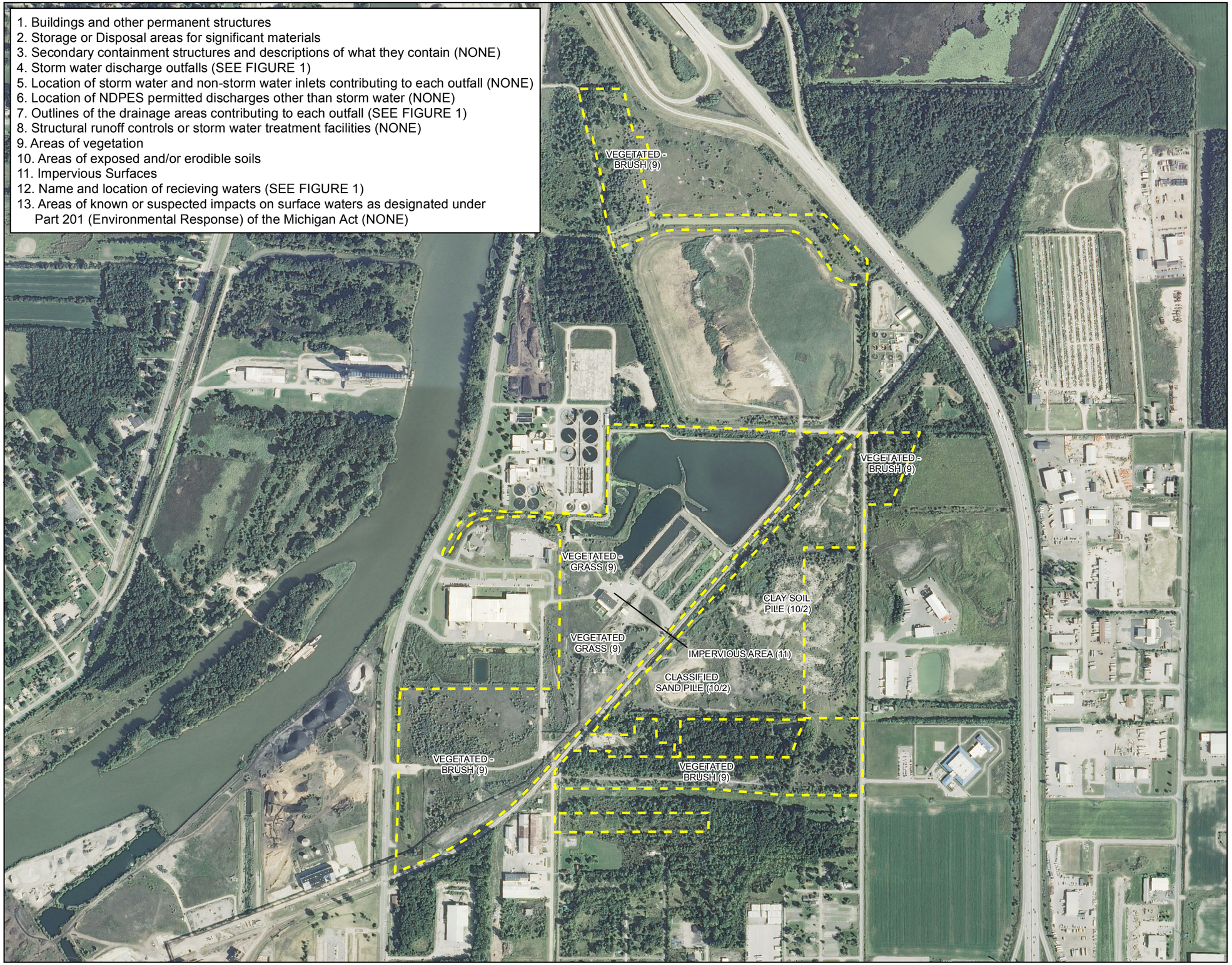
CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
MICHIGAN STATE PLANE SOUTH, NAD 83 USING INTERNATIONAL FEET, NGVD 88

Project Manager:	Reviewed By:	Date:	
M.T.	J.E.P.	MARCH 2012	
Scale: 1" = 400'	Project N°: 58502-T02	Report N°: 007	Drawing N°: 1

58502-T02(007)GN-WA001 NOV 12/2012

1. Buildings and other permanent structures
2. Storage or Disposal areas for significant materials
3. Secondary containment structures and descriptions of what they contain (NONE)
4. Storm water discharge outfalls (SEE FIGURE 1)
5. Location of storm water and non-storm water inlets contributing to each outfall (NONE)
6. Location of NDPES permitted discharges other than storm water (NONE)
7. Outlines of the drainage areas contributing to each outfall (SEE FIGURE 1)
8. Structural runoff controls or storm water treatment facilities (NONE)
9. Areas of vegetation
10. Areas of exposed and/or erodible soils
11. Impervious Surfaces
12. Name and location of recieving waters (SEE FIGURE 1)
13. Areas of known or suspected impacts on surface waters as designated under Part 201 (Environmental Response) of the Michigan Act (NONE)



0 500 1,000 1,500 Feet

LEGEND

APPROXIMATE LIMITS OF RACER PROPERTY

REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE (RACER)
SAGINAW NODULAR INDUSTRIAL LAND

SAGINAW, MICHIGAN

2009 AERIAL

CONESTOGA-ROVERS & ASSOCIATES

Source Reference
MICHIGAN STATE PLANE SOUTH, NAD 83 USING INTERNATIONAL FEET, NAVD 88
2009 SAGINAW COUNTY NAIP PROVIDED BY USDA

Project Manager	Reviewed By	Date	
M.T.	J.E.P.	MARCH 2012	
Scale	Project No.	Report No.	Drawing No.
1:10,000	58502-T02	007	2

TABLE 1
SIGNIFICANT MATERIAL INVENTORY AND DESCRIPTION OF INDUSTRIAL ACTIVITY OR SIGNIFICANT MATERIAL STORAGE AREAS

Section Listed in General Permit	Storage Areas / Activity Areas	Significant Materials	Exposure Method	Reasonable Potential Evaluation (high,medium,low)	Inlet(s)	Outfalls(s)
1) Loading, unloading, and other material handling operations	Fueling (during specific activities) area TBD	Gasoline, diesel fuel, lubricating oils	leaks	low		21/22/23
2) Outdoor storage including secondary containment structures	Washed Classified Sands	Washed classified sand piles (east/west of railroad tracks)	Direct Contact with stormwater	Low		21/22, include outfall for secondary pond
	Stockpiled clay	Stockpiled clay	Direct Contact with stormwater	Low (Material excavated from virigin soil and stockpiled)		
	Primary settling basins and Secondary Pond	Stormwater	Direct Contact with stormwater	Low (see Appendix B for characterization)		21/22
	Primary settling basins and Secondary Pond	Sediment	Indirect contact with stormwater through secondary pond water	Low (see Appendix B for characterization)		21/22
3) Outdoor manufacturing or processing activities						
4) Significant dust or particulate generating processes	**Temporary:** Construction Activities (primary settling basin closure, Storm water improvements, north ditch closure)	Dust particulate, erosion	Inhalation/direct contact	low		21/22/23
5) Discharge from vents, stacks, and air emission controls						
6) On-site waste disposal practices	- Dumpster - WWTP	Various garbage	Leaks	Low		NA
	- Waste bins provided by	Various garbage	Leaks	Low		NA
	Contractor (temporary)					

TABLE 1 (CONTINUED)
SIGNIFICANT MATERIAL INVENTORY AND DESCRIPTION OF INDUSTRIAL ACTIVITY OR SIGNIFICANT MATERIAL STORAGE AREAS

Section Listed in General Permit	Storage Areas / Activity Areas	Significant Materials	Exposure Method	Reasonable Potential Evaluation (high,medium,low)	Inlet(s)	Outfalls(s)
7) Maintenance and cleaning of vehicles, machines and equipment	Construction Vehicles (during specific activities)	Fuel/vehicle fluids	Leaks	Low		21/22/23
8) Areas of exposed and/or erodible soils	See Outdoor Storage including secondary containment structures (2)					
9) Sites of Environmental Contamination listed under Part 201						
10) Areas of significant material residues	Primary settling basins and secondary ponds	sediments	Direct contact	Low (see Appendix B for characterization)		21/22
11) Areas where animals congregate (wild or domestic) and deposit wastes						
12) Other areas where storm water may contact significant materials						

TABLE 2
LIST OF SIGNIFICANT SPILLS

Location & Date	Material & Volume	Corrective Actions Taken

TABLE 3
MATERIAL HANDLING & SPILL PREVENTION / CLEAN-UP PROCEDURES

Potential Spill Area	**Material Handling & Storage Procedures**	**Spill Response Procedures & Equipment**
Temporary (construction) - construction vehicles	- maintain area for construction vehicles that are not being used.	- notify necessary parties (project manager, owner, DEQ) - secure area, stop source of spill - limit the extents of spill (using absorbent material) - spill cleanup - report
Erosion potential Areas (ditches, clay pile, sand pile, secondary and primary pond berms)	- Maintain controls in the SESC Plan - Vegetate exposed soils prone to erosion	- repair sediment and erosion control measures, as necessary - evaluate alternative erosion control measures if repairs are being conducted frequently - implement alternative erosion control measures

TABLE 4
SPILL KIT INVENTORY

List the spill response equipment that will be maintained in each location or locker (refer to MSDSs to determine recommended clean-up methods and supplies):

Person responsible for maintaining this inventory: Steve Hoevemeyer

Locker number or location	**Absorbents (pads, booms, kitty litter, etc.)**	**Tools (shovels, brooms, squeegees, etc.)**	**Personal Protective Equipment (rubber gloves, boots, masks, etc.)**	**Other Supplies (warning tape, labels, markers, MSDSs, etc.)**
WWTP building (during construction activities)	Absorbent pads and sand	Shovels and brooms	Gloves	Cones and warning tape to secure area MSDS (if applicable)

Label each spill kit with the words "SPILL KIT" and the necessary emergency telephone number(s) or pager number(s) of persons to be contacted in case of a spill or leak that is beyond the training and equipment available on or near each spill locker:

Facility Responsible Person/Phone Number: Dave Favero – 217-741-6235, Steve Hoevemeyer - 616-437-7734
Spill Response Contractor (if any)/Phone Number: _____
DEQ District Office Phone Number: Keith Noble - 989-894-6282
DEQ 24-Hour Emergency Spill Reporting Hot-Line: **1-800-292-4706**

Stencil the following warning on each spill kit:

"WARNING: NEVER HOSE DOWN A SPILL!
CLEAN IT UP PROMPTLY AND DISPOSE OF THE WASTE PROPERLY."

TABLE 5
STRUCTURAL CONTOLS USED AT THE FACILITY

Description of Structural Control	Location of Structural Control	Significant Materials intended to be managed
Outfall 021 – controlled outlet for secondary pond	See Figure 1	Surface water, sediment
Outfall 022 - North Ditch overflow – catch basin	See Figure 1	Surface water
Outfall 023 - railroad sump discharge to ditch	See Figure 1	Surface water
Outfall 024 – ditch	See Figure 1	Surface water
Hach Road sump – used to manage surface water runoff to avoid unnecessary flooding	See Figure 1	Surface Water
Silt Fence – used to remove sediments from surface water runoff	See Figure 1	Sediment
Splash Pads (at Outfalls) – used to dissipate discharge flow energy and collect sediments	See Figure 1	Sediment, surface water

Appendix A

Permits

Appendix A-1

Certificate of Coverage

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

August 17, 2006

Mr. Raymond Ilkka
General Motors Powertrain
1629 North Washington Avenue
Mail Code: 486-629-011
Saginaw, Michigan 48605

Dear Mr. Ilkka:

SUBJECT: Storm Water General Permit
Certificate of Coverage No. MIS120003
Designated Name: GM-Powertrain Saginaw

The Water Bureau of the Department of Environmental received on September 29, 2005, your Notice of Intent to be covered under the Storm Water General Permit (Permit No. MIS120000).

Please find attached Certificate of Coverage No. MIS120003 granting this request. If needed, a copy of the Storm Water General Permit can be obtained via the Internet at: (http://www.michigan.gov/deq and on the left side of the screen click on Water, Surface Water, and NPDES Permits; then click on "General NPDES Permits" which is under the Permits banner), or if you do not have access to a computer, you may call the following number to request a paper copy be sent to you: (517) 241-1346. This certificate of coverage takes effect immediately. The granting of this coverage under this storm water general permit establishes several compliance requirements which are detailed in the certificate of coverage.

The issuance of this permit does not authorize violation of any federal, state or local laws or regulations, nor does it obviate the necessity of obtaining such permits, including any other Department of Environmental Quality permits, or approvals from other units of government as may be required by law.

Based on the issuance of this Certificate of Coverage, your storm water discharge control facility is officially classified as A.1.i, Storm Water Management Industrial Site. Please contact Keith Noble at 989-686-8025 ext. 8267 if you have any questions.

Sincerely,

Kelly Ploehn

Kelly Ploehn
Storm Water Program
Water Bureau

Attachment

cc: Saginaw Bay District Office, Water Bureau
PCS Unit, Water Bureau (with COC)
File

DEQ

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER BUREAU
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
Authorized by Michigan Act 451, Public Acts of 1994, as amended, Part 31

CERTIFICATE OF COVERAGE

Under General Permit No. MIS120000
SW-Containment CY1 General Permit

CERTIFICATE OF COVERAGE NO.:	MIS120003
DESIGNATED NAME:	GM-Powertrain Saginaw
PERMITTEE MAILING ADDRESS:	General Motors Powertrain 1629 North Washington Avenue Mail Code: 486-629-011 Saginaw, Michigan 48605

This certificate of coverage authorizes General Motors Powertrain to discharge an unspecified amount of storm water which meets the criteria established in General Permit No. MIS120000. The discharge is from General Motors Powertrain, Saginaw Metal Casting Operations, located at 1629 North Washington Avenue, Saginaw, Michigan 48605. The discharge is to the Saginaw River, in the SE1/4, SE1/4, Section 7, Town 12 N, Range 5 E, Saginaw County.

The discharge is to Diekman Drain in the SE1/4, SE1/4, Section 5, T12N, R5E, Saginaw County.

The discharge is to Koehler Drain in the SE1/4, NE1/4, Section 8, T12N, R5E, Saginaw County.

The discharge is to Gage Number One Drain in the NW1/4, SE1/4, Section 5, T12N, R5E, Saginaw County.

The discharge is to Koehler Drain in the NE1/4, SE1/4, Section 5, T12N, R5E, Saginaw County.

This authorization is based on written certification received on September 29, 2005, that the permittee is in compliance with the following requirements of the Storm Water Pollution Prevention Plan and the general permit (see Part I.A.4. of the general permit):

1. Source identification requirements.
2. Certified storm water operator requirements.
3. Prohibition of unauthorized non-storm water discharges.
4. Non-structural preventative measures and source controls.
5. Structural storm water pollution control requirements as needed.

By February 16, 2007, the permittee shall sample and analyze storm water in accordance with the short-term monitoring plan previously approved by the Department for the permitted facility and submit the storm water analytical data, or submit an updated approvable plan for monitoring and analysis of the storm water in accordance with the requirements of Part I.A.2. of the general permit.

Any party who is aggrieved by this certificate of coverage may file a sworn petition for a contested case hearing on this certificate of coverage with the State Office of Administrative Hearings and Rules of the Michigan Department of Labor and Economic Growth in accordance with the provisions of R323.2192(c) of the Michigan Administrative Code. The Department may reject any petition filed more than 60 days after issuance as being untimely.

The issuance of this certificate of coverage does not authorize violation of any federal, state or local laws or regulations, nor does it obviate the necessity of obtaining such permits, including any other Department of Environmental Quality permits, or approvals from other units of government as may be required by law.

This certificate of coverage is based on a complete application received by the Department of Environmental Quality on September 29, 2005, and is subject to all conditions specified in General Permit No. MIS120000 issued August 2, 2005, expiring April 1, 2011. This certificate of coverage may be modified, terminated, reissued, or revoked as allowed for in General Permit No. MIS120000. On the effective date of this certificate of coverage, this certificate of coverage shall supersede Certificate of Coverage No. MIS120003, issued July 11, 2001, which is hereby revoked.

This certificate of coverage takes effect immediately.

August 16, 2006
Date Issued

Michael J. Bray, P.E., Chief
Lakes Erie and Huron Permits Unit
Permits Section
Water Bureau

EQP 4677 (10/97)

GENERAL PERMIT NO. MIS120000

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTEWATER DISCHARGE GENERAL PERMIT

STORM WATER DISCHARGES WITH REQUIRED MONITORING
CYCLE-YEAR 1 WATERSHEDS

In compliance with the provisions of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq; the "Federal Act"); Michigan Act 451, Public Acts of 1994, as amended (the "Michigan Act"), Part 31; and Michigan Executive Orders 1991-31, 1995-4 and 1995-18, storm water associated with industrial activity, as defined under 40 CFR 122.26(b)(14)(i-ix) and (xi), or as deemed necessary under Section 402(p)(2)(E) of the Federal Act, and other storm water which is adequately regulated by this general permit is authorized to be discharged from facilities specified in individual "certificates of coverage" in accordance with conditions set forth in this National Pollutant Discharge Elimination System (NPDES) general permit (the "permit").

The applicability of this permit shall be limited to facilities which discharge storm water to surface waters of the state located within a cycle-year 1 watershed, as listed in Part II.F. on page 21 of 21. Applicable discharges include storm water from secondary containment structures required by State or Federal law, from lands on Michigan's List of Sites of Environmental Contamination pursuant to Part 201 (Environmental Response) of the Michigan Act, or from other activities which may contribute pollutants to the storm water for which the Michigan Department of Environmental Quality (the "Department") determines monitoring is needed. This permit does not authorize discharges determined by the Department to need individual NPDES permits or different general permits, or that may cause or contribute to a violation of the Water Quality Standards.

In order to constitute a valid authorization to discharge, this permit must be complemented by a certificate of coverage issued by the Department.

Unless specified otherwise, all contact with the Department required by this permit shall be made to the positions indicated in the certificate of coverage, and all Department approvals specified in this permit shall be by the positions indicated in the certificate of coverage.

The terms and conditions of this permit shall apply to an individual facility beginning on the effective date of a certificate of coverage issued for that facility. The Department may grant a contested case hearing on this permit in accordance with the Michigan Act. Any person who is aggrieved by this permit may file a sworn petition with the Office of Administrative Hearings of the Michigan Department of Environmental Quality, setting forth the conditions of the permit which are being challenged and specifying the grounds for the challenge. The Department may grant a contested case hearing on the certificate of coverage issued to an individual facility under this permit in accordance with Rule 323.2192(c) (Rule 323.2192 of the Michigan Administrative Code).

In accordance with Section 324.3118 of the Michigan Act, the permittee shall make payment of an annual storm water fee to the Department. In response to the Department's annual notice, the permittee shall remit the fee to the address on the notice, postmarked no later than March 15 of each year.

This permit shall take effect on April 1, 2006. The provisions of this permit are severable. After notice and opportunity for a hearing, this permit may be modified, suspended or revoked in whole or in part during its term in accordance with applicable laws and rules. On its effective date this permit shall supersede NPDES Permit No. MIS120000, expiring April 1, 2001.

This permit shall expire at midnight, April 1, 2011.

Issued August 2, 2005

Original Permit Signed by Daniel Dell, Acting Section Chief
William Creal, Chief
Permits Section
Water Bureau

PART I

Section A. Limitations And Monitoring Requirements

1. Final Effluent Limitations

During the period beginning on the effective date of this permit and an individual certificate of coverage, and lasting until the expiration of this permit or termination of the individual certificate of coverage, the permittee is authorized to discharge an unspecified amount of storm water to the surface waters of the State of Michigan from industrial activity as defined under 40 CFR 122.26(b)(14)(i-ix) and (xi), from secondary containment structures required by State or Federal law, from lands on Michigan's List of Sites of Environmental Contamination pursuant to Part 201 (Environmental Response) of the Michigan Act, and from other activities which may contribute pollutants to the storm water for which the Department determines monitoring is needed. The discharge shall be limited by the permittee as specified below.

a. Limitations for Discharges from Secondary Containment Structures -- contained storm water may not be discharged if:

1) The storm water contains unnatural turbidity, color, oil film, floating solids, foams, settleable solids, or suspended solids; or

2) The permittee knows, or has reason to believe, the contained storm water is contaminated by or has come in contact with materials stored within the primary containment structure, unless the Department approves the discharge. An operator of a bulk fuel storage facility may discharge storm water that is known to have contacted petroleum products stored within primary containment structures if the contained storm water has been treated to assure that the limitations in item 1) (above) are met; or

3) The permittee has not implemented an acceptable Storm Water Pollution Prevention Plan (SWPPP) as required by Part I.A.5. of this permit.

b. Limitations for Discharges from areas without secondary containment, including Sites of Environmental Contamination and other activities which may contribute pollutants to the storm water for which the Department determines monitoring is needed -- storm water may not be discharged if:

1) The receiving water will contain unnatural turbidity, color, oil films, floating solids, foams, settleable solids, suspended solids, or deposits as a result of this discharge; or

2) The permittee knows, or has reason to believe, the storm water contains contaminants from the site that may cause a violation of the Water Quality Standards; or

3) The permittee has not implemented an acceptable SWPPP as required by Part I.A.5. of this permit.

PART I

Section A. Limitations And Monitoring Requirements

c. Water Treatment Additives

This permit does not authorize the discharge of water additives without approval from the Department. Water additives include any material that is added to water used at the facility or to a wastewater generated by the facility to condition or treat the water.

In the event a permittee proposes to discharge water additives, the permittee shall submit a request to discharge water additives to the Department for approval. Such requests shall be sent to the Surface Water Assessment Section, Water Bureau, Department of Environmental Quality, P.O. Box 30273, Lansing, Michigan 48909, with a copy to the Department. Instructions to submit a request electronically may be obtained via the internet (http://www.michigan.gov/deq and on the left side of the screen click on Water, Water Quality Monitoring, Assessment of Michigan Waters; then click on the Water Treatment Additive List which is under the information banner). Written approval from the Department to discharge such additives at specified levels shall be obtained prior to discharge by the permittee. Additional monitoring and reporting may be required as a condition for the approval to discharge the additive.

A request to discharge water additives shall include all of the following water additive usage and discharge information:

c. Material Safety Data Sheet;

d. the proposed water additive discharge concentration;

e. the discharge frequency (i.e., number of hours per day and number of days per year);

f. the outfall from which the product is to be discharged;

g. the type of removal treatment, if any, that the water additive receives prior to discharge;

h. product function (i.e. microbiocide, flocculent, etc.);

i. a 48-hour LC_{50} or EC_{50} for a North American freshwater planktonic crustacean (either *Ceriodaphnia sp., Daphnia sp., or Simocephalus sp.*); and

j. the results of a toxicity test for one other North American freshwater aquatic species (other than a planktonic crustacean) that meets a minimum requirement of Rule 323.1057(2) of the Water Quality Standards.

Prior to submitting the request, the permittee may contact the Surface Water Assessment Section by telephone at 517-335-1180 or via the internet at the address given above to determine if the Department has the product toxicity data required by items g. and h. above. If the Department has the data, the permittee will not need to submit product toxicity data.

d. Tracer Dye Discharges

This permit does not authorize the discharge of tracer dyes without approval from the Department. Requests to discharge tracer dyes shall be submitted to the Department in accordance with Rule 1097 (Rule 323.1097 of the Michigan Administrative Code).

PART I

Section A. Limitations And Monitoring Requirements

2. Short-Term Storm Water Characterization Study

The permittee shall complete a short-term storm water characterization study. Permittees seeking reissuance under this permit may complete storm water analysis by following their short-term monitoring plan previously approved by the Department, in which case the monitoring results shall be submitted to the Department within six months of the effective date of the certificate of coverage issued under this permit. If, however, changes have occurred at the facility which could result in the discharge of different pollutants than those identified in the previously approved short-term monitoring plan, or if the permittee has never submitted a short term monitoring plan, then the permittee shall submit a new approvable short-term monitoring plan in accordance with the following:

Monitoring plan submittal: Within six (6) months after the effective date of a certificate of coverage issued under this permit, the permittee shall submit to the Department an approvable plan for monitoring and analysis of the storm water discharges authorized by the certificate of coverage and this permit. Guidance for the monitoring plan is available at http://www.deq.state.mi.us/documents/deq-swq-stormwater-SWCharStudy.pdf. The plan shall include a proposed list of pollutants to be monitored to adequately characterize the discharge. At a minimum, the proposed list of pollutants shall include significant materials that the permittee knows or has reason to believe are present in special use areas (special use areas include secondary containment structures and associated storage vessels, Sites of Environmental Contamination, or other activities or areas which may contribute pollutants to the storm water for which the Department determines monitoring is needed). If the permittee has more than one special use area that would require storm water monitoring, such as a secondary containment structure *and* a Site of Environmental Contamination, then a separate monitoring plan shall be submitted for each special use area. The monitoring plan may include a request to monitor a combined discharge from multiple secondary containment structures if the permittee demonstrates in the plan that the monitoring is representative of water from all secondary containment structures. The plan(s) shall describe the monitoring frequency and duration, the total number of sampling events (each discharge is one event), the monitoring and analysis methods to be used, and a date for submittal of the summarized analytical results. Samples shall be collected, preserved, handled, and analyzed using EPA approved methods (see 40 CFR part 136) and quantification levels. Some desired quantification levels are available in Appendix A to this permit.

Monitoring secondary containment structures or retention basins with retention periods greater than 24 hours: Samples shall be collected from the water within a secondary containment structure or retention basin, or of the discharge prior to mixing with the receiving water or other waste streams. Grab samples may be taken unless the Department specifies other sampling methods. Pollutant concentrations and estimated total volume of the discharge shall be reported. Sampling may include visual observations to determine if the storm water contains unnatural turbidity, color, oil film, floating solids, foams, settleable solids, or suspended solids.

Monitoring storm water runoff from a Site of Environmental Contamination or other activity (without secondary containment or 24-hour retention) which may contribute pollutants to the storm water for which the Department determines monitoring is needed: Samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inch of rainfall and causes a discharge; and at least 72 hours from the previous measurable (greater than 0.1 inch) storm event. Quantitative data shall be reported for a grab sample taken during the **first thirty minutes** of the discharge. Additional samples shall be collected during a discharge event as necessary to be representative of the pollutants discharged from the site. Date and duration of the storm event, the rainfall measurement or estimate, duration between the storm event sampled and the end date of the previous measurable storm event, pollutant concentration(s), visual observations, and estimated total volume of the discharge shall be reported.

Monitoring startup: Upon completion and implementation of the Storm Water Pollution Prevention Plan (Part I.A.5.) and approval of the monitoring plan, the permittee shall begin monitoring the authorized discharge as specified in the plan. If the Department does not take action to approve or comment on the monitoring plan within ninety (90) days after submittal, and the Storm Water Pollution Prevention Plan is being implemented by the permittee in its entirety, the permittee shall begin storm water monitoring in accordance with the plan submitted. Nothing in this permit shall prevent additional sampling, in addition to that specified in the monitoring plan, from being conducted. The analytical results of all representative discharge samples collected must be reported to the Department.

If, upon review of the analysis, it is determined that any of the materials or constituents require limiting to protect the receiving waters in accordance with applicable Water Quality Standards, the Department may determine that an individual permit is needed for the discharge in accordance with Part I.A.8. of this permit.

PART I

Section A. Limitations And Monitoring Requirements

3. Schedules and Certifications for New Storm Water General Permit Applicants

Applicants requesting first-time authorization to discharge storm water associated with industrial activity under a general permit shall comply with the schedule and certification requirements identified in this section prior to submittal of a Notice of Intent (NOI) or other Department-approved application to be covered under this permit.

a. Schedule

A first-time applicant will not receive a certificate of coverage issued under this permit unless the NOI or application is accompanied by certification of compliance with the certified operator and Storm Water Pollution Prevention Plan (SWPPP) requirements of this permit as follows.

1) Certified Operator: The applicant shall have a storm water operator certified by the Department, as required by Section 3110 of the Michigan Act. The certified operator shall have supervision over the facility's storm water treatment and control measures included in the SWPPP.

2) Storm Water Pollution Prevention Plan: The applicant's SWPPP shall be developed in accordance with Part I.A.5. and be ready for implementation prior to submittal of an NOI or other application to be covered under this permit. The SWPPP shall be signed by the certified operator and the permittee. Applicants shall be fully ready to carry out the activities specified in their SWPPP and comply with this permit in order to be issued a certificate of coverage. New facilities shall have a certificate of coverage issued under this permit prior to commencement of discharge of storm water associated with industrial activity.

b. Certification

When submitting an NOI or other application for this permit, the permittee shall also submit a written certification that the facility is in compliance with the requirements identified in Parts I.A.3.b.1) through 5). The certification shall be a written statement that the SWPPP has been completed and is being implemented. It is not necessary to submit the SWPPP to the Department unless requested to do so. New facilities shall fulfill the requirements of subparagraphs 4) and 5) when industrial activity begins.

1) The source identification requirements of the SWPPP are completed and identified in the plan (see Part I.A.5.a.).

2) Non-storm water discharges are eliminated or authorized by an NPDES permit (see Part I.D.3.).

3) The facility has a certified storm water operator as required in Part I.A.3.a.1). All operators' names and certification numbers shall be included in the written certification. If a certified operator's number is not available at the time the written certification is submitted, provide the date the operator took the certification exam, the location of the Department's office where the exam was taken, and the signature of the person who took the exam.

4) Non-structural preventative measures and source controls are being implemented (see Part I.A.5.b.).

5) The structural storm water pollution controls (see Part I.A.5.c.), if needed, are installed and operational. If no structural controls are needed, indicate so in writing.

PART I

Section A. Limitations And Monitoring Requirements

4. Schedules and Certifications for Storm Water Dischargers with Previous Permit Requirements for a Storm Water Pollution Prevention Plan

A permittee who has been authorized to discharge storm water under a NPDES permit other than this permit, that required a Storm Water Pollution Prevention Plan (SWPPP), and who submits a Notice of Intent (NOI) or other Department-approved application for authorization to discharge under this permit, shall comply with the schedule and certification requirements identified in this section.

a. Schedule
Continue development and implementation of the SWPPP in accordance with the schedule established under the individual permit, or general permit and certificate of coverage, held previous to this permit. That schedule shall be enforceable under this permit. The SWPPP shall be updated in accordance with Part I.A.5.d.

b. Certification
When submitting an NOI or another application for this permit, the permittee shall also submit a written certification that the facility is in compliance with its current storm water general permit and certificate of coverage or the storm water pollution prevention requirements of its individual permit. The certification shall be a written statement that the SWPPP has been completed and is being implemented. It is not necessary to submit the SWPPP to the Department unless requested to do so. The written certification shall include the name and certification number of the certified storm water operator.

PART I

Section A. Limitations And Monitoring Requirements

5. Storm Water Pollution Prevention Plan

a. Source Identification

To identify potential sources of significant materials that can pollute storm water and subsequently be discharged from the facility, the SWPPP shall, at a minimum, include the following items:

1) A site map identifying the following: buildings and other permanent structures; storage or disposal areas for significant materials; secondary containment structures and descriptions of what they contain; storm water discharge outfalls (numbered for reference); location of storm water and non-storm water inlets contributing to each outfall; location of NPDES permitted discharges other than storm water; outlines of the drainage areas contributing to each outfall; structural runoff controls or storm water treatment facilities; areas of vegetation (with brief description such as lawn, old field, marsh, wooded, etc); areas of exposed and/or erodible soils; impervious surfaces (roofs, asphalt, concrete); name and location of receiving water(s); and areas of known or suspected impacts on surface waters as designated under Part 201 (Environmental Response) of the Michigan Act.

2) A list of all significant materials that could pollute storm water. For each material listed, the SWPPP shall include each of the following descriptions:

a) Ways in which each type of material has been or has reasonable potential to become exposed to storm water (e.g., spillage during handling; leaks from pipes, pumps, and vessels; contact with storage piles, contaminated materials or soils; waste handling and disposal; deposits from dust or overspray; etc.).

b) Identification of the outfall(s) through which the material may be discharged if released.

c) A listing of significant spills and significant leaks of polluting materials that occurred at areas that are exposed to precipitation or that otherwise discharge to a point source at the facility. The listing shall include spills that occurred over the three (3) years prior to the effective date of a certificate of coverage authorizing discharge under this permit. The listing shall include the date, volume and exact location of release, and the action taken to clean up the material and/or prevent exposure to storm water runoff or contamination of surface waters of the state. Any release that occurs after the SWPPP has been developed shall be controlled in accordance with the SWPPP and is cause for the SWPPP to be updated as appropriate within 14 calendar days of obtaining knowledge of the spill or loss.

d) If there is a Total Maximum Daily Load (TMDL) established by the Department for the receiving water, which restricts the discharge of any of the identified significant materials or constituents of those materials, then the SWPPP shall identify the level of control for those materials necessary to comply with the TMDL, and an estimate of the current annual load of those materials via storm water discharges to the receiving stream.

3) An evaluation of the reasonable potential for contribution of significant materials to runoff from at least the following areas or activities: loading, unloading, and other material handling operations; outdoor storage including secondary containment structures; outdoor manufacturing or processing activities; significant dust or particulate generating processes; discharge from vents, stacks and air emission controls; on-site waste disposal practices; maintenance and cleaning of vehicles, machines and equipment; areas of exposed and/or erodible soils; Sites of Environmental Contamination listed under Part 201 (Environmental Response) of the Michigan Act; areas of significant material residues; areas where animals congregate and leave wastes behind; and other areas where storm water may contact significant materials.

4) A summary of existing storm water discharge sampling data (if available) describing pollutants in storm water discharges associated with industrial activity at the facility. This summary shall be accompanied by a description of the suspected source(s) of the pollutants detected.

PART I

Section A. Limitations And Monitoring Requirements

b. Preventive Measures and Source Controls, Non-Structural
To prevent significant materials from contacting storm water at the source, the SWPPP shall, at a minimum, include each of the following non-structural controls:

1) A description of a program for routine preventive maintenance which includes inspection and maintenance of storm water management and control devices (e.g., cleaning of oil/water separators and catch basins) as well as inspecting and testing plant equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters. A log of the inspection and corrective actions shall be maintained on file by the permittee, and shall be retained in accordance with Part I.A.5.f.

2) A schedule for comprehensive site inspection to include visual inspection of equipment, plant areas, areas of containment or past contamination, and structural pollution prevention and treatment controls, to be performed at least once every six (6) months. A report of the results of the comprehensive site inspection shall be prepared and retained in accordance with Part I.A.5.f. The report shall identify any incidents of non-compliance with the SWPPP or this permit. When there are no reportable incidents of non-compliance, the report shall contain a certification that the facility is in compliance with this permit.

3) A description of good housekeeping procedures to maintain a clean, orderly facility.

4) A description of material handling procedures and storage requirements for significant materials. Equipment and procedures for cleaning up spills shall be identified in the SWPPP and made available to the appropriate personnel. The procedures shall identify measures to prevent spilled materials or material residues on the outside of containers from being discharged into storm water. The SWPPP may include, by reference, requirements of either a Pollution Incident Prevention Plan (PIPP) prepared in accordance with the Part 5 Rules (Rules 324.2001 through 324.2009 of the Michigan Administrative Code); a Hazardous Waste Contingency Plan prepared in accordance with 40 CFR 264 and 265 Subpart D, as required by Part 111 of the Michigan Act; or a Spill Prevention Control and Countermeasure (SPCC) Plan prepared in accordance with 40 CFR 112.

5) Identification of areas which, due to topography, activities, or other factors, have a high potential for significant soil erosion. The SWPPP shall also identify measures used to control soil erosion and sedimentation.

6) A description of employee training programs which will be implemented to inform appropriate personnel at all levels of responsibility of the components and goals of the SWPPP. The SWPPP shall identify periodic dates for such training.

7) Identification of actions to limit the discharge of significant materials in order to comply with TMDL requirements.

8) Identification of significant materials expected to be present in storm water discharges following implementation of non-structural preventative measures and source controls.

PART I

Section A. Limitations And Monitoring Requirements

c. Structural Controls for Prevention and Treatment

NOTE: Permittees who do not need to construct structural controls in accordance with this part shall certify to the Department that structural controls are not needed at the facility and begin storm water monitoring, as required in Part I.A.2., within one year after the effective date of a certificate of coverage issued under this permit, or as soon as the non-structural controls are implemented.

Where implementation of the measures required by Part I.A.5.b. does not control storm water discharges in accordance with Part I.A.5.g., the SWPPP shall provide a description of the location, function, and design criteria of structural controls for prevention and treatment. Structural controls may be necessary:

1) To prevent uncontaminated storm water from contacting or being contacted by significant materials; or

2) If preventive measures are not feasible or are inadequate to keep significant materials at the site from contaminating storm water. Structural controls shall be used to treat, divert, isolate, recycle, reuse or otherwise manage storm water in a manner that reduces the level of significant materials in the storm water and provides compliance with the Water Quality Standards as identified under Part I.A.5.g.

d. Keeping Plans Current

1) The permittee shall review the SWPPP annually after it is developed and maintain written summaries of the reviews. Based on the review, the permittee shall amend the SWPPP as needed to ensure continued compliance with the terms and conditions of this permit.

2) The SWPPP developed under the conditions of a previous permit shall be amended as necessary to ensure compliance with this permit.

3) The SWPPP shall be updated or amended whenever changes or spills at the facility increase or have the potential to increase the exposure of significant materials to storm water, or when the SWPPP is determined by the permittee or the Department to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. Updates based on increased activity or spills at the facility shall include a description of how the permittee intends to control any new sources of significant materials or respond to and prevent spills in accordance with the requirements of Parts I.A.5.a., I.A.5.b. and I.A.5.c.

4) The Department or authorized representative may notify the permittee at any time that the SWPPP does not meet minimum requirements. Such notification shall identify why the SWPPP does not meet minimum requirements. The permittee shall make the required changes to the SWPPP within 30 days after such notification from the Department or authorized representative, and shall submit to the Department a written certification that the requested changes have been made.

5) Amendments and updates shall be signed and retained with the SWPPP on site pursuant to Part I.A.5.e.

e. Signature and SWPPP Review

1) The SWPPP shall be signed by the storm water certified operator and by either the permittee or an authorized representative in accordance with Part I.A.5.i. The SWPPP shall be retained on-site at the facility which generates the storm water discharge.

2) The permittee shall make plans, reports, log books, storm water discharge sampling data (if collected), and supporting documents available upon request to the Department.

f. Record Keeping

The permittee shall maintain records of all SWPPP related inspection and maintenance activities. Records shall also be kept describing incidents such as spills or other discharges that can affect the quality of storm water runoff. All such records shall be retained for three (3) years.

g. Water Quality Standards

At the time of discharge, there shall be no violation of the Water Quality Standards in the receiving waters as a result of the storm water discharge. This requirement includes, but is not limited to, the following conditions:

PART I

Section A. Limitations And Monitoring Requirements

1) In accordance with Rule 323.1050 of the Water Quality Standards, the receiving waters shall not have any of the following unnatural physical properties as a result of this discharge in quantities which are or may become injurious to any designated use: unnatural turbidity, color, oil film, floating solids, foams, settleable solids, suspended solids, or deposits.

2) Any unusual characteristics of the discharge (i.e., unnatural turbidity, color, oil film, floating solids, foams, settleable solids, suspended solids, or deposits) shall be reported within 24 hours to the Department followed by a written report within five (5) days detailing the findings of the investigation and the steps taken to correct the condition.

3) Any pollutant for which a level of control is specified to meet a Total Maximum Daily Load (TMDL) established by the Department shall be controlled at the facility so that its discharge is reduced by the amount specified in the waste load allocation of the TMDL. Any reduction achieved through implementation of the non-structural controls or structural controls in accordance with Parts I.A.5.b. or I.A.5.c. shall count toward compliance with the TMDL.

h. Certified Operator Update
If the certified operator is changed or an additional certified operator is added, the permittee shall provide the name and certification number of the new certified operator to the Department. The new operator shall review and sign the SWPPP.

i. Signatory Requirements
All applications, reports or information submitted to the Department shall be signed and certified in accordance with 40 CFR 122.22.

j. Prohibition of Non-Storm Water Discharges
Discharges of material other than storm water shall be in compliance with an NPDES permit (other than this permit) issued for the discharge. Storm water shall be defined to include all of the following non-storm water discharges provided pollution prevention controls for the non-storm water component are identified in the SWPPP: discharges from fire hydrant flushing, potable water sources including water line flushing, fire system test water, irrigation drainage, lawn watering, routine building wash down which does not use detergents or other compounds, pavement wash waters where contamination by toxic or hazardous materials have not occurred (unless all contamination by toxic or hazardous materials have been removed) and where detergents are not used, air conditioning condensate, springs, uncontaminated groundwater, and foundation or footing drains where flows are not contaminated with process materials such as solvents. Discharges from fire fighting activities are authorized by this permit, but are exempted from the requirement to be identified in the SWPPP.

6. Expiration and Reissuance

If the permittee wishes to continue a discharge authorized under this permit beyond the permit's expiration date, the permittee shall submit a written request to the Department on or before October 1, 2010. A person holding a valid certificate of coverage under an expired general permit shall continue to be subject to the terms and conditions of the expired permit until the permit is terminated, revoked, or reissued.

If this permit is modified or reissued, the permittee shall: a) request coverage under the modified or reissued permit, b) apply for an individual NPDES permit, or c) request termination of discharge authorization. Lacking an adequate response, the permittee's authorization to discharge shall expire on the effective date of the reissued or modified permit.

If this permit is terminated or revoked, all authorizations to discharge under the permit shall expire on the date of termination or revocation.

PART I

Section A. Limitations And Monitoring Requirements

7. Termination of General Permit Coverage

If all storm water discharges associated with industrial activity that are authorized by a certificate of coverage issued under this permit are eliminated, the permittee may submit a request to the Department to terminate the certificate of coverage.

For a facility where industrial activity has ceased and no significant materials remain or are exposed to storm water the permittee may request termination of the certificate of coverage.

8. Requirement to Obtain Individual Permit

The Department may require any person who is authorized to discharge by a certificate of coverage issued under this permit, to apply for and obtain an individual NPDES permit if any of the following circumstances apply:

a. the discharge is a significant contributor to pollution, or contains materials or constituents which require limiting to protect the receiving waters in accordance with applicable water quality standards, as determined by the Department on a case-by-case basis;

b. the discharger is not complying or has not complied with the conditions of the permit or schedules included in a certificate of coverage;

c. a change has occurred in the availability of demonstrated technology or practices for the control or abatement of waste applicable to the point source discharge;

d. effluent standards or limitations are promulgated for point source discharges subject to this permit; and

e. the Department determines that the criteria by which the certificate of coverage was issued under this permit no longer apply.

Any person may request the Department to take action pursuant to the provisions of Rule 2191 (Rule 323.2191 of the Michigan Administrative Code).

PART II

Section A. Definitions

This list of definitions may include terms not applicable to this permit.

Bioaccumulative Chemical of Concern (BCC) means a chemical which, upon entering the surface waters, by itself or as its toxic transformation product, accumulates in aquatic organisms by a human health bioaccumulation factor of more than 1000 after considering metabolism and other physiochemical properties that might enhance or inhibit bioaccumulation. The human health bioaccumulation factor shall be derived according to R 323.1057(5). Chemicals with half-lives of less than 8 weeks in the water column, sediment, and biota are not BCCs. The minimum bioaccumulation concentration factor (BAF) information needed to define an organic chemical as a BCC is either a field-measured BAF or a BAF derived using the biota-sediment accumulation factor (BSAF) methodology. The minimum BAF information needed to define an inorganic chemical as a BCC, including an organometal, is either a field-measured BAF or a laboratory-measured bioconcentration factor (BCF). The BCCs to which these rules apply are identified in Table 5 of R 323.1057 of the Water Quality Standards.

Certificate of Coverage means a document, issued by the Department, which authorizes a discharge under this permit.

Department means the Michigan Department of Environmental Quality.

Detection Level means the lowest concentration or amount of the target analyte that can be determined to be different from zero by a single measurement at a stated level of probability.

Grab sample is a single sample taken at neither a set time nor flow.

Individual Permit means a site-specific NPDES permit.

Inlet means a catch basin, roof drain, conduit, drain tile, retention pond riser pipe, sump pump, or other point where storm water or wastewater enters into a closed conveyance system prior to discharge off site or into waters of the state.

Interference is a discharge which, alone or in conjunction with a discharge or discharges from other sources, both:
1) inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
2) therefore, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or, of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent state or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including state regulations contained in any state sludge management plan prepared pursuant to Subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act. [This definition does not apply to sample matrix interference.]

Maximum Acceptable Toxicant Concentration (MATC) means the concentration obtained by calculating the geometric mean of the lower and upper chronic limits from a chronic test. A lower chronic limit is the highest tested concentration that did not cause the occurrence of a specific adverse effect. An upper chronic limit is the lowest tested concentration which did cause the occurrence of a specific adverse effect and above which all tested concentrations caused such an occurrence.

National Pretreatment Standards are the regulations promulgated by or to be promulgated by the Federal Environmental Protection Agency pursuant to Section 307(b) and (c) of the Federal Act. The standards establish nationwide limits for specific industrial categories for discharge to a POTW.

New Facility means a facility located on a newly-developed or redeveloped site which is ready to begin industrial operations on or after the effective date of this permit.

Noncontact Cooling Water is water used for cooling which does not come into direct contact with any raw material, intermediate product, by-product, waste product or finished product.

Pretreatment is reducing the amount of pollutants, eliminating pollutants, or altering the nature of pollutant properties to a less harmful state prior to discharge into a public sewer. The reduction or alteration can be by physical, chemical, or biological processes, process changes, or by other means. Dilution is not considered pretreatment unless expressly authorized by an applicable National Pretreatment Standard for a particular industrial category.

PART II

Section A. Definitions

Point Source Discharge means a discharge from any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container or rolling stock. Changing the surface of land or establishing grading patterns on land will result in a point source where the runoff from the site is ultimately discharged to waters of the state.

Polluting Materials means oil and any material, in solid or liquid form, identified as polluting material under the Part 5 Rules (Rules 324.2001 through 324.2009 of the Michigan Administrative Code).

POTW is a publicly owned treatment works.

Quantification Level means the measurement of the concentration of a contaminant obtained by using a specified laboratory procedure calculated at a specified concentration above the 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.

Regional Administrator is the Region 5 Administrator, U.S. EPA, located at R-19J, 77 W. Jackson Blvd., Chicago, Illinois 60604.

Secondary Containment Structure means a unit, other than the primary container in which significant materials are packaged or held, which is required by State or Federal law to prevent the escape of significant materials by gravity into sewers, drains, or otherwise directly or indirectly into any sewer system or to the surface or ground waters of this state.

Significant Contributor to Pollution means a storm water discharge from a facility specifically designated by the Department or Regional Administrator to need an NPDES permit in accordance with Section 402(p)(2)(E) of the Federal Act or Rule 323.2109(d) of the Michigan Administrative Code.

Significant Materials means any material which could degrade or impair water quality, including but not limited to: raw materials; fuels; solvents, detergents, and plastic pellets; finished materials such as metallic products; hazardous substances designated under section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (See 40 CFR 372.65); any chemical the facility is required to report pursuant to section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA); polluting materials (as defined above); Hazardous Wastes as defined in Part 111 of the Michigan Act; fertilizers; pesticides; and waste products such as ashes, slag, sludge, and plant and animal wastes that have the potential to be released with storm water discharges.

Significant Spills and Significant Leaks means any release of a polluting material reportable under the Part 5 Rules of the Michigan Administrative Code.

Site of Environmental Contamination means land on Michigan's List of Sites of Environmental Contamination pursuant to Part 201 (Environmental Response) of the Michigan Act.

Storm Water means storm water runoff, snow melt runoff, surface runoff and drainage, and non-storm water included under the conditions of Part I.A.5.j.

Total Maximum Daily Load or **TMDL** means the amount of pollutant load a water body such as a lake or stream can assimilate and still meet Water Quality Standards.

Water Quality Standards means the Part 4 Water Quality Standards developed under Part 31 of Act No. 451 of the Public Acts of 1994, as amended, being Rules 323.1041 through 323.1117 of the Michigan Administrative Code.

PART II

Section B. Monitoring Procedures

1. Representative Samples

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

2. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulations promulgated pursuant to Section 304(h) of the Federal Act (40 CFR Part 136 - Guidelines Establishing Test Procedures for the Analysis of Pollutants), unless specified otherwise in this permit. Requests to use test procedures not promulgated under 40 CFR Part 136 for pollutant monitoring required by this permit shall be made in accordance with the Alternate Test Procedures regulations specified in 40 CFR 136.4. These requests shall be submitted to the Chief of the Permits Section, Water Bureau, Michigan Department of Environmental Quality, P.O. Box 30273, Lansing, Michigan, 48909-7773. The permittee may use such procedures upon approval.

The permittee shall periodically calibrate and perform maintenance procedures on all analytical instrumentation at intervals to ensure accuracy of measurements. The calibration and maintenance shall be performed as part of the permittee's laboratory Quality Control/Quality Assurance program.

3. Instrumentation

The permittee shall periodically calibrate and perform maintenance procedures on all monitoring instrumentation at intervals to ensure accuracy of measurements.

4. Recording Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information: 1) the exact place, date, and time of measurement or sampling; 2) the person(s) who performed the measurement or sample collection; 3) the dates the analyses were performed; 4) the person(s) who performed the analyses; 5) the analytical techniques or methods used; 6) the date of and person responsible for equipment calibration; and 7) the results of all required analyses.

5. 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 recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Regional Administrator or the Department.

PART II

Section C. Reporting Requirements

1. Noncompliance Notification

Compliance with all applicable requirements set forth in the Federal Act, Parts 31 and 41 of the Michigan Act, and related regulations and rules is required. All instances of noncompliance shall be reported as follows:

a. 24-hour reporting - Any noncompliance which may endanger health or the environment (including maximum daily concentration discharge limitation exceedances) shall be reported, verbally, within 24 hours from the time the permittee becomes aware of the noncompliance. A written submission shall also be provided within five (5) days.

b. other reporting - The permittee shall report, in writing, all other instances of noncompliance not described in a. above at the time monitoring reports are submitted; or, in the case of retained self-monitoring, within five (5) days from the time the permittee becomes aware of the noncompliance.

Written reporting shall include: 1) a description of the discharge and cause of noncompliance; and 2) the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and the steps taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

2. Spill Notification

The permittee shall immediately report any release of any polluting material which occurs to the surface waters or groundwaters of the state, unless the permittee has determined that the release is not in excess of the threshold reporting quantities specified in the Part 5 Rules (Rules 324.2001 through 324.2009 of the Michigan Administrative Code), by calling the Department at the number indicated in the certificate of coverage, or if the notice is provided after regular working hours call the Department's 24-hour Pollution Emergency Alerting System telephone number, 1-800-292-4706 (calls from out-of-state dial 1-517-373-7660).

Within ten (10) days of the release, the permittee shall submit to the Department a full written explanation as to the cause of the release, the discovery of the release, response (clean-up and/or recovery) measures taken, and preventative measures taken or a schedule for completion of measures to be taken to prevent reoccurrence of similar releases.

3. Upset Noncompliance Notification

If a process "upset" (defined as 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) has occurred, the permittee who wishes to establish the affirmative defense of upset, shall notify the Department by telephone within 24-hours of becoming aware of such conditions; and within five (5) days, provide in writing, the following information:

a. that an upset occurred and that the permittee can identify the specific cause(s) of the upset;

b. that the permitted wastewater treatment facility was, at the time, being properly operated; and

c. that the permittee has specified and taken action on all responsible steps to minimize or correct any adverse impact in the environment resulting from noncompliance with this permit.

In any enforcement proceedings, the permittee, seeking to establish the occurrence of an upset, has the burden of proof.

PART II

Section C. Reporting Requirements

4. Bypass Prohibition and Notification

a. Bypass Prohibition - Bypass is prohibited unless:

1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

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 backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass; and

3) The permittee submitted notices as required under Part II.C.4.b. or Part II.C.4.c. below.

b. Notice of Anticipated Bypass - If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least ten (10) days before the date of the bypass, and provide information about the anticipated bypass as required by the Department. The Department may approve an anticipated bypass, after considering its adverse effects, if it will meet the three conditions listed in Part II.C.4.a. above.

c. Notice of Unanticipated Bypass - The permittee shall submit notice to the Department of an unanticipated bypass by telephone at the number identified in a certificate of coverage issued under this permit (if the notice is provided after regular working hours, use the following number: 1-800-292-4706) as soon as possible, but no later than 24 hours from the time the permittee becomes aware of the circumstances.

d. Written Report of Bypass - A written submission shall be provided within five (5) working days of commencing any bypass to the Department, and at additional times as directed by the Department. The written submission shall contain a description of the bypass and its cause; the period of bypass, including exact dates and times, and if the bypass has not been corrected, the anticipated time it is expected to continue; steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass; and other information as required by the Department.

e. Bypass Not Exceeding Limitations - The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of parts II.C.4.a., 4.b., 4.c., and 4.d., above.

f. Definitions

1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

2) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes 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.

5. Compliance Dates Notification

Within 14 days of every compliance date specified in this permit, the permittee shall submit a written notification to the Department indicating whether or not the particular requirement was accomplished. If the requirement was not accomplished, the notification shall include an explanation of the failure to accomplish the requirement, actions taken or planned by the permittee to correct the situation, and an estimate of when the requirement will be accomplished. If a written report is required to be submitted by a specified date and the permittee accomplishes this, a separate written notification is not required.

PART II

Section C. Reporting Requirements

6. Changes in Facility Operations

Any anticipated action or activity, including but not limited to facility expansion, production increases, or process modification, which will result in new or increased loadings of pollutants to the receiving waters must be reported to the Department by a) submission of an increased use request (application) and all information required under Rule 323.1098 (Antidegradation) of the Water Quality Standards or b) by notice if the following conditions are met: 1) the action or activity will not result in a change in the types of wastewater discharged or result in a greater quantity of wastewater than currently authorized by this permit; 2) the action or activity will not result in violations of the effluent limitations specified in this permit; and 3) the action or activity is not prohibited by the requirements of Part II.C.7. Following such notice, the permit may be modified according to applicable laws and rules to specify and limit any pollutant not previously limited.

7. Bioaccumulative Chemicals of Concern (BCC)

Consistent with the requirements of Rules 323.1098 and 323.1215 of the Michigan Administrative Code, the permittee is prohibited from undertaking any action that would result in a lowering of water quality from an increased loading of a BCC unless an increased use request and antidegradation demonstration have been submitted and approved by the Department.

8. Transfer of Ownership or Control

In the event of any change in control or ownership of facilities from which the authorized discharge emanates, the permittee shall submit to the Department 30 days prior to the actual transfer of ownership or control a written agreement between the current permittee and the new permittee containing: 1) the legal name and address of the new owner; 2) a specific date for the effective transfer of permit responsibility, coverage and liability; and 3) a certification of the continuity of or any changes in operations, wastewater discharge, or wastewater treatment.

If the new permittee is proposing changes in operations, wastewater discharge, or wastewater treatment, the Department may propose modification of this permit in accordance with applicable laws and rules.

PART II

Section D. Management Responsibilities

1. Duty to Comply

All discharges authorized herein shall be consistent with the terms and conditions of this permit and the facility's certificate of coverage (COC). The discharge of any pollutant identified in this permit and/or the facility's COC more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.

It is the duty of the permittee to comply with all the terms and conditions of this permit and the facility's COC. Any noncompliance with the Effluent Limitations, Special Conditions, or terms of this permit or the facility's COC constitutes a violation of the Michigan Act and/or the Federal Act and constitutes grounds for enforcement action; for COC termination, revocation and reissuance, or modification; or denial of an application for permit or COC renewal.

2. Operator Certification

The permittee shall have the waste treatment facilities under direct supervision of an operator certified at the appropriate level for the facility certification by the Department, as required by Sections 3110 and 4104 of the Michigan Act.

3. Facilities Operation

The permittee shall, at all times, properly operate and maintain all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes adequate laboratory controls and appropriate quality assurance procedures.

4. Power Failures

In order to maintain compliance with the effluent limitations of this permit and prevent unauthorized discharges, the permittee shall either:

a. provide an alternative power source sufficient to operate facilities utilized by the permittee to maintain compliance with the effluent limitations and conditions of this permit; or

b. upon the reduction, loss, or failure of one or more of the primary sources of power to facilities utilized by the permittee to maintain compliance with the effluent limitations and conditions of this permit, the permittee shall halt, reduce or otherwise control production and/or all discharge in order to maintain compliance with the effluent limitations and conditions of this permit.

5. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the surface waters or groundwaters of the state resulting from noncompliance with any effluent limitation specified in this permit including, but not limited to, such accelerated or additional monitoring as necessary to determine the nature and impact of the discharge in noncompliance.

6. Containment Facilities

The permittee shall provide facilities for containment of any accidental losses of concentrated solutions, acids, alkalies, salts, oils, or other polluting materials in accordance with the requirements of the Part 5 Rules (Rules 324.2001 through 324.2009 of the Michigan Administrative Code). For Publicly Owned Treatment Works (POTW), these facilities shall be approved under Part 41 of the Michigan Act. Other state and federal laws and rules that require secondary containment include but are not limited to the following for flammable and combustible liquids: 1974 P.A. 154 (Michigan), as amended, Part 75 Flammable and Combustible Liquid Rules along with Federal Safety Standard 29 CFR 1910.106, 1941 P.A. 207 (Michigan), as amended, and Michigan Storage and Handling of Flammable And Combustible Liquids (FL/CL) rules; for highly hazardous chemicals: 1974 P.A. 154, as amended, and 29 CFR 1910.119; for hazardous waste: Michigan Act, Part 111 and rules, and the Federal Resource Conservation and Recovery Act (RCRA) 40 CFR 260 to 299; and for oil: 40 CFR 112.

PART II

Section D. Management Responsibilities

7. Waste Treatment Residues

Residuals (i.e. solids, sludges, biosolids, filter backwash, scrubber water, ash, grit or other pollutants) removed from or resulting from treatment or control of wastewaters, shall be disposed of in an environmentally compatible manner and according to applicable laws and rules. These laws may include, but are not limited to, the Michigan Act, Part 31 for protection of water resources, Part 55 for air pollution control, Part 111 for hazardous waste management, Part 115 for solid waste management, Part 121 for liquid industrial wastes, Part 301 for protection of inland lakes and streams, and Part 303 for wetlands protection. Such disposal shall not result in any unlawful pollution of the air, surface waters or groundwaters of the state.

8. Treatment System Closure

In the event that discharges from a treatment system are planned to be eliminated, the permittee shall submit a closure plan to the Department for approval. The closure plan shall include characterization of any wastewater and residuals which will remain on-site after the discharges are eliminated, along with disposal methods, proposed schedule, and any other relevant information as required by the Department. Closure activities involving waste treatment residuals shall be consistent with Part II.D.7. of this permit.

The permittee shall implement the closure activities in accordance with the approved plan. Any wastewater or residual disposal inconsistent with the approved plan shall be considered a violation of this permit. After proper closure of the treatment system, this permit may be terminated.

9. Right of Entry

The permittee shall allow the Department, any agent appointed by the Department or the Regional Administrator, upon the presentation of credentials:

a. to enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and

b. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect process facilities, treatment works, monitoring methods and equipment regulated or required under this permit; and to sample any discharge of pollutants.

10. Availability of Reports

Except for data determined to be confidential under Section 308 of the Federal Act and Rule 2128 (Rule 323.2128 of the Michigan Administrative Code), all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department and the Regional Administrator. As required by the Federal Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Act and Sections 3112, 3115, 4106 and 4110 of the Michigan Act.

PART II

Section E. Activities Not Authorized by This Permit

1. Discharges Not Authorized by This Permit

This permit does not authorize the following storm water discharges:

a. Storm water discharges associated with industrial activity that are permitted by an existing NPDES individual permit or a different general permit;

b. Storm water discharges associated with construction activities as identified under 40 CFR 122.26(b)(14)(x). Storm water discharges associated with industrial activity that are mixed with storm water discharges associated with construction activities may be authorized by this permit if the discharge from the construction activity is in compliance with a national permit for storm water discharge from a construction activity (Rule 323.2190 of the Michigan Administrative Code);

c. Storm water discharges that have been determined by the Department to be contributing to unlawful pollution that cannot be adequately guarded against under the requirements of this permit. Such a determination constitutes grounds for revocation of a certificate of coverage issued under this permit;

d. Storm water discharges associated with industrial activity from inactive mining, inactive landfill, or inactive oil and gas operations occurring on federal lands where an operator cannot be identified;

e. Storm water discharges for which federal effluent limitation guidelines exist. The following industrial categories have storm water effluent limitation guidelines in the Code of Federal Regulations: cement manufacturing (40 CFR 411); feedlots (40 CFR 412); fertilizer manufacturing (40 CFR 418); petroleum refining (40 CFR 419); phosphate manufacturing (40 CFR 422); steam electric (40 CFR 423); coal mining (40 CFR 434); mineral mining and processing (40 CFR 436); ore mining and dressing (40 CFR 440); and asphalt emulsion (40 CFR 443 Subpart A);

f. Storm water discharges to groundwaters; and

g. Storm water from a new facility discharging to wild or wilderness rivers or water bodies within the boundaries of national lakeshores or national parks, which are designated "outstanding state resource waters" pursuant to Michigan Water Quality Standards.

2. Civil and Criminal Liability

Except as provided in permit conditions on "Bypass" (Part II.C.4. pursuant to 40 CFR 122.41(m)), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance, whether or not such noncompliance is due to factors beyond the permittee's control, such as accidents, equipment breakdowns, or labor disputes.

3. Oil and Hazardous Substance Liability

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 to which the permittee may be subject under Section 311 of the Federal Act except as are exempted by federal regulations.

4. 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 Federal Act.

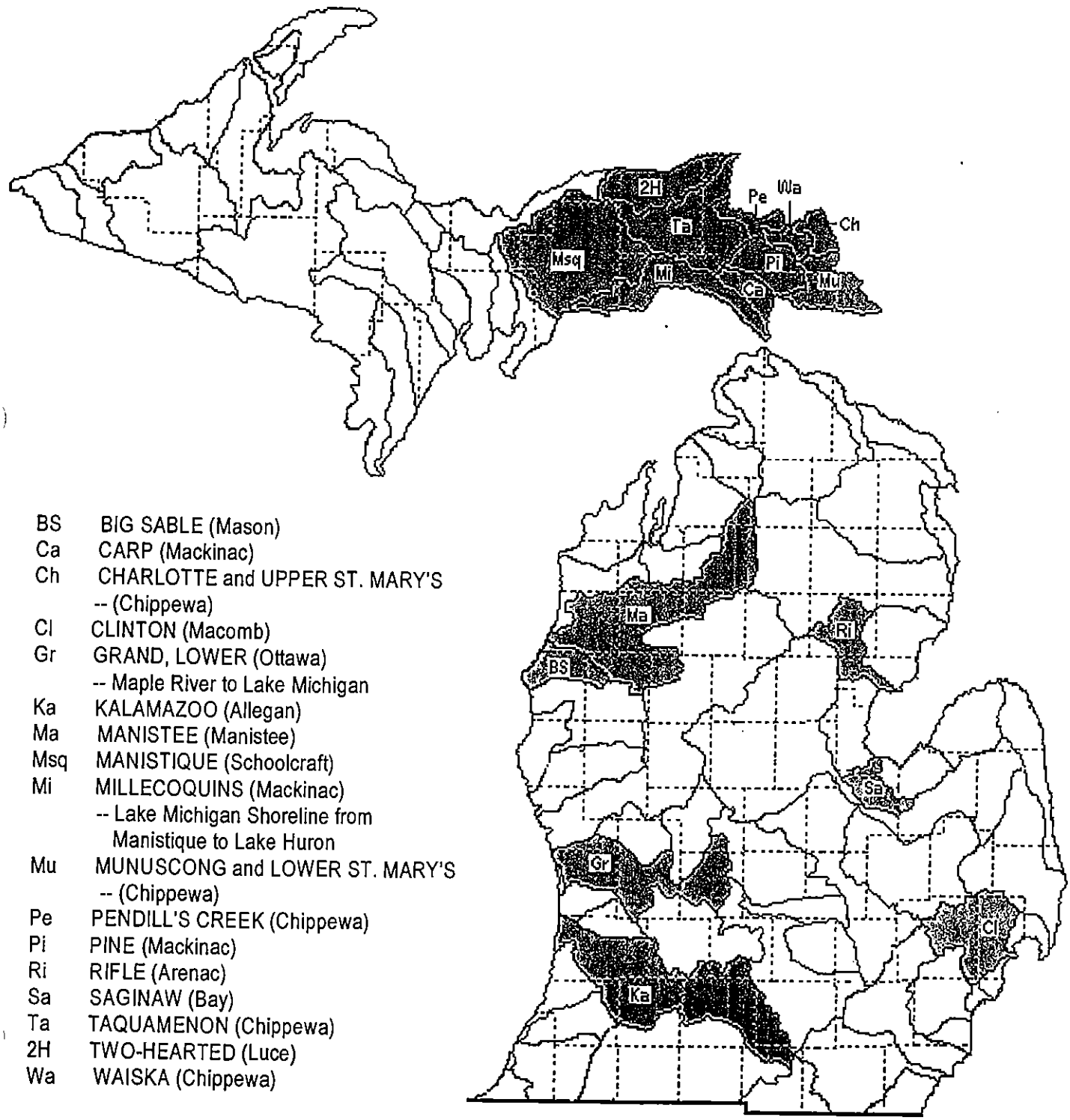
5. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize violation of any federal, state or local laws or regulations, nor does it obviate the necessity of obtaining such permits or approvals as may be required by law.

PART II

Section F. Cycle-Year 1 Watersheds

Cycle-year 1 watersheds are shaded in the map below, and named according to the principal water body in the watershed. On the key below, the name of the principal water body is followed by the name of the county (in parentheses) where the most downstream segment of the principal water body is located.



BS	BIG SABLE (Mason)
Ca	CARP (Mackinac)
Ch	CHARLOTTE and UPPER ST. MARY'S -- (Chippewa)
Cl	CLINTON (Macomb)
Gr	GRAND, LOWER (Ottawa) -- Maple River to Lake Michigan
Ka	KALAMAZOO (Allegan)
Ma	MANISTEE (Manistee)
Msq	MANISTIQUE (Schoolcraft)
Mi	MILLECOQUINS (Mackinac) -- Lake Michigan Shoreline from Manistique to Lake Huron
Mu	MUNUSCONG and LOWER ST. MARY'S -- (Chippewa)
Pe	PENDILL'S CREEK (Chippewa)
Pi	PINE (Mackinac)
Ri	RIFLE (Arenac)
Sa	SAGINAW (Bay)
Ta	TAQUAMENON (Chippewa)
2H	TWO-HEARTED (Luce)
Wa	WAISKA (Chippewa)

APPENDIX A

Samples shall be collected, preserved, handled, and analyzed using EPA approved methods (see 40 CFR part 136) and quantification levels. Alternative methods shall be approved by the Department. Some desired quantification levels are listed below.

Parameter	Typical Quantification Level (µg/l)
Total Antimony	1
Total Arsenic	1
Total Beryllium	1
Total Cadmium	0.2
Hexavalent Chromium	5
Total Chromium	10
Total Copper	1
Cyanide, Available	2
Total Cyanide	5
Total Lead	1
Total Mercury	0.0005
Total Nickel	5
Total Selenium	1
Total Silver	0.5
Total Thallium	1
Total Zinc	10

Appendix A-2

NPDES Permit

PERMIT NO. MI0059042

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

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 "Federal Act"), Michigan Act 451, Public Acts of 1994, as amended (the "Michigan Act"), Parts 31 and 41, and Michigan Executive Order 2011-1,

Revitalizing Auto Communities Environmental Response (RACER) Trust

2930 Ecorse Road
Ypsilanti, Michigan 48198

is authorized to discharge from the **RACER-Saginaw Nodular Industrial Land** located at

2100 Veterans Memorial Parkway
Saginaw, Michigan 48601

designated as **RACER-Saginaw Nodular Indust**

to the receiving waters named the Saginaw River and an unnamed tributary to the Saginaw River in accordance with effluent limitations, monitoring requirements, and other conditions set forth in this permit.

This permit is based on a complete application submitted on April 4, 2012, as amended through May 11, 2012.

This permit for a new use takes immediate effect on the date of issuance. The provisions of this permit are severable. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term in accordance with applicable laws and rules.

This permit and the authorization to discharge shall expire at midnight, **October 1, 2016.** In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit an application which contains such information, forms, and fees as are required by the Department of Environmental Quality (Department) by **April 4, 2016.**

Issued August 24, 2012

Philip Argiroff, Chief
Permits Section
Water Resources Division

PERMIT FEE REQUIREMENTS

In accordance with Section 324.3120 of the Michigan Act, the permittee shall make payment of an annual permit fee to the Department for each October 1 the permit is in effect regardless of occurrence of discharge. The permittee shall submit the fee in response to the Department's annual notice. The fee shall be postmarked by January 15 for notices mailed by December 1. The fee is due no later than 45 days after receiving the notice for notices mailed after December 1.

Annual Permit Fee Classification: Industrial-Commercial Minor, high-flow (Individual Permit)

In accordance with Section 324.3118 of the Michigan Act, the permittee shall make payment of an annual storm water fee to the Department for each January 1 the permit is in effect regardless of occurrence of discharge. The permittee shall submit the fee in response to the Department's annual notice. The fee shall be postmarked by March 15 for notices mailed by February 1. The fee is due no later than 45 days after receiving the notice for notices mailed after February 1.

ANTIDEGRADATION

The Department has determined that the permittee's Antidegradation Demonstration/Exemption, based on information required by Subrule (4) of R323.1098, shows that lowering of water quality is necessary to support the identified important social and economic development in the area. This determination is solely for purposes of satisfying state water quality regulations and is not intended to supplant local requirements, including land use or zoning laws. It is not, and should not be construed as, a finding by the Department that the proposed development meets local requirements or ordinances.

CONTACT INFORMATION

Unless specified otherwise, all contact with the Department required by this permit shall be made to the Saginaw Bay District Supervisor of the Water Resources Division. The Saginaw Bay District Office is located at 401 Ketchum Street, Suite B, Bay City, Michigan 48708-5430, Telephone: 989-894-6200, Fax: 989-891-9237.

CONTESTED CASE INFORMATION

Any person to whom this permit is not acceptable may file a sworn petition with the Office of Regulatory Reinvention within the Michigan Department of Licensing and Regulatory Affairs, setting forth the conditions of the permit which are being challenged and specifying the grounds for the challenge. The Department of Licensing and Regulatory Affairs may reject any petition filed more than 60 days after issuance as being untimely.

PART I

Section A. Limitations and Monitoring Requirements

1. Final Effluent Limitations, Monitoring Point 021A

During the period beginning on the effective date of this permit and lasting until the expiration date of this permit, the permittee is authorized to discharge a maximum of 1.63 MGD of previously accumulated wastewater from a former foundry process combined with storm water from Monitoring Point 021A through Outfall 021. Outfall 021 discharges to an unnamed tributary to the Saginaw River. Such discharge shall be limited and monitored by the permittee as specified below.

Parameter	Maximum Limits for Quantity or Loading			Maximum Limits for Quality or Concentration			Monitoring Frequency	Sample Type
	Monthly	Daily	Units	Monthly	Daily	Units		
Flow	(report)	(report)	MGD	---	---	---	Daily*	Report Total Daily Flow
Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)								
May – September	---	---	---	---	7.2	mg/l	Daily*	Grab
October – November	---	---	---	---	13	mg/l	Daily*	Grab
December – March	---	---	---	---	28	mg/l	Daily*	Grab
April	---	---	---	---	39	mg/l	Daily*	Grab
Ammonia Nitrogen (as N)								
May – September	---	---	---	---	2.5	mg/l	Daily*	Grab
October – November	---	---	---	---	5.8	mg/l	Daily*	Grab
December – March	---	---	---	---	10	mg/l	Daily*	Grab
April	---	---	---	---	(report)	mg/l	Daily*	Grab
Total Suspended Solids	---	---	---	35	70	mg/l	See Part I.A.1.c.	3-Portion Composite
Turbidity (See Part I.A.1.d.)	---	---	---	80	160	NTU	See Part I.A.1.c.	Grab
Outfall Observation	(report)	---	yes/no	---	---	---	Daily*	Visual

Parameter	Minimum Daily	Maximum Daily			
pH	6.5	9.0	S.U.	Daily*	Grab
Dissolved Oxygen	6.0	---	mg/l	Daily*	Grab

* During discharge

a. Narrative Standard
The receiving water shall contain no turbidity, color, oil films, floating solids, foams, settleable solids, or deposits as a result of this discharge in unnatural quantities which are or may become injurious to any designated use.

b. Monitoring Location
Samples, measurements, and observations taken in compliance with the monitoring requirements above shall be taken prior to discharge to the unnamed tributary to the Saginaw River.

PART I

Section A. Limitations and Monitoring Requirements

c. Frequency of Analysis for Turbidity and Total Suspended Solids

The permittee may determine compliance for the total suspended solids effluent limitations either by direct measurement or by a combination of direct and indirect methods. The method that is used to measure compliance will determine the frequency of analysis required for each parameter, as described below.

1) Direct Measurement

If the permittee only monitors total suspended solids by direct measurement, the monitoring frequency shall be daily during discharge, unless otherwise specified in accordance with Part I.A.3. of this permit. Turbidity requirements will **not** be in effect.

2) Combination of Direct and Indirect Measurement

If the permittee monitors total suspended solids using a combination of direct and indirect methods, the permittee shall monitor turbidity as an indirect, partial substitute for monitoring total suspended solids. The monitoring frequency shall be daily during discharge for turbidity and weekly during discharge for total suspended solids, unless otherwise specified in accordance with Part I.A.3. of this permit. Any exceedance of the turbidity limitations shall be considered an exceedance of the total suspended solids limitations.

d. Monitoring Requirements for Turbidity

The monitoring requirements for turbidity are in effect only if the permittee uses turbidity to indirectly determine compliance for total suspended solids as described in Part I.A.1.c. If the permittee does not indirectly determine compliance with the monitoring requirements, the permittee is not required to monitor for turbidity.

Monitoring for turbidity shall be conducted daily during periods of discharge, shall be representative of the discharge, and shall be analyzed using EPA approved methods. A minimum of four turbidity samples are required daily. All turbidity samples shall be collected at equal intervals over the discharge period for that day. An average of the results from all of the turbidity monitoring conducted during the day shall be used to determine compliance with the daily maximum effluent limitation. All daily averages for the month shall be averaged to determine compliance with the monthly average effluent limitation.

The permittee may choose to demonstrate that an alternate site-specific turbidity effluent limitation is appropriate. Such request and supporting documentation shall be submitted to the Department. Supporting documentation shall include a calculation of the correlation between turbidity and total suspended solids. If an alternate site-specific turbidity effluent limitation is approved, the permit shall be modified in accordance with applicable laws and rules to incorporate the alternate site-specific turbidity effluent limitation.

e. Outfall Observation

Any unusual characteristics of the discharge (i.e., unnatural turbidity, color, oil film, floating solids, foams, settleable solids, suspended solids, or deposits) shall be reported within 24 hours to the Department followed with a written report within five (5) days detailing the findings of the investigation and the steps taken to correct the condition.

f. Water Treatment Additives

This permit does not authorize the discharge of water additives without approval from the Department. Approval of water additives is authorized under separate correspondence. Water additives include any material that is added to water used at the facility or to a wastewater generated by the facility to condition or treat the water. In the event a permittee proposes to discharge water additives, including an increased discharge concentration of a previously approved water additive, the permittee shall submit a request to the Department for approval. See Part I.A.4. for information on requesting water treatment additive use.

PART I

Section A. Limitations and Monitoring Requirements

2. Final Effluent Limitations, Monitoring Point 022A

During the period beginning on the effective date of this permit and lasting until the expiration date of this permit, the permittee is authorized to discharge an unspecified amount of storm water from Monitoring Point 022A through Outfall 022. Outfall 022 discharges to the Saginaw River. Such discharge shall be limited and monitored by the permittee as specified below.

	Maximum Limits for Quantity or Loading			Maximum Limits for Quality or Concentration			Monitoring	Sample
Parameter	Monthly	Daily	Units	Monthly	Daily	Units	Frequency	Type
Flow	(report)	(report)	MGD	---	---	---	Daily*	Report Total Daily Flow
Total Suspended Solids	---	---	---	35	70	mg/l	see Part I.A.2.c.	3-Portion Composite
Turbidity (see Part I.A.2.d.)	---	---	---	80	160	NTU	see Part I.A.2.c.	Grab
Outfall Observation	(report)	---	yes/no	---	---	---	Daily*	Visual
				Minimum Daily	Maximum Daily			
pH	---	---	---	6.5	9.0	S.U.	Daily*	Grab

* During discharge

a. Narrative Standard
The receiving water shall contain no turbidity, color, oil films, floating solids, foams, settleable solids, or deposits as a result of this discharge in unnatural quantities which are or may become injurious to any designated use.

b. Monitoring Location
Samples, measurements, and observations taken in compliance with the monitoring requirements above shall be taken prior to discharge to the Saginaw River.

c. Frequency of Analysis for Turbidity and Total Suspended Solids
The permittee may determine compliance for the total suspended solids effluent limitations either by direct measurement or by a combination of direct and indirect methods. The method that is used to measure compliance will determine the frequency of analysis required for each parameter, as described below.

1) Direct Measurement

If the permittee only monitors total suspended solids by direct measurement, the monitoring frequency shall be daily during discharge, unless otherwise specified in accordance with Part I.A.3. of this permit. Turbidity requirements will **not** be in effect.

2) Combination of Direct and Indirect Measurement

If the permittee monitors total suspended solids using a combination of direct and indirect methods, the permittee shall monitor turbidity as an indirect, partial substitute for monitoring total suspended solids. The monitoring frequency shall be daily during discharge for turbidity and weekly during discharge for total suspended solids, unless otherwise specified in accordance with Part I.A.3. of this permit. Any exceedance of the turbidity limitations shall be considered an exceedance of the total suspended solids limitations.

PART I

Section A. Limitations and Monitoring Requirements

d. Monitoring Requirements for Turbidity
The monitoring requirements for turbidity are in effect only if the permittee uses turbidity to indirectly determine compliance for total suspended solids as described in Part I.A.2.c. If the permittee does not indirectly determine compliance with the monitoring requirements, the permittee is not required to monitor for turbidity.

Monitoring for turbidity shall be conducted daily during periods of discharge, shall be representative of the discharge, and shall be analyzed using EPA approved methods. A minimum of four turbidity samples are required daily. All turbidity samples shall be collected at equal intervals over the discharge period for that day. An average of the results from all of the turbidity monitoring conducted during the day shall be used to determine compliance with the daily maximum effluent limitation. All daily averages for the month shall be averaged to determine compliance with the monthly average effluent limitation.

The permittee may choose to demonstrate that an alternate site-specific turbidity effluent limitation is appropriate. Such request and supporting documentation shall be submitted to the Department. Supporting documentation shall include a calculation of the correlation between turbidity and total suspended solids. If an alternate site-specific turbidity effluent limitation is approved, the permit shall be modified in accordance with applicable laws and rules to incorporate the alternate site-specific turbidity effluent limitation.

e. Outfall Observation
Any unusual characteristics of the discharge (i.e., unnatural turbidity, color, oil film, floating solids, foams, settleable solids, suspended solids, or deposits) shall be reported within 24 hours to the Department followed with a written report within five (5) days detailing the findings of the investigation and the steps taken to correct the condition.

f. Water Treatment Additives
This permit does not authorize the discharge of water additives without approval from the Department. Approval of water additives is authorized under separate correspondence. Water additives include any material that is added to water used at the facility or to a wastewater generated by the facility to condition or treat the water. In the event a permittee proposes to discharge water additives, including an increased discharge concentration of a previously approved water additive, the permittee shall submit a request to the Department for approval. See Part I.A.4. for information on requesting water treatment additive use.

3. Monitoring Frequency Reduction

After the submittal of six months of data, the permittee may request, in writing, Department approval of a reduction in monitoring frequency. This request shall contain an explanation as to why the reduced monitoring is appropriate. A reduction will only be allowed if effluent concentrations are well below the discharge limitations or there is minimal variability in the effluent concentrations. Upon receipt of written approval and consistent with such approval, the permittee may reduce the monitoring frequency indicated in this permit. The monitoring frequency for every parameter shall not be reduced to less than weekly during discharge. The Department may revoke the approval for reduced monitoring at any time upon notification to the permittee.

PART I

Section A. Limitations and Monitoring Requirements

4. Request for Discharge of Water Treatment Additives

In the event a permittee proposes to discharge water additives, the permittee shall submit a request to discharge water additives to the Department for approval. Such requests shall be sent to the Permits Section, Water Resources Division, Department of Environmental Quality, P.O. Box 30458, Lansing, Michigan 48909, with a copy to the Department contact listed on the cover page of this permit. Instructions to submit a request electronically may be obtained via the Internet (http://www.michigan.gov/deqnpdes; then click on Applicable Rules and Regulations which is under the Information banner and then click on Water Treatment Additive Discharge Application Instructions). Written approval from the Department to discharge such additives at specified levels shall be obtained prior to discharge by the permittee. Additional monitoring and reporting may be required as a condition for the approval to discharge the additive.

A request to discharge water additives shall include all of the following water additive usage and discharge information:

a. Material Safety Data Sheet;

b. the proposed water additive discharge concentration with supporting calculations;

c. the discharge frequency (i.e., number of hours per day and number of days per year);

d. the monitoring point from which the product is to be discharged;

e. the type of removal treatment, if any, that the water additive receives prior to discharge;

f. product function (i.e. microbiocide, flocculant, etc.);

g. a 48-hour LC_{50} or EC_{50} for a North American freshwater planktonic crustacean (either *Ceriodaphnia sp., Daphnia sp., or Simocephalus sp.*); and

h. the results of a toxicity test for one other North American freshwater aquatic species (other than a planktonic crustacean) that meets a minimum requirement of Rule 323.1057(2) of the Water Quality Standards.

Prior to submitting the request, the permittee may contact the Permits Section by telephone at 517-241-1346 or via the Internet at the address given above to determine if the Department has the product toxicity data required by items g. and h. above. If the Department has the data, the permittee will not need to submit product toxicity data.

PART I

Section A. Limitations and Monitoring Requirements

5. Storm Water Pollution Prevention Plan

The permittee is authorized to discharge storm water associated with industrial activities as defined in 40 CFR 122.26(b)(14)(i-ix). These storm water discharges shall be controlled in accordance with the requirements of this special condition. The permittee has developed and implemented a Storm Water Pollution Prevention Plan (SWPPP). The permittee shall continue implementation of the SWPPP for maximum control of significant materials (as defined in Part II.A.) so that storm water discharges will not cause a violation of the Water Quality Standards. The SWPPP shall be routinely reviewed and updated in accordance with the requirements of this section.

Storm water discharges are a violation of this permit if:

The receiving water will contain unnatural turbidity, color, oil films, floating solids, foams, settleable solids, suspended solids, or deposits as a result of this discharge; or

The permittee has not implemented an acceptable SWPPP.

a. Source Identification
To identify potential sources of significant materials that can pollute storm water and subsequently be discharged from the facility, the SWPPP shall, at a minimum, include the following:

1) A site map identifying the following: buildings and other permanent structures; storage or disposal areas for significant materials; secondary containment structures and descriptions of what is contained in the primary containment structures; storm water discharge outfalls (numbered or otherwise labeled for reference); location of storm water and non-storm inlets (catch basins, roof drains, conduits, drain tiles, retention pond riser pipes, and sump pumps) (numbered or otherwise labeled for reference) contributing to each outfall; location of NPDES permitted discharges other than storm water; outlines of the drainage areas contributing to each outfall; structural runoff controls or storm water treatment facilities; areas of vegetation (with brief description such as lawn, old field, marsh, wooded, etc); areas of exposed and/or erodible soils and gravel lots; impervious surfaces (roofs, asphalt, concrete); name and location of receiving water(s); and areas of known or suspected impacts on surface waters as designated under Part 201 (Environmental Response) of the Michigan Act;

2) A list of all significant materials that could pollute storm water. For each material listed, the SWPPP shall include each of the following descriptions:

a) ways in which each type of significant material has been or has reasonable potential to become exposed to storm water (e.g., spillage during handling; leaks from pipes, pumps, and vessels; contact with storage piles, contaminated materials, or soils; waste handling and disposal; deposits from dust or overspray, etc.);

b) an evaluation of the reasonable potential for contribution of significant materials to runoff from at least the following areas or activities: loading, unloading, and other significant material handling operations; outdoor storage, including secondary containment structures; outdoor manufacturing or processing activities; significant dust or particulate generating processes; discharge from vents, stacks and air emission controls; on-site waste treatment, storage, and disposal practices; maintenance and cleaning of vehicles, machines and equipment; sites of exposed and/or erodible soil; Sites of Environmental Contamination listed under Part 201 (Environmental Response) of the Michigan Act; waste management units and areas of concern subject to corrective action under Part 111 (Hazardous Waste Management) or Part 115 (Solid Waste Management) of the Michigan Act; areas of significant material residues; areas where animals congregate (wild or domestic) and deposit wastes; and other areas where storm water may contact significant materials;

PART I

Section A. Limitations and Monitoring Requirements

c) identification of the outfall(s) and the inlet(s) contributing the significant material to each outfall through which the significant material may be discharged if released;

d) a listing of significant spills and significant leaks of polluting materials that occurred at areas that are exposed to precipitation or that otherwise discharge to a point source at the facility. The listing shall include spills that occurred over the three (3) years prior to the completion of the SWPPP or latest update of the SWPPP; the date, volume and exact location of release; and the action taken to clean up the material and/or prevent exposure to storm water runoff or contamination of surface waters of the state. Any release that occurs after the SWPPP has been developed shall be controlled in accordance with the SWPPP and is cause for the SWPPP to be updated as appropriate within 14 calendar days of obtaining knowledge of the spill or loss; and

e) the permittee shall determine whether its facility discharges storm water to a water body for which the Department has established a Total Maximum Daily Load (TMDL). If so, the permittee shall assess whether the TMDL requirements for the facility's discharge are being met through the existing SWPPP controls or whether additional control measures are necessary. The permitee's assessment of whether the TMDL requirements are being met shall focus on the effectiveness, adequacy, and implementation of the permitee's SWPPP controls; and

3) A summary of existing storm water discharge sampling data (if available) describing pollutants in storm water discharges at the facility. This summary shall be accompanied by a description of the suspected source(s) of the pollutants detected.

b. Preventive Measures and Source Controls, Non-Structural
To prevent significant materials from contacting storm water at the source, the SWPPP shall, at a minimum, include the following non-structural controls:

1) A program which includes a schedule for routine preventive maintenance. The preventive maintenance program shall consist of routine inspections and maintenance of storm water management and control devices (e.g., cleaning of oil/water separators and catch basins, routine housekeeping activities, etc.) as well as inspecting and testing plant equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to the storm sewer system or the surface waters of the state. The routine inspection shall include areas of the facility in which significant materials have the reasonable potential to contaminate runoff. A written report of the inspection and corrective actions shall be maintained on file by the permittee, and shall be retained in accordance with Record Keeping, below;

2) Good housekeeping procedures to maintain a clean, orderly facility. Good housekeeping procedures shall include routine inspections that focus on the areas of the facility that have a reasonable potential to contaminate storm water runoff from the property. The routine housekeeping inspections may be combined with the routine inspections for the preventive maintenance program. A written report of the inspection and corrective actions shall be retained in accordance with Record Keeping, below;

3) Regularly scheduled comprehensive site inspections. The inspections shall include, but not be limited to, the structural controls in use at the facility and the areas and equipment identified in the preventive maintenance program and good housekeeping procedures. The inspections shall also include a review of the routine preventive maintenance reports, good housekeeping inspections reports, and any other paperwork associated with the SWPPP. The comprehensive site inspection shall be conducted by the Certified Storm Water Operator at least quarterly. The permittee may request Department approval of an alternate schedule for comprehensive site inspections. A written report of the inspection and corrective actions shall be retained in accordance with Record Keeping, below. Included in the report shall be a certification that the facility is in compliance with this permit and the SWPPP;

PART I

Section A. Limitations and Monitoring Requirements

4) Material handling procedures and storage requirements for significant materials. Equipment and procedures for cleaning up spills shall be identified in the SWPPP and made available to the appropriate personnel. The procedures shall identify measures to prevent the spilled materials or material residues from contaminating storm water runoff from the property. The SWPPP shall include language describing what a reportable spill or release is and the appropriate reporting requirements in accordance with Part II.C.6. and Part II.C.7. of the permit. The SWPPP may include, by reference, requirements of either a Pollution Incident Prevention Plan (PIPP) prepared in accordance with the Part 5 Rules (Rules 324.2001 through 324.2009 of the Michigan Administrative Code); a Hazardous Waste Contingency Plan prepared in accordance with 40 CFR 264 and 265 Subpart D, as required by Part 111 of the Michigan Act; or a Spill Prevention Control and Countermeasure (SPCC) plan prepared in accordance with 40 CFR 112;

5) Measures used to control soil erosion and sedimentation including identification of the areas that, due to topography, activities, or other factors, have a high potential for significant soil erosion. Gravel lots are to be included;

6) A description of the employee training program which will be implemented on an annual basis to inform appropriate personnel at all levels of their responsibility as it relates to the components and goals of the SWPPP. The SWPPP shall identify periodic dates for the employee training program. Records of the employee training program shall be retained in accordance with Record Keeping, below; and

7) Actions being taken to limit the discharge of significant materials in order to comply with TMDL requirements.

The SWPPP shall identify significant materials expected to be present in storm water discharges following implementation of non-structural preventative measures and source controls.

c. Structural Controls for Prevention and Treatment
Where implementation of the measures required by Preventive Measures and Source Controls, Non-Structural; above; does not control storm water discharges in accordance with Water Quality Standards, below, the SWPPP shall provide a description of the location, function, design criteria, and installation/construction schedules of structural controls for prevention and treatment. Structural controls may be necessary:

1) To prevent uncontaminated storm water from contacting or being contacted by significant materials, and/or

2) If preventive measures are not feasible or are inadequate to keep significant materials at the site from contaminating storm water.

Structural controls shall be used to treat, divert, isolate, recycle, reuse, or otherwise manage storm water in a manner that reduces the level of significant materials in the storm water and provides compliance with the Water Quality Standards, below.

d. Keeping SWPPPs Current
1) The permittee and/or the Certified Storm Water Operator shall review the SWPPP annually after it is developed and maintain a written report of the review in accordance with Record Keeping, below. Based on the review, the permittee or the Certified Storm Water Operator shall amend the SWPPP as needed to ensure continued compliance with the terms and conditions of this permit. The written report shall be submitted to the department on or before January 10th of each year.

2) The SWPPP developed under the conditions of a previous permit shall be amended as necessary to ensure compliance with this permit.

PART I

Section A. Limitations and Monitoring Requirements

3) The SWPPP shall be updated or amended whenever changes at the facility have the potential to increase the exposure of significant materials to storm water, significant spills at the facility occur, or when the SWPPP is determined by the permittee or the Department to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. Updates based on increased activity at the facility shall include a description of how the permittee intends to control any new sources of significant materials or respond to and prevent spills in accordance with the requirements of Source Identification; Preventive Measures and Source Controls, Non-Structural; and Structural Controls for Prevention and Treatment; above.

4) The Department or authorized representative may notify the permittee at any time that the SWPPP does not meet minimum requirements. Such notification shall identify why the SWPPP does not meet minimum requirements. The permittee shall make the required changes to the SWPPP within 30 days after such notification from the Department or authorized representative and shall submit to the Department a written certification that the requested changes have been made.

5) Amendments to the SWPPP shall be signed and retained on-site pursuant to Record Keeping, below.

e. Certified Storm Water Operator Requirements
A Certified Storm Water Operator certified by the Department is required by Section 3110 of the Michigan Act. The Certified Storm Water Operator shall have supervision over the facility's storm water treatment and control measures included in the SWPPP. The names and certification numbers of the Certified Storm Water Operators shall be included in the SWPPP.

If the Certified Storm Water Operator is changed or an additional Certified Storm Water Operator is added, the permittee shall provide the name and certification number of the new Certified Storm Water Operator to the Department. If a facility has multiple Certified Storm Water Operators, the names and certification numbers of the Certified Storm Water Operators shall be included in the SWPPP.

f. Signature and SWPPP Review
1) The SWPPP shall be signed by the Certified Storm Water Operator and by either the permittee or an authorized representative in accordance with 40 CFR 122.22. The SWPPP and associated records shall be retained on-site at the facility which generates the storm water discharge.

2) The permittee shall make SWPPPs, reports, log books, storm water discharge sampling data (if collected), and items required by Record Keeping, below, available upon request to the Department or authorized representative.

g. Record Keeping
The permittee shall maintain records of all SWPPP related inspection and maintenance activities. Records shall also be kept describing incidents such as spills or other discharges that can affect the quality of storm water runoff. All such records shall be retained for three (3) years.

h. Water Quality Standards
At the time of discharge, there shall be no violation of the Water Quality Standards in the receiving waters as a result of the storm water discharge. This requirement includes, but is not limited to, the following conditions:

1) In accordance with Rule 323.1050 of the Water Quality Standards, the receiving waters shall not have any of the following unnatural physical properties as a result of this discharge in quantities which are or may become injurious to any designated use: turbidity, color, oil film, floating solids, foams, settleable solids, suspended solids, or deposits;

PART I

Section A. Limitations and Monitoring Requirements

2) Any unusual characteristics of the discharge (i.e., unnatural turbidity, color, oil film, floating solids, foams, settleable solids, suspended solids, or deposits) shall be reported within 24 hours to the Department followed by a written report within five (5) days detailing the findings of the investigation and the steps taken to correct the condition; and

3) Any pollutant for which a level of control is specified to meet a TMDL established by the Department shall be controlled at the facility so that its discharge is reduced by/to the amount specified in the TMDL.

i. Prohibition of Non-storm Water Discharges
Discharges of material other than storm water shall be in compliance with an NPDES permit issued for the discharge. Storm water shall be defined to include the following non-storm water discharges provided pollution prevention controls for the non-storm water component are identified in the SWPPP: discharges from fire hydrant flushing, potable water sources including water line flushing, water from fire system testing and fire fighting training without burned materials or chemical fire suppressants, irrigation drainage, lawn watering, routine building wash down which does not use detergents or other compounds, pavement wash water where toxic or hazardous materials have not occurred (unless all contamination by toxic or hazardous materials have been removed) and where detergents are not used, air conditioning condensate, springs, uncontaminated groundwater, foundation or footing drains where flows are not contaminated with process materials such as solvents, and discharges from fire fighting activities. Discharges from fire fighting activities are exempted from the requirement to be identified in the SWPPP.

6. Facility Contact

The "Facility Contact" was specified in the application. The permittee may replace the facility contact at any time, and shall notify the Department in writing within 10 days after replacement (including the name, address and telephone number of the new facility contact).

a. The facility contact shall be (or a duly authorized representative of this person):
- for a corporation, a principal executive officer of at least the level of vice president, or a designated representative, if the representative is responsible for the overall operation of the facility from which the discharge described in the permit application or other NPDES form originates,
- for a partnership, a general partner,
- for a sole proprietorship, the proprietor, or
- for a municipal, state, or other public facility, either a principal executive officer, the mayor, village president, city or village manager or other duly authorized employee.

b. A person is a duly authorized representative only if:
- the authorization is made in writing to the Department by a person described in paragraph a. of this section; and
- 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, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the facility (a duly authorized representative may thus be either a named individual or any individual occupying a named position).

Nothing in this section obviates the permittee from properly submitting reports and forms as required by law.

PART II

Section A. Definitions

This list of definitions may include terms not applicable to this permit.

Acute toxic unit (TU_A) means $100/LC_{50}$ where the LC_{50} is determined from a whole effluent toxicity (WET) test which produces a result that is statistically or graphically estimated to be lethal to 50% of the test organisms.

Bioaccumulative chemical of concern (BCC) means a chemical which, upon entering the surface waters, by itself or as its toxic transformation product, accumulates in aquatic organisms by a human health bioaccumulation factor of more than 1000 after considering metabolism and other physiochemical properties that might enhance or inhibit bioaccumulation. The human health bioaccumulation factor shall be derived according to R 323.1057(5). Chemicals with half-lives of less than 8 weeks in the water column, sediment, and biota are not BCCs. The minimum bioaccumulation concentration factor (BAF) information needed to define an organic chemical as a BCC is either a field-measured BAF or a BAF derived using the biota-sediment accumulation factor (BSAF) methodology. The minimum BAF information needed to define an inorganic chemical as a BCC, including an organometal, is either a field-measured BAF or a laboratory-measured bioconcentration factor (BCF). The BCCs to which these rules apply are identified in Table 5 of R 323.1057 of the Water Quality Standards.

Biosolids are the solid, semisolid, or liquid residues generated during the treatment of sanitary sewage or domestic sewage in a treatment works. This includes, but is not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment processes and a derivative of the removed scum or solids.

Bulk biosolids means biosolids that are not sold or given away in a bag or other container for application to a lawn or home garden.

Chronic toxic unit (TU_C) means 100/MATC or $100/IC_{25}$, where the maximum acceptable toxicant concentration (MATC) and IC_{25} are expressed as a percent effluent in the test medium.

Class B Biosolids refers to material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PSRP) in accordance with the Part 24 Rules. Processes include aerobic digestion, composting, anaerobic digestion, lime stabilization and air drying.

Daily concentration is the sum of the concentrations of the individual samples of a parameter divided by the number of samples taken during any calendar day. If the parameter concentration in any sample is less than the quantification limit, regard that value as zero when calculating the daily concentration. The daily concentration will be used to determine compliance with any maximum and minimum daily concentration limitations (except for pH and dissolved oxygen). When required by the permit, report the maximum calculated daily concentration for the month in the "MAXIMUM" column under "QUALITY OR CONCENTRATION" on the Discharge Monitoring Reports (DMRs).

For pH, report the maximum value of any individual sample taken during the month in the "MAXIMUM" column under "QUALITY OR CONCENTRATION" on the DMRs and the minimum value of any individual sample taken during the month in the "MINIMUM" column under "QUALITY OR CONCENTRATION" on the DMRs. For dissolved oxygen, report the minimum concentration of any individual sample in the "MINIMUM" column under "QUALITY OR CONCENTRATION" on the DMRs.

Daily loading is the total discharge by weight of a parameter discharged during any calendar day. This value is calculated by multiplying the daily concentration by the total daily flow and by the appropriate conversion factor. The daily loading will be used to determine compliance with any maximum daily loading limitations. When required by the permit, report the maximum calculated daily loading for the month in the "MAXIMUM" column under "QUANTITY OR LOADING" on the DMRs.

Department means the Michigan Department of Environmental Quality.

Detection Level means the lowest concentration or amount of the target analyte that can be determined to be different from zero by a single measurement at a stated level of probability.

PART II

Section A. Definitions

Discharge Event is a discrete occurrence during which effluent is discharged to the surface water up to 10 days of a consecutive 14 day period.

EC_{50} means a statistically or graphically estimated concentration that is expected to cause 1 or more specified effects in 50% of a group of organisms under specified conditions.

Fecal coliform bacteria monthly is the geometric mean of the samples collected in a calendar month (or 30 consecutive days). The calculated monthly value will be used to determine compliance with the maximum monthly fecal coliform bacteria limitations. When required by the permit, report the calculated monthly value in the "AVERAGE" column under "QUALITY OR CONCENTRATION" on the DMRs. FOR SEASONAL LAGOON DISCHARGES ONLY: If the period in which the discharge occurred was partially in each of two months, the monthly average shall be reported on the DMR of the month in which the last day of discharge occurred.

Fecal coliform bacteria 7-day is the geometric mean of the samples collected in any 7-day period. The calculated 7-day value will be used to determine compliance with the maximum 7-day fecal coliform bacteria limitations. When required by the permit, report the maximum calculated 7-day concentration for the month in the "MAXIMUM" column under "QUALITY OR CONCENTRATION" on the DMRs. FOR SEASONAL LAGOON DISCHARGES ONLY: If the seven day period was partially in each of two months, the seven day average shall be reported on the DMR of the month in which the last day of discharge occurred.

Flow Proportioned sample is a composite sample with the sample volume proportional to the effluent flow.

Grab sample is a single sample taken at neither a set time nor flow.

Geometric Mean is the average of the logarithmic values of a base 10 data set, converted back to a base 10 number.

IC_{25} means the toxicant concentration that would cause a 25% reduction in a nonquantal biological measurement for the test population.

Interference is a discharge which, alone or in conjunction with a discharge or discharges from other sources, both: 1) inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and 2) therefore, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or, of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent state or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including state regulations contained in any state sludge management plan prepared pursuant to Subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act. [This definition does not apply to sample matrix interference.]

Land Application means spraying or spreading biosolids or a biosolids derivative onto the land surface, injecting below the land surface, or incorporating into the soil so that the biosolids or biosolids derivative can either condition the soil or fertilize crops or vegetation grown in the soil.

LC_{50} means a statistically or graphically estimated concentration that is expected to be lethal to 50% of a group of organisms under specified conditions.

Maximum acceptable toxicant concentration (MATC) means the concentration obtained by calculating the geometric mean of the lower and upper chronic limits from a chronic test. A lower chronic limit is the highest tested concentration that did not cause the occurrence of a specific adverse effect. An upper chronic limit is the lowest tested concentration which did cause the occurrence of a specific adverse effect and above which all tested concentrations caused such an occurrence.

MGD means million gallons per day.

PART II

Section A. Definitions

Monthly monitoring frequency refers to a calendar month. When required by this permit, an analytical result, reading, value or observation must be reported for that period if a discharge occurs during that period.

Monthly concentration is the sum of the daily concentrations determined during a reporting month (or 30 consecutive days) divided by the number of daily concentrations determined. The calculated monthly concentration will be used to determine compliance with any maximum monthly concentration limitations. When required by the permit, report the calculated monthly concentration in the "AVERAGE" column under "QUALITY OR CONCENTRATION" on the DMRs. FOR SEASONAL LAGOON DISCHARGES ONLY: If the period in which the discharge occurred was partially in each of two months, the monthly average shall be reported on the DMR of the month in which the last day of discharge occurred.

For minimum percent removal requirements, the monthly influent concentration and the monthly effluent concentration shall be determined. The calculated monthly percent removal, which is equal to 100 times the quantity [1 minus the quantity (monthly effluent concentration divided by the monthly influent concentration)], shall be reported in the "MINIMUM" column under "QUALITY OR CONCENTRATION" on the DMRs.

Monthly loading is the sum of the daily loadings of a parameter divided by the number of daily loadings determined in the reporting month (or 30 consecutive days). The calculated monthly loading will be used to determine compliance with any maximum monthly loading limitations. When required by the permit, report the calculated monthly loading in the "AVERAGE" column under "QUANTITY OR LOADING" on the DMRs. FOR SEASONAL LAGOON DISCHARGES ONLY: If the period in which the discharge occurred was partially in each of two months, the monthly average shall be reported on the DMR of the month in which the last day of discharge occurred.

National Pretreatment Standards are the regulations promulgated by or to be promulgated by the Federal Environmental Protection Agency pursuant to Section 307(b) and (c) of the Federal Act. The standards establish nationwide limits for specific industrial categories for discharge to a POTW.

NTU means nephelometric turbidity unit.

No observed adverse effect level (NOAEL) means the highest tested dose or concentration of a substance which results in no observed adverse effect in exposed test organisms where higher doses or concentrations result in an adverse effect.

Noncontact Cooling Water is water used for cooling which does not come into direct contact with any raw material, intermediate product, by-product, waste product or finished product.

Nondomestic user is any discharger to a POTW that discharges wastes other than or in addition to water-carried wastes from toilet, kitchen, laundry, bathing or other facilities used for household purposes.

Partially treated sewage is any sewage, sewage and storm water, or sewage and wastewater, from domestic or industrial sources that is treated to a level less than that required by the permittee's National Pollutant Discharge Elimination System permit, or that is not treated to national secondary treatment standards for wastewater, including discharges to surface waters from retention treatment facilities.

Pretreatment is reducing the amount of pollutants, eliminating pollutants, or altering the nature of pollutant properties to a less harmful state prior to discharge into a public sewer. The reduction or alteration can be by physical, chemical, or biological processes, process changes, or by other means. Dilution is not considered pretreatment unless expressly authorized by an applicable National Pretreatment Standard for a particular industrial category.

POTW is a publicly owned treatment works.

Quantification level means the measurement of the concentration of a contaminant obtained by using a specified laboratory procedure calculated at a specified concentration above the 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.

PART II

Section A. Definitions

Quarterly monitoring frequency refers to a three month period, defined as January through March, April through June, July through September, and October through December. When required by this permit, an analytical result, reading, value or observation must be reported for that period if a discharge occurs during that period.

Regional Administrator is the Region 5 Administrator, U.S. EPA, located at R-19J, 77 W. Jackson Blvd., Chicago, Illinois 60604.

Significant industrial user is a nondomestic user that: 1) is subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; or 2) discharges an average of 25,000 gallons per day or more of process wastewater to a POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastestream which makes up five (5) percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the permittee as defined in 40 CFR 403.12(a) on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's treatment plant operation or violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

Significant Materials Significant Materials means any material which could degrade or impair water quality, including but not limited to: raw materials; fuels; solvents, detergents, and plastic pellets; finished materials such as metallic products; hazardous substances designated under Section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (see 40 CFR 372.65); any chemical the facility is required to report pursuant to Section 313 of Emergency Planning and Community Right-to-Know Act (EPCRA); polluting materials as identified under the Part 5 Rules (Rules 324.2001 through 324.2009 of the Michigan Administrative Code); Hazardous Wastes as defined in Part 111 of the Michigan Act; fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

Tier I value means a value for aquatic life, human health or wildlife calculated under R 323.1057 of the Water Quality Standards using a tier I toxicity database.

Tier II value means a value for aquatic life, human health or wildlife calculated under R 323.1057 of the Water Quality Standards using a tier II toxicity database.

Total Maximum Daily Loads (TMDLs) are required by the Federal Act for waterbodies that do not meet Water Quality Standards. TMDLs represent the maximum daily load of a pollutant that a waterbody can assimilate and meet Water Quality Standards and an allocation of that load among point sources, nonpoint sources, and a margin of safety.

Toxicity Reduction Evaluation (TRE) means a site-specific study conducted in a stepwise process designed to identify the causative agents of effluent toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in effluent toxicity.

Water Quality Standards means the Part 4 Water Quality Standards promulgated pursuant to Part 31 of Act No. 451 of the Public Acts of 1994, as amended, being Rules 323.1041 through 323.1117 of the Michigan Administrative Code.

Weekly monitoring frequency refers to a calendar week which begins on Sunday and ends on Saturday. When required by this permit, an analytical result, reading, value or observation must be reported for that period if a discharge occurs during that period.

Yearly monitoring frequency refers to a calendar year beginning on January 1 and ending on December 31. When required by this permit, an analytical result, reading, value or observation must be reported for that period if a discharge occurs during that period.

24-Hour Composite sample is a flow proportioned composite sample consisting of hourly or more frequent portions that are taken over a 24-hour period.

PART II

Section A. Definitions

3-Portion Composite sample is a sample consisting of three equal volume grab samples collected at equal intervals over an 8-hour period.

7-day concentration is the sum of the daily concentrations determined during any 7 consecutive days in a reporting month divided by the number of daily concentrations determined. The calculated 7-day concentration will be used to determine compliance with any maximum 7-day concentration limitations. When required by the permit, report the maximum calculated 7-day concentration for the month in the "MAXIMUM" column under "QUALITY OR CONCENTRATION" on the DMRs. FOR SEASONAL LAGOON DISCHARGES ONLY: If the seven day period was partially in each of two months, the seven day average shall be reported on the DMR of the month in which the last day of discharge occurred.

7-day loading is the sum of the daily loadings of a parameter divided by the number of daily loadings determined during any 7 consecutive days in a reporting month. The calculated 7-day loading will be used to determine compliance with any maximum 7-day loading limitations. When required by the permit, report the maximum calculated 7-day loading for the month in the "MAXIMUM" column under "QUANTITY OR LOADING" on the DMRs. FOR SEASONAL LAGOON DISCHARGES ONLY: If the seven day period was partially in each of two months, the seven day average shall be reported on the DMR of the month in which the last day of discharge occurred.

PART II

Section B. Monitoring Procedures

1. Representative Samples

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

2. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulations promulgated pursuant to Section 304(h) of the Federal Act (40 CFR Part 136 - Guidelines Establishing Test Procedures for the Analysis of Pollutants), unless specified otherwise in this permit. Requests to use test procedures not promulgated under 40 CFR Part 136 for pollutant monitoring required by this permit shall be made in accordance with the Alternate Test Procedures regulations specified in 40 CFR 136.4. These requests shall be submitted to the Chief of the Permits Section, Water Resources Division, Michigan Department of Environmental Quality, P.O. Box 30458, Lansing, Michigan, 48909-7773. The permittee may use such procedures upon approval.

The permittee shall periodically calibrate and perform maintenance procedures on all analytical instrumentation at intervals to ensure accuracy of measurements. The calibration and maintenance shall be performed as part of the permittee's laboratory Quality Control/Quality Assurance program.

3. Instrumentation

The permittee shall periodically calibrate and perform maintenance procedures on all monitoring instrumentation at intervals to ensure accuracy of measurements.

4. Recording Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information: 1) the exact place, date, and time of measurement or sampling; 2) the person(s) who performed the measurement or sample collection; 3) the dates the analyses were performed; 4) the person(s) who performed the analyses; 5) the analytical techniques or methods used; 6) the date of and person responsible for equipment calibration; and 7) the results of all required analyses.

5. 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 recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Regional Administrator or the Department.

PART II

Section C. Reporting Requirements

1. Start-up Notification

If the permittee will not discharge during the first 60 days following the effective date of this permit, the permittee shall notify the Department within 14 days following the effective date of this permit, and then 60 days prior to the commencement of the discharge.

2. Submittal Requirements for Self-Monitoring Data

Part 31 of Act 451 of 1994, as amended, specifically Section 324.3110(3) and Rule 323.2155(2) of Part 21 allows the department to specify the forms to be utilized for reporting the required self-monitoring data. Unless instructed on the effluent limitations page to conduct "Retained Self Monitoring" the permittee shall submit self-monitoring data via the Department's Electronic Environmental Discharge Monitoring Reporting (e2-DMR) system.

The permittee shall utilize the information provided on the e2-Reporting website @ **https://secure1.state.mi.us/e2rs/** to access and submit the electronic forms. Both monthly summary and daily data shall be submitted to the department no later than the **20th day of the month** following each month of the authorized discharge period(s). The permittee may be allowed to submit the electronic forms after this date if the Department has granted an extension to the submittal date.

3. Retained Self-Monitoring Requirements

If instructed on the effluent limits page to conduct retained self-monitoring, the permittee shall maintain a year-to-date log of retained self-monitoring results and, upon request, provide such log for inspection to the staff of the Water Resources Division, Michigan Department of Environmental Quality. Retained self-monitoring results are public information and shall be promptly provided to the public upon request.

The permittee shall certify, in writing, to the Department, on or before January 10th of each year, that: 1) all retained self-monitoring requirements have been complied with and a year-to-date log has been maintained; and 2) the application on which this permit is based still accurately describes the discharge. With this annual certification, the permittee shall submit a summary of the previous years monitoring data. The summary shall include maximum values for samples to be reported as daily maximums and/or monthly maximums and minimum values for any daily minimum samples.

4. 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 such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report. Such increased frequency shall also be indicated.

Monitoring required pursuant to Part 41 of the Michigan Act or Rule 35 of the Mobile Home Park Commission Act (Act 96 of the Public Acts of 1987) for assurance of proper facility operation shall be submitted as required by the Department.

5. Compliance Dates Notification

Within 14 days of every compliance date specified in this permit, the permittee shall submit a written notification to the Department indicating whether or not the particular requirement was accomplished. If the requirement was not accomplished, the notification shall include an explanation of the failure to accomplish the requirement, actions taken or planned by the permittee to correct the situation, and an estimate of when the requirement will be accomplished. If a written report is required to be submitted by a specified date and the permittee accomplishes this, a separate written notification is not required.

PART II

Section C. Reporting Requirements

6. Noncompliance Notification

Compliance with all applicable requirements set forth in the Federal Act, Parts 31 and 41 of the Michigan Act, and related regulations and rules is required. All instances of noncompliance shall be reported as follows:

a. 24-hour reporting - Any noncompliance which may endanger health or the environment (including maximum and/or minimum daily concentration discharge limitation exceedances) shall be reported, verbally, within 24 hours from the time the permittee becomes aware of the noncompliance. A written submission shall also be provided within five (5) days.

b. other reporting - The permittee shall report, in writing, all other instances of noncompliance not described in a. above at the time monitoring reports are submitted; or, in the case of retained self-monitoring, within five (5) days from the time the permittee becomes aware of the noncompliance.

Written reporting shall include: 1) a description of the discharge and cause of noncompliance; and 2) the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and the steps taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

7. Spill Notification

The permittee shall immediately report any release of any polluting material which occurs to the surface waters or groundwaters of the state, unless the permittee has determined that the release is not in excess of the threshold reporting quantities specified in the Part 5 Rules (Rules 324.2001 through 324.2009 of the Michigan Administrative Code), by calling the Department at the number indicated on the second page of this permit, or if the notice is provided after regular working hours call the Department's 24-hour Pollution Emergency Alerting System telephone number, 1-800-292-4706 (calls from out-of-state dial 1-517-373-7660).

Within ten (10) days of the release, the permittee shall submit to the Department a full written explanation as to the cause of the release, the discovery of the release, response (clean-up and/or recovery) measures taken, and preventative measures taken or a schedule for completion of measures to be taken to prevent reoccurrence of similar releases.

8. Upset Noncompliance Notification

If a process "upset" (defined as 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) has occurred, the permittee who wishes to establish the affirmative defense of upset, shall notify the Department by telephone within 24-hours of becoming aware of such conditions; and within five (5) days, provide in writing, the following information:

a. that an upset occurred and that the permittee can identify the specific cause(s) of the upset;

b. that the permitted wastewater treatment facility was, at the time, being properly operated; and

c. that the permittee has specified and taken action on all responsible steps to minimize or correct any adverse impact in the environment resulting from noncompliance with this permit.

In any enforcement proceedings, the permittee, seeking to establish the occurrence of an upset, has the burden of proof.

PART II

Section C. Reporting Requirements

9. Bypass Prohibition and Notification

a. Bypass Prohibition - Bypass is prohibited unless:

1) bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

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 backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass; and

3) the permittee submitted notices as required under 9.b. or 9.c. below.

b. Notice of Anticipated Bypass - If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least ten (10) days before the date of the bypass, and provide information about the anticipated bypass as required by the Department. The Department may approve an anticipated bypass, after considering its adverse effects, if it will meet the three (3) conditions listed in 9.a. above.

c. Notice of Unanticipated Bypass - The permittee shall submit notice to the Department of an unanticipated bypass by calling the Department at the number indicated on the second page of this permit (if the notice is provided after regular working hours, use the following number: 1-800-292-4706) as soon as possible, but no later than 24 hours from the time the permittee becomes aware of the circumstances.

d. Written Report of Bypass - A written submission shall be provided within five (5) working days of commencing any bypass to the Department, and at additional times as directed by the Department. The written submission shall contain a description of the bypass and its cause; the period of bypass, including exact dates and times, and if the bypass has not been corrected, the anticipated time it is expected to continue; steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass; and other information as required by the Department.

e. Bypass Not Exceeding Limitations - The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of 9.a., 9.b., 9.c., and 9.d., above. This provision does not relieve the permittee of any notification responsibilities under Part II.C.10. of this permit.

f. Definitions

1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

2) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes 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.

PART II

Section C. Reporting Requirements

10. Notification of Changes in Discharge

The permittee shall notify the Department, in writing, within 10 days of knowing, or having reason to believe, that any activity or change has occurred or will occur which would result in the discharge of: 1) detectable levels of chemicals on the current Michigan Critical Materials Register, priority pollutants or hazardous substances set forth in 40 CFR 122.21, Appendix D, or the Pollutants of Initial Focus in the Great Lakes Water Quality Initiative specified in 40 CFR 132.6, Table 6, which were not acknowledged in the application or listed in the application at less than detectable levels; 2) detectable levels of any other chemical not listed in the application or listed at less than detection, for which the application specifically requested information; or 3) any chemical at levels greater than five times the average level reported in the complete application (see the first page of this permit for the date(s) the complete application was submitted). Any other monitoring results obtained as a requirement of this permit shall be reported in accordance with the compliance schedules.

11. Changes in Facility Operations

Any anticipated action or activity, including but not limited to facility expansion, production increases, or process modification, which will result in new or increased loadings of pollutants to the receiving waters must be reported to the Department by a) submission of an increased use request (application) and all information required under Rule 323.1098 (Antidegradation) of the Water Quality Standards or b) by notice if the following conditions are met: 1) the action or activity will not result in a change in the types of wastewater discharged or result in a greater quantity of wastewater than currently authorized by this permit; 2) the action or activity will not result in violations of the effluent limitations specified in this permit; 3) the action or activity is not prohibited by the requirements of Part II.C.12.; and 4) the action or activity will not require notification pursuant to Part II.C.10. Following such notice, the permit may be modified according to applicable laws and rules to specify and limit any pollutant not previously limited.

12. Bioaccumulative Chemicals of Concern (BCC)

Consistent with the requirements of Rules 323.1098 and 323.1215 of the Michigan Administrative Code, the permittee is prohibited from undertaking any action that would result in a lowering of water quality from an increased loading of a BCC unless an increased use request and antidegradation demonstration have been submitted and approved by the Department.

13. Transfer of Ownership or Control

In the event of any change in control or ownership of facilities from which the authorized discharge emanates, the permittee shall submit to the Department 30 days prior to the actual transfer of ownership or control a written agreement between the current permittee and the new permittee containing: 1) the legal name and address of the new owner; 2) a specific date for the effective transfer of permit responsibility, coverage and liability; and 3) a certification of the continuity of or any changes in operations, wastewater discharge, or wastewater treatment.

If the new permittee is proposing changes in operations, wastewater discharge, or wastewater treatment, the Department may propose modification of this permit in accordance with applicable laws and rules.

PART II

Section D. Management Responsibilities

1. Duty to Comply

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.

It is the duty of the permittee to comply with all the terms and conditions of this permit. Any noncompliance with the Effluent Limitations, Special Conditions, or terms of this permit constitutes a violation of the Michigan Act and/or the Federal Act and constitutes grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of an application for permit renewal.

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 this permit.

2. Operator Certification

The permittee shall have the waste treatment facilities under direct supervision of an operator certified at the appropriate level for the facility certification by the Department, as required by Sections 3110 and 4104 of the Michigan Act. Permittees authorized to discharge storm water shall have the storm water treatment and/or control measures under direct supervision of a storm water operator certified by the Department, as required by Section 3110 of the Michigan Act.

3. Facilities Operation

The permittee shall, at all times, properly operate and maintain all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes adequate laboratory controls and appropriate quality assurance procedures.

4. Power Failures

In order to maintain compliance with the effluent limitations of this permit and prevent unauthorized discharges, the permittee shall either:

a. provide an alternative power source sufficient to operate facilities utilized by the permittee to maintain compliance with the effluent limitations and conditions of this permit; or

b. upon the reduction, loss, or failure of one or more of the primary sources of power to facilities utilized by the permittee to maintain compliance with the effluent limitations and conditions of this permit, the permittee shall halt, reduce or otherwise control production and/or all discharge in order to maintain compliance with the effluent limitations and conditions of this permit.

5. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the surface waters or groundwaters of the state resulting from noncompliance with any effluent limitation specified in this permit including, but not limited to, such accelerated or additional monitoring as necessary to determine the nature and impact of the discharge in noncompliance.

PART II

Section D. Management Responsibilities

6. Containment Facilities

The permittee shall provide facilities for containment of any accidental losses of polluting materials in accordance with the requirements of the Part 5 Rules (Rules 324.2001 through 324.2009 of the Michigan Administrative Code). For a Publicly Owned Treatment Work (POTW), these facilities shall be approved under Part 41 of the Michigan Act.

7. Waste Treatment Residues

Residuals (i.e. solids, sludges, biosolids, filter backwash, scrubber water, ash, grit, or other pollutants or wastes) removed from or resulting from treatment or control of wastewaters, including those that are generated during treatment or left over after treatment or control has ceased, shall be disposed of in an environmentally compatible manner and according to applicable laws and rules. These laws may include, but are not limited to, the Michigan Act, Part 31 for protection of water resources, Part 55 for air pollution control, Part 111 for hazardous waste management, Part 115 for solid waste management, Part 121 for liquid industrial wastes, Part 301 for protection of inland lakes and streams, and Part 303 for wetlands protection. Such disposal shall not result in any unlawful pollution of the air, surface waters or groundwaters of the state.

8. Right of Entry

The permittee shall allow the Department, any agent appointed by the Department or the Regional Administrator, upon the presentation of credentials:

a. to enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and

b. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect process facilities, treatment works, monitoring methods and equipment regulated or required under this permit; and to sample any discharge of pollutants.

9. Availability of Reports

Except for data determined to be confidential under Section 308 of the Federal Act and Rule 2128 (Rule 323.2128 of the Michigan Administrative Code), all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department and the Regional Administrator. As required by the Federal Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Act and Sections 3112, 3115, 4106 and 4110 of the Michigan Act.

PART II

Section E. Activities Not Authorized by This Permit

1. Discharge to the Groundwaters

This permit does not authorize any discharge to the groundwaters. Such discharge may be authorized by a groundwater discharge permit issued pursuant to the Michigan Act.

2. POTW Construction

This permit does not authorize or approve the construction or modification of any physical structures or facilities at a POTW. Approval for the construction or modification of any physical structures or facilities at a POTW must be by permit issued under Part 41 of the Michigan Act.

3. Civil and Criminal Liability

Except as provided in permit conditions on "Bypass" (Part II.C.9. pursuant to 40 CFR 122.41(m)), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance, whether or not such noncompliance is due to factors beyond the permittee's control, such as accidents, equipment breakdowns, or labor disputes.

4. Oil and Hazardous Substance Liability

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 to which the permittee may be subject under Section 311 of the Federal Act except as are exempted by federal regulations.

5. 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 Federal Act.

6. Property Rights

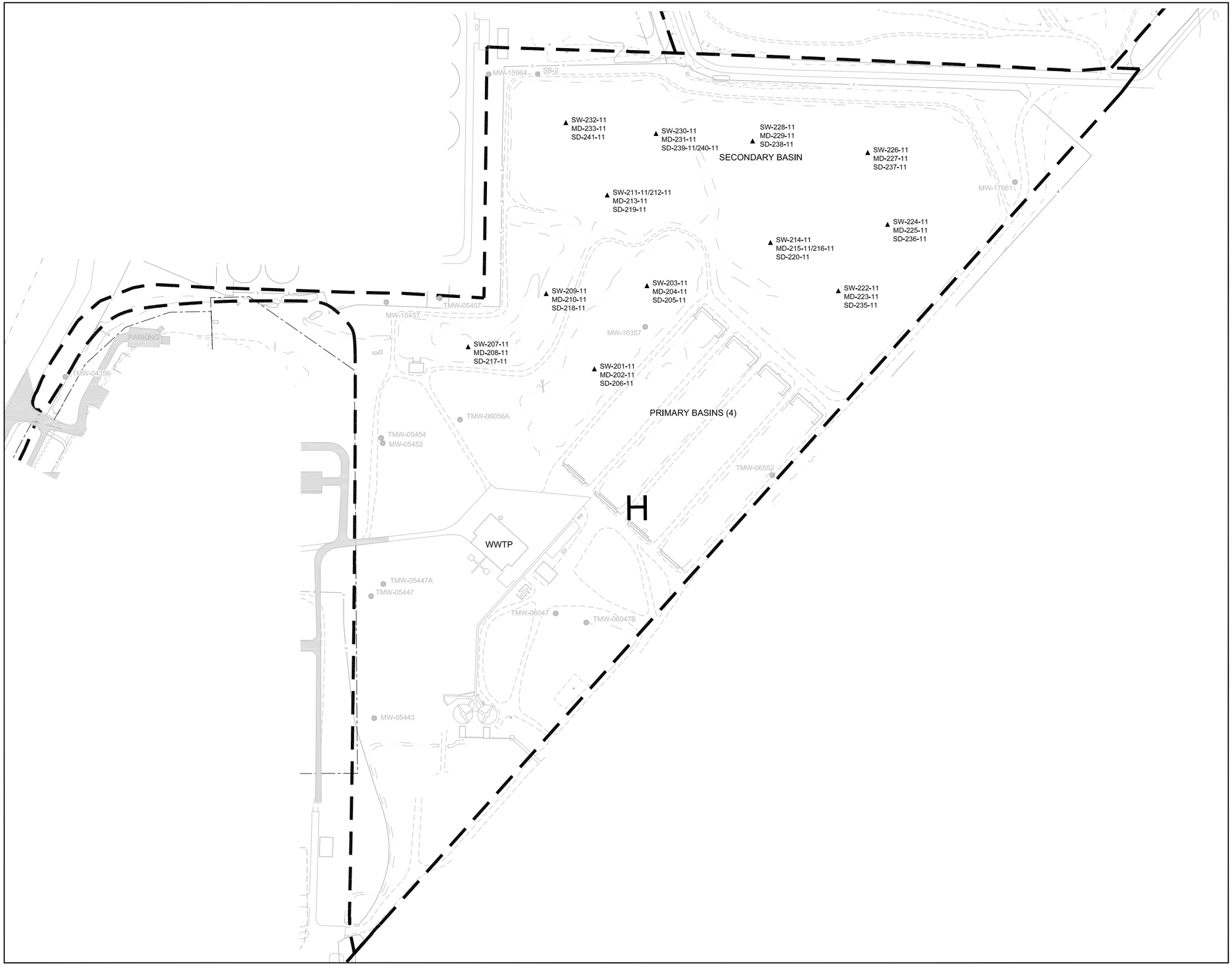
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize violation of any federal, state or local laws or regulations, nor does it obviate the necessity of obtaining such permits, including any other Department of Environmental Quality permits, or approvals from other units of government as may be required by law.

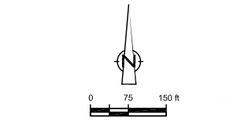
Appendix B

Secondary Pond Data

Appendix B-1

Secondary Pond Characterization Results



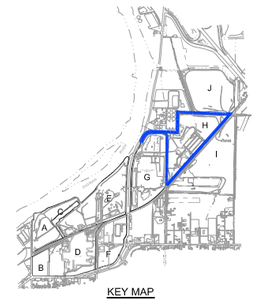


LEGEND

- INVESTIGATIVE UNIT BOUNDARY AND IDENTIFIER
- MONITORING WELL LOCATION
- POND WATER AND SEDIMENT SAMPLE LOCATION

NOTES:

- POND ELEVATION APPROX. 593.00 ft AMSL.
- SW = SURFACE WATER
- MD = MID-DEPTH
- SD = SEDIMENT



KEY MAP

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

REVITALIZING AUTOMOTIVE COMMUNITY ENVIRONMENTAL RESPONSE

SAGINAW, MICHIGAN

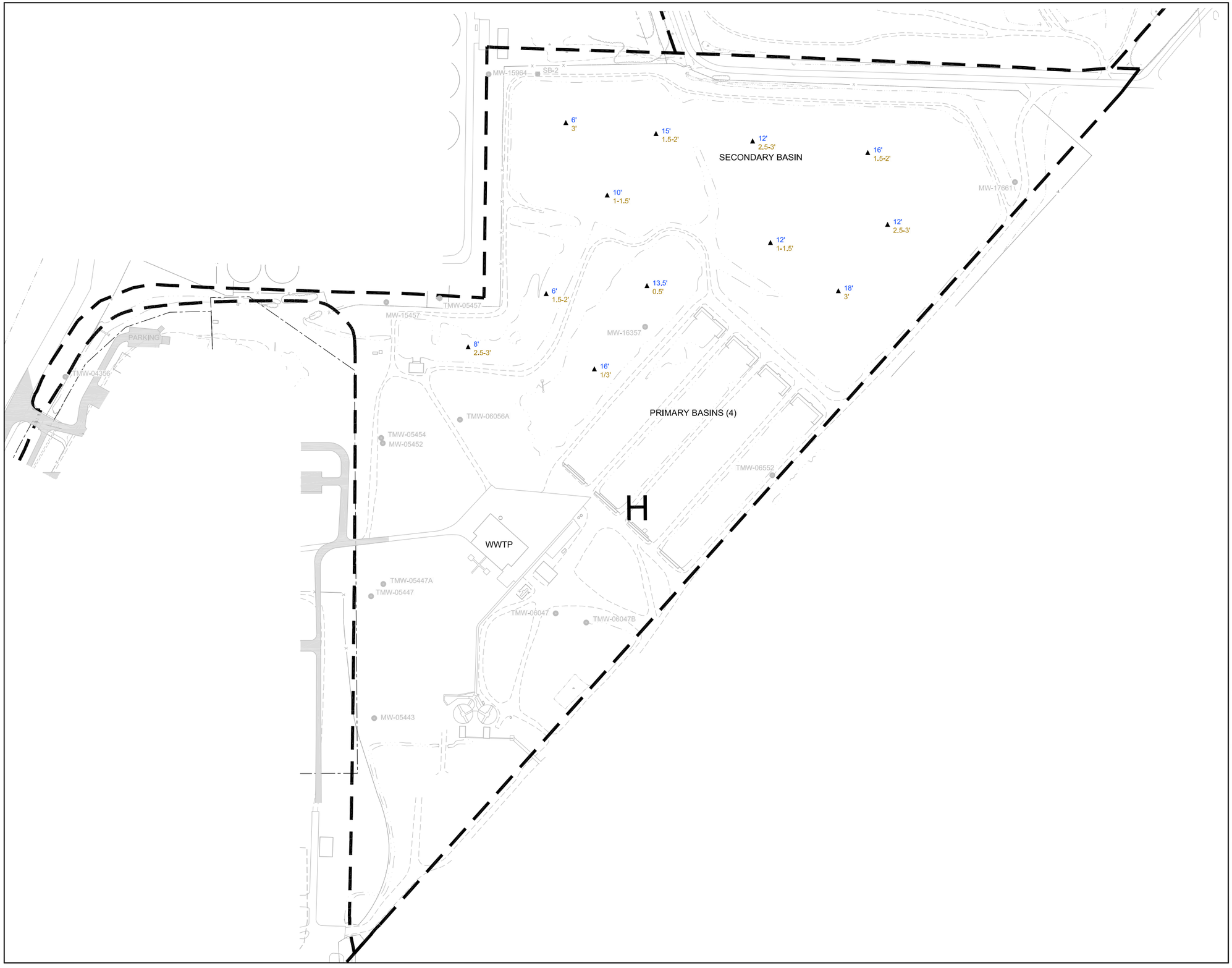
POND WATER AND SEDIMENT SAMPLE LOCATIONS

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
MICHIGAN STATE PLANE SOUTH, NAD 83 USING INTERNATIONAL FEET, NGVD 88
TOPO - SANBORN, 1996

Project Manager:	Reviewed By:	Date:	
I.R.	M.T.	JULY 2011	
Scale: 1" = 200'	Project №: 58502-T02	Report №: 005	Drawing №: figure 1

58502-T02(005)GN-WA001 JUL 07/2011



SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

REVITALIZING AUTOMOTIVE COMMUNITY ENVIRONMENTAL RESPONSE

SAGINAW, MICHIGAN

POND WATER DEPTH AND SEDIMENT THICKNESS

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
MICHIGAN STATE PLANE SOUTH, NAD 83 USING INTERNATIONAL FEET, NGVD 88
TOPO - SANBORN, 1996

Project Manager:	Reviewed By:	Date:	
I.R.	M.T.	JULY 2011	
Scale: 1" = 200'	Project №: 58502-T02	Report №: 005	Drawing №: figure 2

TABLE 1

SURFACE WATER ANALYTICAL RESULTS OF THE SECONDARY POND
NODULAR FACILITY
SAGINAW, MICHIGAN

Sample Location:							*MD-202-11*	*MD-204-11*	*MD-208-11*	*MD-210-11*	*MD-213-11*
Sample ID:							*SW-58502-062711-SH-202*	*SW-58502-062711-SH-204*	*SW-58502-062711-SH-208*	*SW-58502-062811-SH-210*	*SW-58502-062811-SH-213*
Sample Date:				Rule 57			*6/27/2011*	*6/27/2011*	*6/27/2011*	*6/28/2011*	*6/28/2011*
		a	*b*	*c*	*d*	e					
Parameters:	*Units*	GSI	*FCV*	*HCVd*	*HNVd*	*WV*					
Metals											
Antimony, total recoverable	mg/L	0.13	0.24		0.0017		0.00037 J	0.00034 J	0.00055 J	0.00053 J	0.00052 J
Arsenic, total recoverable	mg/L	0.01	0.15	0.01	0.01		0.0025 J	0.0026 J	0.0024 J	0.0024 J	0.0025 J
Barium, total recoverable (1)	mg/L	0.44	0.44		1.9		0.033 J	0.032 J	0.043 J	0.043 J B	0.044 J B
Beryllium, total recoverable (1)	mg/L	0.0024	0.002		0.16		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium, total recoverable (1)	mg/L	0.0022	0.0025		0.0025		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chromium, total recoverable	mg/L	0.011	0.07		0.12		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cobalt, total recoverable	mg/L	0.1	0.10				0.00019 J	0.00015 J	0.00018 J	0.00023 J	0.00024 J
Copper, total recoverable (1)	mg/L	0.0090	0.009		0.47		0.00097 J	0.00095 J	0.00068 J	0.00054 J B	0.00059 J B
Lead, total recoverable (1)	mg/L	0.010	0.04		0.014		0.003 U	0.003 U	0.00027 J	0.00028 J	0.00019 J
Manganese, total recoverable (1)	mg/L	1.30	1.93		1.3		0.15	0.12	0.17	0.18	0.18
Mercury	mg/L	0.0000013	0.00077		0.0000018	0.0000013	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Mercury (convert from ng/L)	mg/L	0.0000013	0.00077		0.0000018	0.0000013	0.00000037 J	**0.0000014**	0.00000014 J	0.00000024 J	0.0000003 J
Nickel, total recoverable (1)	mg/L	0.052	0.05		2.6		0.0011 J	0.00093 J	0.001 J	0.0012 J B	0.0013 J B
Selenium, total recoverable	mg/L	0.005	0.01		0.12		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver, total recoverable	mg/L	0.0002	0.00006		0.13		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Thallium, total recoverable	mg/L	0.0037	0.01		0.0012		0.0003 J	0.001 U	0.001 U	0.001 U	0.00017 J B
Vanadium, total recoverable	mg/L	0.012	0.03		0.053		0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc, total recoverable (1)	mg/L	0.12	0.12		3.3		0.0055 J B	0.02 U	0.0042 J B	0.02 U	0.0026 J B
Polychlorinated Biphenyls											
Aroclor-1016 (PCB-1016)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1221 (PCB-1221)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1232 (PCB-1232)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1242 (PCB-1242)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1248 (PCB-1248)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1254 (PCB-1254)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1260 (PCB-1260)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1262 (PCB-1262)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1268 (PCB-1268)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
General Chemistry											
Ammonia	mg/L						0.83 J	0.83 J	3.6	3.6	3.9
warmwater Unionized Ammonia (calculated)	mg/L	0.056	0.053				**0.10**	**0.09**	**0.40**	**0.40**	**0.44**
Biochemical oxygen demand (BOD)	mg/L	-					2.0 U	2.0 U	2.3	10	9.0
Chemical oxygen demand (COD)	mg/L	-					51	20 U	56	53	30
Cyanide (amenable)	mg/L	-					0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Cyanide (total)	mg/L	0.0052	0.0052		0.6		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Formaldehyde	mg/L	0.12	0.12		5.0		0.025 J B	0.017 J B	0.022 J B	0.016 J B	0.016 J B
Nitrate (as N)	mg/L	-			10		0.27	0.27	0.41	0.53	0.43
Oil and grease (HEM), polar	mg/L	-					4.8 U	0.86 J	0.96 J	1.2 J B	0.87 J B
pH, lab	s.u.	-					8.18 H	8.50 H	8.55 H	8.43 H	8.40 H
Phenolics (total)	mg/L	-					0.040 U	0.040 U	0.040 U	0.040 U	0.040 U
Total organic carbon (TOC)	mg/L	-					15	16	14	14	14

Notes:
B - For orgainics Method blank contamintion / For Inorganics = Estimated Value
J - Estimated concentration.
U - Not present at or above the associated value.
0.01 calculated value assuming a hardness of: 100 mg/L
Assuming a temperature of 20 degrees C and an average pH of 8.5 the percentage of NH3 in ammonia is: 11.2%

HCVd = HCV-Human Cancer Value-Drink
HNVd = Human Noncancer Value-Drink
FCV = Final Chronic Value
WV = Wildlife Value

TABLE 1

SURFACE WATER ANALYTICAL RESULTS OF THE SECONDARY POND
NODULAR FACILITY
SAGINAW, MICHIGAN

Sample Location:							*MD-215-11*	*MD-215-11*	*MD-223-11*	*MD-225-11*	*MD-227-11*
Sample ID:							*SW-58502-062811-SH-215*	*SW-58502-062811-SH-216*	*SW-58502-062911-SH-223*	*SW-58502-062911-SH-225*	*SW-58502-062911-SH-227*
Sample Date:				Rule 57			*6/28/2011*	*6/28/2011*	*6/29/2011*	*6/29/2011*	*6/29/2011*
		a	*b*	*c*	*d*	e		*(Duplicate)*			
Parameters:	*Units*	GSI	*FCV*	*HCVd*	*HNVd*	*WV*					
Metals											
Antimony, total recoverable	mg/L	0.13	0.24		0.0017		0.00053 J	0.00048 J	0.0005 J	0.00055 J	0.00046 J
Arsenic, total recoverable	mg/L	0.01	0.15	0.01	0.01		0.0024 J	0.0023 J	0.0023 J	0.0024 J	0.0022 J
Barium, total recoverable (1)	mg/L	0.44	0.44		1.9		0.044 J B	0.042 J B	0.043 J	0.043 J	0.043 J
Beryllium, total recoverable (1)	mg/L	0.0024	0.002		0.16		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium, total recoverable (1)	mg/L	0.0022	0.0025		0.0025		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chromium, total recoverable	mg/L	0.011	0.07		0.12		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cobalt, total recoverable	mg/L	0.1	0.10				0.00021 J	0.00022 J	0.0002 J	0.00019 J	0.00018 J
Copper, total recoverable (1)	mg/L	0.0090	0.009		0.47		0.00058 J B	0.00054 J B	0.0006 J	0.00058 J	0.00042 J
Lead, total recoverable (1)	mg/L	0.010	0.04		0.014		0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Manganese, total recoverable (1)	mg/L	1.30	1.93		1.3		0.17	0.16	0.18	0.17	0.17
Mercury	mg/L	0.0000013	0.00077		0.0000018	0.0000013	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Mercury (convert from ng/L)	mg/L	0.0000013	0.00077		0.0000018	0.0000013	0.00000022 J	0.00000027 J	0.00000033 J	0.00000015 J	0.00000019 J
Nickel, total recoverable (1)	mg/L	0.052	0.05		2.6		0.001 J B	0.0018 J B	0.0012 J	0.0012 J	0.0011 J
Selenium, total recoverable	mg/L	0.005	0.01		0.12		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver, total recoverable	mg/L	0.0002	0.00006		0.13		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Thallium, total recoverable	mg/L	0.0037	0.01		0.0012		0.001 U	0.001 U	0.001 U	0.0004 J	0.001 U
Vanadium, total recoverable	mg/L	0.012	0.03		0.053		0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc, total recoverable (1)	mg/L	0.12	0.12		3.3		0.02 U	0.02 U	0.0042 J B	0.02 U	0.02 U
Polychlorinated Biphenyls											
Aroclor-1016 (PCB-1016)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1221 (PCB-1221)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1232 (PCB-1232)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1242 (PCB-1242)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1248 (PCB-1248)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1254 (PCB-1254)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1260 (PCB-1260)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1262 (PCB-1262)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1268 (PCB-1268)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.000095 U	0.000095 U	0.000095 U	0.000095 U
General Chemistry											
Ammonia	mg/L						4.2	4.7	4.2	3.6	4.7
warmwater Unionized Ammonia (calculated)	mg/L	0.056	0.053				**0.47**	**0.53**	**0.47**	**0.40**	**0.53**
Biochemical oxygen demand (BOD)	mg/L	-					8.7	8.9	4.0 H	8.3	5.7
Chemical oxygen demand (COD)	mg/L	-					56	58	40	48	51
Cyanide (amenable)	mg/L	-					0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Cyanide (total)	mg/L	0.0052	0.0052		0.6		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Formaldehyde	mg/L	0.12	0.12		5.0		0.018 J B	0.018 J B	0.016 J B	0.017 J B	0.017 J B
Nitrate (as N)	mg/L	-			10		0.43	0.45	0.38	0.39	0.38
Oil and grease (HEM), polar	mg/L	-					1.0 J B	1.1 J B	1.3 J	1.4 J	1.6 J
pH, lab	s.u.	-					8.40 H	8.46 H	8.22 H	8.28 H	8.32 H
Phenolics (total)	mg/L	-					0.040 U	0.014 J	0.040 U	0.0094 J	0.0094 J
Total organic carbon (TOC)	mg/L	-					14	14	14	14	14

Notes:
B - For orgainics Method blank contamintion / For Inorganics = Estimated Value
J - Estimated concentration.
U - Not present at or above the associated value.
0.01 calculated value assuming a hardness of: 100 mg/L
Assuming a temperature of 20 degrees C and an average pH of 8.5 the percentage of NH3 in ammonia is: 11.2%

HCVd = HCV-Human Cancer Value-Drink
HNVd = Human Noncancer Value-Drink
FCV = Final Chronic Value
WV = Wildlife Value

TABLE 1

SURFACE WATER ANALYTICAL RESULTS OF THE SECONDARY POND
NODULAR FACILITY
SAGINAW, MICHIGAN

Sample Location:							*MD-229-11*	*MD-231-11*	*MD-233-11*	*SW-201-11*	*SW-201-11*
Sample ID:							*SW-58502-062911-SH-229*	*SW-58502-062911-SH-231*	*SW-58502-062911-SH-233*	*SW-58502-062711-SH-201*	*SW-58502-062711-SH-207*
Sample Date:				Rule 57			*6/29/2011*	*6/29/2011*	*6/29/2011*	*6/27/2011*	*6/27/2011*
		a	*b*	*c*	*d*	e					
Parameters:	*Units*	GSI	*FCV*	*HCVd*	*HNVd*	*WV*					
Metals											
Antimony, total recoverable	mg/L	0.13	0.24		0.0017		0.00051 J	0.00052 J	0.00049 J	0.00031 J	0.00052 J
Arsenic, total recoverable	mg/L	0.01	0.15	0.01	0.01		0.0024 J	0.0025 J	0.0025 J	0.0023 J	0.0023 J
Barium, total recoverable (1)	mg/L	0.44	0.44		1.9		0.043 J	0.044 J	0.042 J	0.032 J	0.041 J
Beryllium, total recoverable (1)	mg/L	0.0024	0.002		0.16		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium, total recoverable (1)	mg/L	0.0022	0.0025		0.0025		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chromium, total recoverable	mg/L	0.011	0.07		0.12		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cobalt, total recoverable	mg/L	0.1	0.10				0.00019 J	0.00019 J	0.00019 J	0.00016 J	0.00017 J
Copper, total recoverable (1)	mg/L	0.0090	0.009		0.47		0.00062 J	0.00056 J	0.00057 J	0.0011 J	0.00045 J
Lead, total recoverable (1)	mg/L	0.010	0.04		0.014		0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Manganese, total recoverable (1)	mg/L	1.30	1.93		1.3		0.17	0.2	0.17	0.13	0.098
Mercury	mg/L	0.0000013	0.00077		0.0000018	0.0000013	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Mercury (convert from ng/L)	mg/L	0.0000013	0.00077		0.0000018	0.0000013	0.000001	0.00000023 J	0.00000032 J	0.0000004 J	0.0000005 U
Nickel, total recoverable (1)	mg/L	0.052	0.05		2.6		0.0013 J	0.00095 J	0.0011 J	0.0011 J	0.001 J
Selenium, total recoverable	mg/L	0.005	0.01		0.12		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver, total recoverable	mg/L	0.0002	0.00006		0.13		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Thallium, total recoverable	mg/L	0.0037	0.01		0.0012		0.001 U	0.001 U	0.001 U	0.00037 J	0.001 U
Vanadium, total recoverable	mg/L	0.012	0.03		0.053		0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc, total recoverable (1)	mg/L	0.12	0.12		3.3		0.02 U	0.02 U	0.0025 J B	0.0052 J B	0.0024 J B
Polychlorinated Biphenyls											
Aroclor-1016 (PCB-1016)	mg/L	0.0002		0.000000026		0.00000012	0.00011 U	0.000096 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1221 (PCB-1221)	mg/L	0.0002		0.000000026		0.00000012	0.00011 U	0.000096 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1232 (PCB-1232)	mg/L	0.0002		0.000000026		0.00000012	0.00011 U	0.000096 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1242 (PCB-1242)	mg/L	0.0002		0.000000026		0.00000012	0.00011 U	0.000096 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1248 (PCB-1248)	mg/L	0.0002		0.000000026		0.00000012	0.00011 U	0.000096 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1254 (PCB-1254)	mg/L	0.0002		0.000000026		0.00000012	0.00011 U	0.000096 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1260 (PCB-1260)	mg/L	0.0002		0.000000026		0.00000012	0.00011 U	0.000096 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1262 (PCB-1262)	mg/L	0.0002		0.000000026		0.00000012	0.00011 U	0.000096 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1268 (PCB-1268)	mg/L	0.0002		0.000000026		0.00000012	0.00011 U	0.000096 U	0.000095 U	0.000095 U	0.000095 U
General Chemistry											
Ammonia	mg/L						3.9	3.3	3.6	0.83 J	3.9
warmwater Unionized Ammonia (calculated)	mg/L	0.056	0.053				**0.44**	**0.37**	**0.40**	**0.09**	**0.44**
Biochemical oxygen demand (BOD)	mg/L	-					4.8	4.3	4.7	2.0 U	4.2
Chemical oxygen demand (COD)	mg/L	-					56	40	45	53	53
Cyanide (amenable)	mg/L	-					0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Cyanide (total)	mg/L	0.0052	0.0052		0.6		0.010 U	0.010 U	**0.0060 J**	0.010 U	0.010 U
Formaldehyde	mg/L	0.12	0.12		5.0		0.017 J B	0.019 J B	0.016 J B	0.019 J B	0.019 J B
Nitrate (as N)	mg/L	-			10		0.38	0.39	0.39	0.27	0.51
Oil and grease (HEM), polar	mg/L	-					0.77 J	4.8 U	1.0 J	1.1 J	1.3 J
pH, lab	s.u.	-					8.32 H	8.24 H	8.45 H	8.35 H	8.40 H
Phenolics (total)	mg/L	-					0.040 U	0.0094 J	0.040 U	0.040 U	0.0073 J
Total organic carbon (TOC)	mg/L	-					14	14	14	16	14

Notes:
B - For orgainics Method blank contamintion / For Inorganics = Estimated Value
J - Estimated concentration.
U - Not present at or above the associated value.
0.01 calculated value assuming a hardness of: 100 mg/L
Assuming a temperature of 20 degrees C and an average pH of 8.5 the percentage of NH3 in ammonia is: 11.2%

HCVd = HCV-Human Cancer Value-Drink
HNVd = Human Noncancer Value-Drink
FCV = Final Chronic Value
WV = Wildlife Value

TABLE 1

SURFACE WATER ANALYTICAL RESULTS OF THE SECONDARY POND
NODULAR FACILITY
SAGINAW, MICHIGAN

Sample Location:							*SW-203-11*	*SW-209-11*	*SW-211-11*	*SW-211-11*	*SW-214-11*
Sample ID:							*SW-58502-062711-SH-203*	*SW-58502-062811-SH-209*	*SW-58502-062811-SH-211*	*SW-58502-062811-SH-212*	*SW-58502-062811-SH-214*
Sample Date:				Rule 57			*6/27/2011*	*6/28/2011*	*6/28/2011*	*6/28/2011*	*6/28/2011*
		a	*b*	*c*	*d*	e				*(Duplicate)*	
Parameters:	*Units*	GSI	*FCV*	*HCVd*	*HNVd*	*WV*					
Metals											
Antimony, total recoverable	mg/L	0.13	0.24		0.0017		0.00031 J	0.00055 J	0.00055 J	0.00054 J	0.00053 J
Arsenic, total recoverable	mg/L	0.01	0.15	0.01	0.01		0.0026 J	0.0025 J	0.0024 J	0.0023 J	0.0024 J
Barium, total recoverable (1)	mg/L	0.44	0.44		1.9		0.033 J	0.043 J B	0.044 J B	0.042 J B	0.043 J B
Beryllium, total recoverable (1)	mg/L	0.0024	0.002		0.16		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium, total recoverable (1)	mg/L	0.0022	0.0025		0.0025		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chromium, total recoverable	mg/L	0.011	0.07		0.12		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cobalt, total recoverable	mg/L	0.1	0.10				0.00016 J	0.00021 J	0.00022 J	0.00021 J	0.00023 J
Copper, total recoverable (1)	mg/L	0.0090	0.009		0.47		0.00099 J	0.00058 J B	0.00072 J B	0.0006 J B	0.00055 J B
Lead, total recoverable (1)	mg/L	0.010	0.04		0.014		0.003 U	0.00027 J	0.00018 J	0.00018 J	0.003 U
Manganese, total recoverable (1)	mg/L	1.30	1.93		1.3		0.12	0.18	0.17	0.15	0.16
Mercury	mg/L	0.0000013	0.00077		0.0000018	0.0000013	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Mercury (convert from ng/L)	mg/L	0.0000013	0.00077		0.0000018	0.0000013	0.00000018 J	0.00000047 J	0.0000005 U	0.00000014 J	0.00000015 J
Nickel, total recoverable (1)	mg/L	0.052	0.05		2.6		0.0014 J	0.0011 J B	0.0013 J B	0.0011 J B	0.0012 J B
Selenium, total recoverable	mg/L	0.005	0.01		0.12		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver, total recoverable	mg/L	0.0002	0.00006		0.13		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Thallium, total recoverable	mg/L	0.0037	0.01		0.0012		0.00018 J	0.001 U	0.001 U	0.00021 J B	0.001 U
Vanadium, total recoverable	mg/L	0.012	0.03		0.053		0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Zinc, total recoverable (1)	mg/L	0.12	0.12		3.3		0.02 U	0.02 U	0.0027 J B	0.0035 J B	0.02 U
Polychlorinated Biphenyls											
Aroclor-1016 (PCB-1016)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.0001 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1221 (PCB-1221)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.0001 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1232 (PCB-1232)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.0001 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1242 (PCB-1242)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.0001 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1248 (PCB-1248)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.0001 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1254 (PCB-1254)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.0001 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1260 (PCB-1260)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.0001 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1262 (PCB-1262)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.0001 U	0.000095 U	0.000095 U	0.000095 U
Aroclor-1268 (PCB-1268)	mg/L	0.0002		0.000000026		0.00000012	0.000095 U	0.0001 U	0.000095 U	0.000095 U	0.000095 U
General Chemistry											
Ammonia	mg/L						1.1 J	4.2	4.2	3.9	4.2
warmwater Unionized Ammonia (calculated)	mg/L	0.056	0.053				**0.12**	**0.47**	**0.47**	**0.44**	**0.47**
Biochemical oxygen demand (BOD)	mg/L	-					2.0 U	12	7.6	8.0	7.4
Chemical oxygen demand (COD)	mg/L	-					51	48	33	30	38
Cyanide (amenable)	mg/L	-					0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Cyanide (total)	mg/L	0.0052	0.0052		0.6		0.010 U	0.010 U	**0.0071 J**	0.010 U	0.010 U
Formaldehyde	mg/L	0.12	0.12		5.0		0.022 J B	0.018 J B	0.018 J B	0.016 J B	0.018 J B
Nitrate (as N)	mg/L	-			10		0.27	0.48	0.46	0.46	0.45
Oil and grease (HEM), polar	mg/L	-					4.9 U	1.2 J B	0.82 J B	1.4 J B	5.2 U
pH, lab	s.u.	-					8.55 H	8.27 H	8.40 H	8.25 H	8.23 H
Phenolics (total)	mg/L	-					0.040 U	0.23	0.040 U	0.040 U	0.011 J
Total organic carbon (TOC)	mg/L	-					15	15	14	14	14

Notes:
B - For orgainics Method blank contamintion / For Inorganics = Estimated Value
J - Estimated concentration.
U - Not present at or above the associated value.
0.01 calculated value assuming a hardness of: 100 mg/L
Assuming a temperature of 20 degrees C and an average pH of 8.5 the percentage of NH3 in ammonia is: 11.2%

HCVd = HCV-Human Cancer Value-Drink
HNVd = Human Noncancer Value-Drink
FCV = Final Chronic Value
WV = Wildlife Value

TABLE 1

SURFACE WATER ANALYTICAL RESULTS OF THE SECONDARY POND
NODULAR FACILITY
SAGINAW, MICHIGAN

Sample Location:							*SW-222-11*	*SW-224-11*	*SW-226-11*	*SW-228-11*	*SW-230-11*
Sample ID:							*SW-58502-062911-SH-222*	*SW-58502-062911-SH-224*	*SW-58502-062911-SH-226*	*SW-58502-062911-SH-228*	*SW-58502-062911-SH-230*
Sample Date:				Rule 57			*6/29/2011*	*6/29/2011*	*6/29/2011*	*6/29/2011*	*6/29/2011*
		a	*b*	*c*	*d*	e					
Parameters:	*Units*	GSI	*FCV*	*HCVd*	*HNVd*	*WV*					
Metals											
Antimony, total recoverable	mg/L	0.13	0.24		0.0017		0.0005 J	0.00049 J	0.00052 J	0.00055 J	0.00076 J
Arsenic, total recoverable	mg/L	0.01	0.15	0.01	0.01		0.0025 J	0.0024 J	0.0023 J	0.0024 J	0.0027 J
Barium, total recoverable (1)	mg/L	0.44	0.44		1.9		0.045 J	0.043 J	0.043 J	0.043 J	0.046 J
Beryllium, total recoverable (1)	mg/L	0.0024	0.002		0.16		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium, total recoverable (1)	mg/L	0.0022	0.0025		0.0025		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chromium, total recoverable	mg/L	0.011	0.07		0.12		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cobalt, total recoverable	mg/L	0.1	0.10				0.00021 J	0.00019 J	0.00018 J	0.0002 J	0.00023 J
Copper, total recoverable (1)	mg/L	0.0090	0.009		0.47		0.00053 J	0.0007 J	0.00058 J	0.0005 J	0.00068 J
Lead, total recoverable (1)	mg/L	0.010	0.04		0.014		0.003 U	0.003 U	0.003 U	0.003 U	0.00019 J
Manganese, total recoverable (1)	mg/L	1.30	1.93		1.3		0.19	0.17	0.16	0.17	0.19 B
Mercury	mg/L	0.0000013	0.00077		0.0000018	0.0000013	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Mercury (convert from ng/L)	mg/L	0.0000013	0.00077		0.0000018	0.0000013	0.0000003 J	0.00000026 J	0.0000002 J	0.00000024 J	0.0000005 U
Nickel, total recoverable (1)	mg/L	0.052	0.05		2.6		0.0013 J	0.001 J	0.00097 J	0.0011 J	0.0013 J
Selenium, total recoverable	mg/L	0.005	0.01		0.12		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver, total recoverable	mg/L	0.0002	0.00006		0.13		0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Thallium, total recoverable	mg/L	0.0037	0.01		0.0012		0.001 U	0.001 U	0.001 U	0.001 U	0.0011
Vanadium, total recoverable	mg/L	0.012	0.03		0.053		0.00066 J	0.004 U	0.004 U	0.004 U	0.004 U
Zinc, total recoverable (1)	mg/L	0.12	0.12		3.3		0.0041 J B	0.0035 J B	0.0031 J B	0.0029 J B	0.0024 J
Polychlorinated Biphenyls											
Aroclor-1016 (PCB-1016)	mg/L	0.0002		0.000000026		0.00000012	0.0001 U	0.000095 U	0.000097 U	0.000095 U	0.000095 U
Aroclor-1221 (PCB-1221)	mg/L	0.0002		0.000000026		0.00000012	0.0001 U	0.000095 U	0.000097 U	0.000095 U	0.000095 U
Aroclor-1232 (PCB-1232)	mg/L	0.0002		0.000000026		0.00000012	0.0001 U	0.000095 U	0.000097 U	0.000095 U	0.000095 U
Aroclor-1242 (PCB-1242)	mg/L	0.0002		0.000000026		0.00000012	0.0001 U	0.000095 U	0.000097 U	0.000095 U	0.000095 U
Aroclor-1248 (PCB-1248)	mg/L	0.0002		0.000000026		0.00000012	0.0001 U	0.000095 U	0.000097 U	0.000095 U	0.000095 U
Aroclor-1254 (PCB-1254)	mg/L	0.0002		0.000000026		0.00000012	0.0001 U	0.000095 U	0.000097 U	0.000095 U	0.000095 U
Aroclor-1260 (PCB-1260)	mg/L	0.0002		0.000000026		0.00000012	0.0001 U	0.000095 U	0.000097 U	0.000095 U	0.000095 U
Aroclor-1262 (PCB-1262)	mg/L	0.0002		0.000000026		0.00000012	0.0001 U	0.000095 U	0.000097 U	0.000095 U	0.000095 U
Aroclor-1268 (PCB-1268)	mg/L	0.0002		0.000000026		0.00000012	0.0001 U	0.000095 U	0.000097 U	0.000095 U	0.000095 U
General Chemistry											
Ammonia	mg/L						3.6	3.9	3.6	4.7	4.2
warmwater Unionized Ammonia (calculated)	mg/L	0.056	0.053				**0.40**	**0.44**	**0.40**	**0.53**	**0.47**
Biochemical oxygen demand (BOD)	mg/L	-					8.5	7.8	8.0	4.3	6.5
Chemical oxygen demand (COD)	mg/L	-					40	43	51	51	48
Cyanide (amenable)	mg/L	-					0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Cyanide (total)	mg/L	0.0052	0.0052		0.6		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
Formaldehyde	mg/L	0.12	0.12		5.0		0.017 J B	0.020 J B	0.017 J B	0.018 J B	0.016 J B
Nitrate (as N)	mg/L	-			10		0.38	0.39	0.38	0.37	0.39
Oil and grease (HEM), polar	mg/L	-					1.0 J	1.1 J	1.2 J	1.2 J	0.91 J
pH, lab	s.u.	-					8.27 H	8.28 H	8.35 H	8.26 H	8.30 H
Phenolics (total)	mg/L	-					0.040 U	0.0094 J	0.040 U	0.040 U	0.040 U
Total organic carbon (TOC)	mg/L	-					14	14	14	14	14

Notes:
B - For orgainics Method blank contamintion / For Inorganics = Estimated Value
J - Estimated concentration.
U - Not present at or above the associated value.
0.01 calculated value assuming a hardness of: 100 mg/L
Assuming a temperature of 20 degrees C and an average pH of 8.5 the percentage of NH3 in ammonia is: 11.2%

HCVd = HCV-Human Cancer Value-Drink
HNVd = Human Noncancer Value-Drink
FCV = Final Chronic Value
WV = Wildlife Value

TABLE 1

SURFACE WATER ANALYTICAL RESULTS OF THE SECONDARY POND
NODULAR FACILITY
SAGINAW, MICHIGAN

Sample Location:							***SW-232-11***
Sample ID:							***SW-58502-062911-SH-232***
Sample Date:				Rule 57			***6/29/2011***
		a	***b***	***c***	***d***	***e***	
Parameters:	***Units***	GSI	***FCV***	***HCVd***	***HNVd***	***WV***	
Metals							
Antimony, total recoverable	mg/L	0.13	0.24		0.0017		0.00047 J
Arsenic, total recoverable	mg/L	0.01	0.15	0.01	0.01		0.0025 J
Barium, total recoverable (1)	mg/L	0.44	0.44		1.9		0.042 J
Beryllium, total recoverable (1)	mg/L	0.0024	0.002		0.16		0.001 U
Cadmium, total recoverable (1)	mg/L	0.0022	0.0025		0.0025		0.001 U
Chromium, total recoverable	mg/L	0.011	0.07		0.12		0.005 U
Cobalt, total recoverable	mg/L	0.1	0.10				0.00019 J
Copper, total recoverable (1)	mg/L	0.0090	0.009		0.47		0.00051 J
Lead, total recoverable (1)	mg/L	0.010	0.04		0.014		0.003 U
Manganese, total recoverable (1)	mg/L	1.30	1.93		1.3		0.17
Mercury	mg/L	0.0000013	0.00077		0.0000018	0.0000013	0.0002 U
Mercury (convert from ng/L)	mg/L	0.0000013	0.00077		0.0000018	0.0000013	0.0000005 U
Nickel, total recoverable (1)	mg/L	0.052	0.05		2.6		0.0012 J
Selenium, total recoverable	mg/L	0.005	0.01		0.12		0.005 U
Silver, total recoverable	mg/L	0.0002	0.00006		0.13		0.0002 U
Thallium, total recoverable	mg/L	0.0037	0.01		0.0012		0.001 U
Vanadium, total recoverable	mg/L	0.012	0.03		0.053		0.004 U
Zinc, total recoverable (1)	mg/L	0.12	0.12		3.3		0.0024 J B
Polychlorinated Biphenyls							
Aroclor-1016 (PCB-1016)	mg/L	0.0002		0.000000026		0.00000012	0.0001 U
Aroclor-1221 (PCB-1221)	mg/L	0.0002		0.000000026		0.00000012	0.0001 U
Aroclor-1232 (PCB-1232)	mg/L	0.0002		0.000000026		0.00000012	0.0001 U
Aroclor-1242 (PCB-1242)	mg/L	0.0002		0.000000026		0.00000012	0.0001 U
Aroclor-1248 (PCB-1248)	mg/L	0.0002		0.000000026		0.00000012	0.0001 U
Aroclor-1254 (PCB-1254)	mg/L	0.0002		0.000000026		0.00000012	0.0001 U
Aroclor-1260 (PCB-1260)	mg/L	0.0002		0.000000026		0.00000012	0.0001 U
Aroclor-1262 (PCB-1262)	mg/L	0.0002		0.000000026		0.00000012	0.0001 U
Aroclor-1268 (PCB-1268)	mg/L	0.0002		0.000000026		0.00000012	0.0001 U
General Chemistry							
Ammonia	mg/L						3.9
warmwater Unionized Ammonia (calculated)	mg/L	0.056	0.053				**0.44**
Biochemical oxygen demand (BOD)	mg/L	-					6.8
Chemical oxygen demand (COD)	mg/L	-					51
Cyanide (amenable)	mg/L	-					0.010 U
Cyanide (total)	mg/L	0.0052	0.0052		0.6		0.010 U
Formaldehyde	mg/L	0.12	0.12		5.0		0.021 J B
Nitrate (as N)	mg/L	-			10		0.40
Oil and grease (HEM), polar	mg/L	-					0.81 J
pH, lab	s.u.	-					8.39 H
Phenolics (total)	mg/L	-					0.040 U
Total organic carbon (TOC)	mg/L	-					14

Notes:
B - For orgainics Method blank contamintion / For Inorganics = Estimated Value
J - Estimated concentration.
U - Not present at or above the associated value.
0.01 calculated value assuming a hardness of: 100 mg/L
Assuming a temperature of 20 degrees C and an average pH of 8.5 the percentage of NH3 in ammonia is: 11.2%

HCVd = HCV-Human Cancer Value-Drink
HNVd = Human Noncancer Value-Drink
FCV = Final Chronic Value
WV = Wildlife Value

TABLE 2

ANALYTICAL RESULTS SUMMARY- SEDIMENT DATA
RACER NODULAR
JUNE 2011

Sample Location:			*SD-205-11*	*SD-206-11*	*SD-217-11*	*SD-218-11*
Sample ID:			*S-58502-062711-SH-205*	*S-58502-062711-SH-206*	*S-58502-062811-SH-217*	*S-58502-062811-SH-218*
Sample Date:			*6/27/2011*	*6/27/2011*	*6/28/2011*	*6/28/2011*
Sample Depth:			-	-	-	-
Parameters:	*Units*	Res/Non_Res/GW Prot_GW SW Interface Prot				
Metals						
Antimony	mg/kg	94	0.096 J	0.55	3.2	5.8
Arsenic	mg/kg	4.6	2.7	3.8	**12**	**15**
Barium	mg/kg	-	45	52	150	220
Beryllium	mg/kg	-	0.17 U	0.22 U	1.1	1.3
Cadmium	mg/kg	-	0.12	0.50	6.9	9.3
Chromium	mg/kg	3.3	**14**	**23**	**130**	**170**
Cobalt	mg/kg	2	**4.8**	**5.1**	**6.9**	**8.4**
Copper	mg/kg	-	12	34	110	160
Lead	mg/kg	-	9.8	57	1000	1200
Manganese	mg/kg	-	500	1000	5400	9900
Mercury	mg/kg	0.05	0.013 J	0.060 U	**0.072 J**	**0.083 J**
Nickel	mg/kg	-	13	17	31	38
Selenium	mg/kg	0.4	0.22	**0.58**	**3.3**	**5.1**
Silver	mg/kg	0.1	0.033 J	**0.16**	**1.9**	**2.8**
Thallium	mg/kg	4.2	0.15	0.24	0.83 J	0.93 J
Vanadium	mg/kg	190	17	18	19	33
Zinc	mg/kg	-	15	340	6900	5900
Metals - SPLPEM						
Cadmium	umol/g	-	0.0012	0.0025	0.066	0.053
Copper	umol/g	-	0.11	0.13	1.0	1.1
Lead	umol/g	-	0.045	0.11	6.4	5.7
Mercury	umol/g	-	0.000062 U	0.000062 U	0.000062 U	0.000062 U
Nickel	umol/g	-	0.083	0.12	0.41	0.45
SEM	umol/g	-	1.1	2.8	100	70
SEM/AVS	none	-	0.53	0.52	5.3	3.6
Sulfide	umol/g	-	2.1	5.3	19	19
Zinc	umol/g	-	0.84	2.4	94	62
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	mg/kg	-	0.35 U	0.39 U	0.55 U	0.61 U
Aroclor-1221 (PCB-1221)	mg/kg	-	0.35 U	0.39 U	0.55 U	0.61 U
Aroclor-1232 (PCB-1232)	mg/kg	-	0.35 U	0.39 U	0.55 U	0.61 U
Aroclor-1242 (PCB-1242)	mg/kg	-	0.35 U	0.39 U	0.55 U	0.28 J
Aroclor-1248 (PCB-1248)	mg/kg	-	0.35 U	0.048 J	0.057 J	0.61 U
Aroclor-1254 (PCB-1254)	mg/kg	-	0.35 U	0.39 U	0.55 U	0.61 U
Aroclor-1260 (PCB-1260)	mg/kg	-	0.35 U	0.39 U	0.55 U	0.61 U
Aroclor-1262 (PCB-1262)	mg/kg	-	0.35 U	0.39 U	0.55 U	0.61 U
Aroclor-1268 (PCB-1268)	mg/kg	-	0.35 U	0.39 U	0.55 U	0.61 U
General Chemistry						
Ammonia	mg/kg	-	9.9	9.4	51	110
Cyanide (total)	mg/kg	0.1	0.64 U	0.74 U	**1.7**	**1.1**
Nitrate (as N)	mg/kg	-	5.0 U	5.0 U	5.0 U	5.0 U
Nitrite (as N)	mg/kg	-	5.0 U	0.19 J	5.0 U	5.0 U
Orthophosphate	mg/kg	-	1.7 J	5.0 U	4.5 J	3.3 J
pH, lab	s.u.	-	8.44 J	8.21 J	9.84 J	9.50 J
Total organic carbon (TOC)	mg/kg	-	18000	19000	66000	68000

Notes:
J - Estimated concentration.
U - Not present at or above the associated value.

TABLE 2

ANALYTICAL RESULTS SUMMARY- SEDIMENT DATA
RACER NODULAR
JUNE 2011

Sample Location:			*SD-219-11*	*SD-220-11*	*SD-235-11*	*SD-236-11*
Sample ID:			*S-58502-062811-SH-219*	*S-58502-062811-SH-220*	*S-58502-063011-SH-235*	*S-58502-063011-SH-236*
Sample Date:			*6/28/2011*	*6/28/2011*	*6/30/2011*	*6/30/2011*
Sample Depth:			-	-	-	-
Parameters:	*Units*	Res/Non_Res/GW Prot_GW SW Interface Prot				
Metals						
Antimony	mg/kg	94	1.7	38 U	5.1 J	1.0 J
Arsenic	mg/kg	4.6	**9.6**	19 U	**19**	**7.7**
Barium	mg/kg	-	140	140	130	78
Beryllium	mg/kg	-	0.79	0.62	1.7	0.19 U
Cadmium	mg/kg	-	3.0	4.4	5.9	1.4
Chromium	mg/kg	3.3	**110**	**92**	**130**	**46**
Cobalt	mg/kg	2	**6.3**	**9.4**	**6.2**	**7.3**
Copper	mg/kg	-	77	90	120	44
Lead	mg/kg	-	340	550	900	210
Manganese	mg/kg	-	3700	3400	4900	1500
Mercury	mg/kg	0.05	0.035 J	**0.057 J**	**0.17**	**0.078**
Nickel	mg/kg	-	28	35	45	26
Selenium	mg/kg	0.4	**2.3**	38 U	**3.3**	**0.89**
Silver	mg/kg	0.1	**0.78**	19 U	**2.9**	**0.58**
Thallium	mg/kg	4.2	0.38 J	19 U	**5.0 J**	**6.0 J**
Vanadium	mg/kg	190	20	31	16	23
Zinc	mg/kg	-	2100	13000	41000	6800
Metals - SPLPEM						
Cadmium	umol/g	-	0.015	0.016	0.051	0.048
Copper	umol/g	-	0.25	0.57	1.3	1.2
Lead	umol/g	-	1.5	1.5	4.3	4.1
Mercury	umol/g	-	0.000062 U	0.000062 U	0.000062 U	0.000062 U
Nickel	umol/g	-	0.30	0.24	0.47	0.45
SEM	umol/g	-	26	90	380	330
SEM/AVS	none	-	2.6	8.8	8.8	11
Sulfide	umol/g	-	9.9	10	43	31
Zinc	umol/g	-	24	88	370	330
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	mg/kg	-	0.57 U	0.69 U	0.81 U	0.51 U
Aroclor-1221 (PCB-1221)	mg/kg	-	0.57 U	0.69 U	0.81 U	0.51 U
Aroclor-1232 (PCB-1232)	mg/kg	-	0.57 U	0.69 U	0.81 U	0.51 U
Aroclor-1242 (PCB-1242)	mg/kg	-	0.33 J	0.69 U	0.81 U	0.073 J
Aroclor-1248 (PCB-1248)	mg/kg	-	0.57 U	0.17 J	0.074 J	0.51 U
Aroclor-1254 (PCB-1254)	mg/kg	-	0.57 U	0.69 U	0.81 U	0.052 J
Aroclor-1260 (PCB-1260)	mg/kg	-	0.57 U	0.69 U	0.81 U	0.51 U
Aroclor-1262 (PCB-1262)	mg/kg	-	0.57 U	0.69 U	0.81 U	0.51 U
Aroclor-1268 (PCB-1268)	mg/kg	-	0.57 U	0.69 U	0.81 U	0.51 U
General Chemistry						
Ammonia	mg/kg	-	26	35	64	46
Cyanide (total)	mg/kg	0.1	**1.5**	**1.1 J**	**4.1**	0.96 U
Nitrate (as N)	mg/kg	-	5.0 U	5.0 U	5.0 U	5.0 U
Nitrite (as N)	mg/kg	-	5.0 U	5.0 U	0.15 J	5.0 U
Orthophosphate	mg/kg	-	4.0 J	2.5 J	6.4	3.9 J
pH, lab	s.u.	-	9.87 J	8.83 J	8.65	8.80
Total organic carbon (TOC)	mg/kg	-	89000	47000	44000 J	41000 J

Notes:
J - Estimated concentration.
U - Not present at or above the associated value.

TABLE 2

ANALYTICAL RESULTS SUMMARY- SEDIMENT DATA
RACER NODULAR
JUNE 2011

Sample Location:			*SD-237-11*	*SD-238-11*	*SD-239-11*	*SD-239-11*
Sample ID:			*S-58502-063011-SH-237*	*S-58502-063011-SH-238*	*S-58502-063011-SH-239*	*S-58502-063011-SH-240*
Sample Date:			*6/30/2011*	*6/30/2011*	*6/30/2011*	*6/30/2011*
Sample Depth:			-	-	-	-
						(Duplicate)
Parameters:	*Units*	Res/Non_Res/GW Prot_GW SW Interface Prot				
Metals						
Antimony	mg/kg	94	3.2 J	3.2 J	0.77 J	0.87 J
Arsenic	mg/kg	4.6	**14**	**14**	**5.0**	**6.1**
Barium	mg/kg	-	130	140	74	81
Beryllium	mg/kg	-	1.9	1.8	0.25 U	0.93
Cadmium	mg/kg	-	6.0	5.2	0.72	0.67
Chromium	mg/kg	3.3	**130**	**110**	**39**	**47**
Cobalt	mg/kg	2	**7.7**	**8.4**	**5.3**	**5.8**
Copper	mg/kg	-	130	120	30	34
Lead	mg/kg	-	840	760	120	140
Manganese	mg/kg	-	4800	4500	1300	1600
Mercury	mg/kg	0.05	**0.14**	**0.14**	0.048 J	0.040 J
Nickel	mg/kg	-	46	43	19	22
Selenium	mg/kg	0.4	**3.1**	**2.9**	**0.84**	**0.89**
Silver	mg/kg	0.1	**2.3**	**1.9**	**0.59**	**0.78**
Thallium	mg/kg	4.2	18 U	19 U	0.17 J	0.23
Vanadium	mg/kg	190	22	27	18	20
Zinc	mg/kg	-	26000	21000	1500	980
Metals - SPLPEM						
Cadmium	umol/g	-	0.045	0.052	0.0060	0.0067
Copper	umol/g	-	1.2	1.3	0.31	0.30
Lead	umol/g	-	3.5	4.2	0.50	0.54
Mercury	umol/g	-	0.000062 U	0.000062 U	0.000062 U	0.000062 U
Nickel	umol/g	-	0.39	0.43	0.20	0.20
SEM	umol/g	-	280	320	15	22
SEM/AVS	none	-	7.6	5.4	3.6	3.6
Sulfide	umol/g	-	37	60	4.1	6.2
Zinc	umol/g	-	270	310	14	21
Polychlorinated Biphenyls						
Aroclor-1016 (PCB-1016)	mg/kg	-	0.67 U	0.75 U	0.42 U	4.1 U
Aroclor-1221 (PCB-1221)	mg/kg	-	0.67 U	0.75 U	0.42 U	4.1 U
Aroclor-1232 (PCB-1232)	mg/kg	-	0.67 U	0.75 U	0.42 U	4.1 U
Aroclor-1242 (PCB-1242)	mg/kg	-	0.1 J	0.75 U	0.2 J	2.6 J
Aroclor-1248 (PCB-1248)	mg/kg	-	0.67 U	0.75 U	0.42 U	4.1 U
Aroclor-1254 (PCB-1254)	mg/kg	-	0.068 J	0.75 U	0.42 U	0.7 J
Aroclor-1260 (PCB-1260)	mg/kg	-	0.67 U	0.75 U	0.42 U	4.1 U
Aroclor-1262 (PCB-1262)	mg/kg	-	0.67 U	0.75 U	0.42 U	4.1 U
Aroclor-1268 (PCB-1268)	mg/kg	-	0.67 U	0.75 U	0.42 U	4.1 U
General Chemistry						
Ammonia	mg/kg	-	82	47	85	65
Cyanide (total)	mg/kg	0.1	**2.0**	**2.5**	0.78 U	0.74 U
Nitrate (as N)	mg/kg	-	5.1 U	5.0 U	5.0 U	5.0 U
Nitrite (as N)	mg/kg	-	5.1 U	5.0 U	5.0 U	5.0 U
Orthophosphate	mg/kg	-	3.8 J	2.7 J	4.3 J	2.7 J
pH, lab	s.u.	-	8.71	8.77	8.48	8.36
Total organic carbon (TOC)	mg/kg	-	37000 J	37000 J	32000 J	20000 J

Notes:
J - Estimated concentration.
U - Not present at or above the associated value.

TABLE 2

ANALYTICAL RESULTS SUMMARY- SEDIMENT DATA
RACER NODULAR
JUNE 2011

Sample Location:			***SD-241-11***
Sample ID:			***S-58502-063011-SH-241***
Sample Date:			***6/30/2011***
Sample Depth:			***-***
Parameters:	***Units***	Res/Non_Res/GW Prot_GW SW Interface Prot	
Metals			
Antimony	mg/kg	94	3.5 J
Arsenic	mg/kg	4.6	**9.8**
Barium	mg/kg	-	280
Beryllium	mg/kg	-	2.6
Cadmium	mg/kg	-	2.0
Chromium	mg/kg	3.3	**130**
Cobalt	mg/kg	2	**5.2**
Copper	mg/kg	-	67
Lead	mg/kg	-	370
Manganese	mg/kg	-	6900
Mercury	mg/kg	0.05	**0.15**
Nickel	mg/kg	-	24
Selenium	mg/kg	0.4	**3.1**
Silver	mg/kg	0.1	**1.3**
Thallium	mg/kg	4.2	0.86
Vanadium	mg/kg	190	17
Zinc	mg/kg	-	2100
Metals - SPLPEM			
Cadmium	umol/g	-	0.016
Copper	umol/g	-	0.025
Lead	umol/g	-	1.8
Mercury	umol/g	-	0.000062 U
Nickel	umol/g	-	0.26
SEM	umol/g	-	24
SEM/AVS	none	-	1.3
Sulfide	umol/g	-	19
Zinc	umol/g	-	22
Polychlorinated Biphenyls			
Aroclor-1016 (PCB-1016)	mg/kg	-	5.5 U
Aroclor-1221 (PCB-1221)	mg/kg	-	5.5 U
Aroclor-1232 (PCB-1232)	mg/kg	-	5.5 U
Aroclor-1242 (PCB-1242)	mg/kg	-	4.2 J
Aroclor-1248 (PCB-1248)	mg/kg	-	5.5 U
Aroclor-1254 (PCB-1254)	mg/kg	-	0.99 J
Aroclor-1260 (PCB-1260)	mg/kg	-	5.5 U
Aroclor-1262 (PCB-1262)	mg/kg	-	5.5 U
Aroclor-1268 (PCB-1268)	mg/kg	-	5.5 U
General Chemistry			
Ammonia	mg/kg	-	61
Cyanide (total)	mg/kg	0.1	**3.5**
Nitrate (as N)	mg/kg	-	5.0 U
Nitrite (as N)	mg/kg	-	5.0 U
Orthophosphate	mg/kg	-	1.7 J
pH, lab	s.u.	-	8.70
Total organic carbon (TOC)	mg/kg	-	57000 J

Notes:
J - Estimated concentration.
U - Not present at or above the associated value.

TABLE 3

AMMONIA ISOTOPE ANALYSIS
SAGINAW NODULAR IRON
SAGINAW, MI

Sample	Date	Position	Mass (mg)	N2 Ampl (volts)	N2 Area (V/s)	%N	Obs N (µg)	Exp N (µg)	Percent recovery	$d^{15}N$ (‰)	Comments
SH-208	22-Sep-11	5		0.81	19.80		38.31	40.00	95.78	23.82	
SH-208	22-Sep-11	6		0.80	19.53		37.80	40.00	94.50	23.39	
SH-208	22-Sep-11	7		0.82	20.02		38.75	40.00	96.89	23.84	
SH-204	22-Sep-11	8		0.19	4.98		9.63	40.00	24.08	18.18	
SH-204	22-Sep-11	9		0.20	5.49		10.62	40.00	26.55	20.19	
SH-204	22-Sep-11	10		0.21	5.61		10.85	40.00	27.13	17.13	
SH-202	22-Sep-11	11		0.28	7.27		14.08	40.00	35.20	20.01	
SH-202	22-Sep-11	12		0.27	7.09		13.72	40.00	34.31	19.30	
SH-202	22-Sep-11	14		0.27	7.00		13.55	40.00	33.86	19.38	
SH-216	22-Sep-11	15		0.29	7.58		14.68	40.00	36.69	8.66	
SH-216	22-Sep-11	16		0.66	16.08		31.12	40.00	77.80	22.84	
SH-216	22-Sep-11	17		0.66	16.06		31.08	40.00	77.71	22.67	
SH-215	22-Sep-11	18		0.73	17.82		34.50	40.00	86.24	23.58	
SH-215	22-Sep-11	19		0.70	17.11		33.11	40.00	82.76	23.73	
SH-215	22-Sep-11	20		0.71	17.29		33.47	40.00	83.66	23.50	
SH-213	22-Sep-11	21		0.79	19.16		37.08	40.00	92.71	23.81	
SH-213	22-Sep-11	22		0.79	19.13		37.01	40.00	92.54	23.36	
SH-213	22-Sep-11	23		0.77	18.65		36.09	40.00	90.22	23.44	
SH-210	22-Sep-11	24		0.73	17.63		34.12	40.00	85.31	25.27	
SH-210	22-Sep-11	26		0.70	16.79		32.49	40.00	81.23	25.79	
SH-210	22-Sep-11	27		0.72	17.26		33.41	40.00	83.53	25.80	
SH-227	22-Sep-11	28		0.66	15.78		30.54	40.00	76.35	23.73	
SH-227	22-Sep-11	29		0.63	15.28		29.57	40.00	73.92	23.25	
SH-227	22-Sep-11	30		0.66	15.78		30.54	40.00	76.36	23.56	
SH-233	22-Sep-11	31		0.84	20.05		38.81	40.00	97.02	23.77	
SH-233	22-Sep-11	32		0.84	20.08		38.85	40.00	97.13	23.89	
SH-233	22-Sep-11	33		0.83	19.90		38.52	40.00	96.31	23.75	
SH-231	22-Sep-11	34		0.94	22.37		43.29	40.00	108.23	23.75	
SH-231	22-Sep-11	35		0.94	22.37		43.29	40.00	108.23	23.62	
SH-231	22-Sep-11	36		0.90	21.46		41.53	40.00	103.83	22.36	
SH-225	22-Sep-11	38		0.81	20.63		39.93	40.00	99.81	23.72	
SH-225	22-Sep-11	39		0.83	20.75		40.17	40.00	100.42	23.64	
SH-225	22-Sep-11	40		0.84	20.72		40.11	40.00	100.27	23.98	
SH-229	22-Sep-11	41		0.77	18.95		36.67	40.00	91.69	23.72	
SH-229	22-Sep-11	42		0.78	19.06		36.89	40.00	92.23	23.91	
SH-229	22-Sep-11	43		0.74	17.87		34.59	40.00	86.46	26.45	
SH-223	22-Sep-11	44		0.73	17.76		34.38	40.00	85.95	23.89	
SH-223	22-Sep-11	45		0.67	16.47		31.87	40.00	79.67	23.41	
SH-223	22-Sep-11	46		0.51	12.81		24.79	40.00	61.98	12.27	
			min	**0.19**	**4.98**						
			max	**0.94**	**22.37**						
Note: the accuracy of "% recovery" depends on the accuracy of the supplied [NH4] data.											
Diffused standards											**Expected**
IAEA N1	22-Sep-11	70	0.150	0.67	16.82	21.70	32.56	40.00	81.39	0.45	**d15N = 0.43**
IAEA N1	22-Sep-11	71	0.167	0.72	17.56	20.35	33.98	40.00	84.94	0.31	**d15N = 0.43**
IAEA N1	22-Sep-11	72	0.200	0.81	19.64	19.00	38.01	40.00	95.02	0.53	**d15N = 0.43**
									avg	**0.43**	
									sd	**0.12**	
IAEA N2	22-Sep-11	74	0.184	0.85	20.54	21.61	39.76	40.00	99.40	20.29	**d15N = 20.41**
IAEA N2	22-Sep-11	75	0.204	0.95	22.99	21.81	44.50	40.00	111.24	20.52	**d15N = 20.41**
IAEA N2	22-Sep-11	76	0.188	0.89	21.48	22.11	41.57	40.00	103.91	20.42	**d15N = 20.41**
									avg	**20.41**	
									sd	**0.11**	
Lab (NH4)2SO4	22-Sep-11	77		0.77	18.09		35.00	40.00	87.51	0.92	
Lab (NH4)2SO4	22-Sep-11	79		0.74	17.88		34.61	40.00	86.52	0.84	
Lab (NH4)2SO4	22-Sep-11	81		0.75	17.90		34.65	40.00	86.62	0.92	
Lab (NH4)2SO4	22-Sep-11	82		0.74	17.85		34.55	40.00	86.38	1.08	
Lab (NH4)2SO4	22-Sep-11	84		0.75	17.97		34.78	40.00	86.96	1.09	
Lab (NH4)2SO4	22-Sep-11	86		0.74	17.66		34.19	40.00	85.46	0.98	
			min	**0.74**	**17.66**				**avg**	**0.97**	
			max	**0.77**	**18.09**				**sd**	**0.10**	
Blank 1	22-Sep-11	67		-	-	-	-	-	-	-	
Blank 2	22-Sep-11	68		-	-	-	-	-	-	-	
Blank 3	22-Sep-11	69		-	-	-	-	-	-	-	
Powdered standards											**Expected**
IAEA N1	22-Sep-11	87	0.288	1.30	31.59	21.23	61.13			0.43	**d15N = 0.43**
IAEA N2	22-Sep-11	88	0.286	1.30	31.73	21.47	61.40			20.41	**d15N = 20.41**
Lab (NH4)2SO4	22-Sep-11	3	0.303	1.36	33.40	21.34	64.65			0.73	
Lab (NH4)2SO4	22-Sep-11	4	0.307	1.41	34.90	22.00	67.54			0.78	
Lab (NH4)2SO4	22-Sep-11	13	0.322	1.44	35.53	21.36	68.76			0.75	
Lab (NH4)2SO4	22-Sep-11	25	0.308	1.42	34.49	21.67	66.75			0.90	
Lab (NH4)2SO4	22-Sep-11	37	0.319	1.39	36.39	22.08	70.44			0.84	
Lab (NH4)2SO4	22-Sep-11	49	0.278	1.26	31.41	21.87	60.80			0.73	
Lab (NH4)2SO4	22-Sep-11	61	0.300	1.37	33.61	21.69	65.06			0.86	
Lab (NH4)2SO4	22-Sep-11	73	0.328	1.47	36.18	21.35	70.02			0.74	
Lab (NH4)2SO4	22-Sep-11	85	0.292	1.35	32.87	21.79	63.62			0.64	
Lab (NH4)2SO4	22-Sep-11	89	1.007	4.72	113.65	21.84	219.95			0.97	
Lab (NH4)2SO4	22-Sep-11	90	0.466	2.18	52.47	21.79	101.55			0.99	
Lab (NH4)2SO4	22-Sep-11	91	0.256	1.17	28.40	21.47	54.97			0.76	
Lab (NH4)2SO4	22-Sep-11	92	0.054	0.23	5.67	20.33	10.98			0.97	
Lab (NH4)2SO4	22-Sep-11	93	0.296	1.36	32.92	21.52	63.70			0.67	
			min	**0.23**	**5.67**				**avg**	**0.81**	
			max	**4.72**	**113.65**				**sd**	**0.11**	

TABLE 4

FIELD AMMONIA READINGS
SAGINAW NODULAR IRON
SAGINAW, MI

Location	23-Nov-11		2-Dec-11		9-Dec-11		16-Dec-11	
	Total Ammonia (mg/L)	Unionized Ammonia (mg/L) - calculated	Total Ammonia (mg/L)	Unionized Ammonia (mg/L) - calculated	Total Ammonia (mg/L)	Unionized Ammonia (mg/L) - calculated	Total Ammonia (mg/L)	Unionized Ammonia (mg/L) - calculated
Lagoon 5			0.44	0.0113	0.35	0.0063	0.11	0.0023
Secondary Pond 1(point)	0.44	0.0113	0.30	0.0077	0.30	0.0053	0.24	0.0050
Secondary Pond 2(pump house)	0.20	0.0051	0.10	0.0026	0.26	0.0046	0.23	0.0049
Secondary Pond 3(NE corner)	0.30	0.0077	0.40	0.0103	0.27	0.0048	0.28	0.0059
north ditch					0.02	0.0004		
railroad sump					0.00	0.0000		
Hack Rd. sump					0.25	0.0045	0.22	0.0046
Primary #3					0.68	0.0121	0.57	0.0120
Primary #4								
pH of Saginaw River	8.3		8.3 (1)		8.2		8.2 (1)	
Temperature of Saginaw River (^{o}F)	39.75		39.75 (1)		35.8		38.3	
Unionized ammonia fraction (%)	2.57%		2.57%		1.78%		2.09%	

Notes:
(1) Value you taken from previous reading as current day's data is unavailable
(2) USGS 04157000 SAGINAW RIVER AT SAGINAW, MI
- Rule 57 Criteria for cold water unionized ammonia is **0.029 mg/L**

TABLE 4

FIELD AMMONIA READINGS
SAGINAW NODULAR IRON
SAGINAW, MI

Location	21-Dec-11		4-Jan-12		11-Jan-12	
	Total Ammonia (mg/L)	Unionized Ammonia (mg/L) - calculated	Total Ammonia (mg/L)	Unionized Ammonia (mg/L) - calculated	Total Ammonia (mg/L)	Unionized Ammonia (mg/L) - calculated
Lagoon 5	0.21	0.0041	0.14	0.0027	0.35	0.0062
Secondary Pond 1(point)	0.37	0.0072	0.17	0.0033	0.42	0.0075
Secondary Pond 2(pump house)	0.23	0.0044	0.49	0.0095	0.32	0.0057
Secondary Pond 3(NE corner)	0.37	0.0071	0.28	0.0054	0.37	0.0066
north ditch						
railroad sump						
Hack Rd. sump	0.41	0.0080	1.70	**0.0328**	1.25	0.0223
Primary #3	0.88	0.0170	0.21	0.0041	0.27	0.0048
Primary #4	0.88	0.0170	1.05	0.0203	1.05	0.0187
pH of Saginaw River	8.2 (1)		8.2 (1)		8.2 (1)	
Temperature of Saginaw River (^{o}F)	36.4		36.4 (1)		34.1	
Unionized ammonia fraction (%)	1.93%		1.93%		1.78%	

Notes:
(1) Value you taken from previous reading as current day's data is unavailable
(2) USGS 04157000 SAGINAW RIVER AT SAGINAW, MI
- Rule 57 Criteria for cold water unionized ammonia is **0.029 mg/L**

Appendix B-2

Stormwater Discharge Results from Secondary Pond

TABLE G.2

SUMMARY OF SECONDARY POND DISCHARGE ANALYTICAL DATA
RACER- SAGINAW, MICHIGAN

Sample ID:			*W-58502-031412-SSH-260*	*W-58502-032912-SSH-261*	*W-58502-051712-SSH-262*
Sample Date:			*3/14/2012*	*3/29/2012*	*5/17/2012*
Matrix:			*SURFACE WATER*	*SURFACE WATER*	*SURFACE WATER*
Parameters	*Units*	*Rule 57 Water Quality Values- Surface Water Assessment Section Criteria* [1]			
Polychlorinated Biphenyls (PCBs)					
Aroclor-1016	ug/L	-	0.095U	0.095U	0.095U
Aroclor-1221	ug/L	-	0.095U	0.095U	0.095U
Aroclor-1232	ug/L	-	0.095U	0.095U	0.095U
Aroclor-1242	ug/L	-	0.095U	0.095U	0.095U
Aroclor-1248	ug/L	-	0.095U	0.095U	0.095U
Aroclor-1254	ug/L	-	0.095U	0.095U	0.095U
Aroclor-1260	ug/L	-	0.095U	0.095U	0.095U
Total PCBs	ug/L	0.000026	-	-	-
Volatiles					
Silver	ug/L	0.06	1.0U	1.0U	1.0U
Arsenic	ug/L	10	5.0U	5.0U	5.0U
Barium	ug/L	438[2]	31	31	24
Cadmium	ug/L	2.2[2]	1.0U	1.0U	1.0U
Chromium	ug/L	74.1[2]	2.0U	2.0U	2.0U
Copper	ug/L	9[2]	2.0U	2.0U	2.0U
Lead	ug/L	14	1.0U	1.0U	1.0U
Selenium	ug/L	5	5.0U	5.0U	5.0U
Zinc	ug/L	117.2[2]	10U	10U	10U
Other					
Mercury	ug/L	0.0013	0.20U	0.20U	0.20U
Total Suspended Solids (TSS)	mg/L	--	4.0U	4.0U	4.0U
Ammonia	mg/L	0.029	2.0U	2.0U	2.0U

Notes:
µg/L - micrograms per litre
mg/L - milligrams per litre
0.095U - concentrations were not dectable above the stated threshold value
(1) Criteria were selected from Rule 57 under the most stringent category for each parameter
(2) The criteria were calculated using a hardness of 100mg/L

Appendix C

Inspection Forms

Appendix C-1

Routine Maintenance Inspection Form

APPENDIX C-1

ROUTINE MAINTENANCE STORM WATER INSPECTION FORM
(Once every month during periods of inactivity and weekly during activity or within 24 hours of a storm event)

Inspection Date: _____ Time: _____
Name of Inspector(s): _____
Manager of SWPPP (signature): _____
Weather Conditions: _____

Checklist for visual site inspection - preventative maintenance inspections

Y/N/NA

1. Inspect discharge from outfalls to determine if they are meeting water quality standards
   - Outfall 020 (Southeast corner of property)
   - Outfall 021 (Controlled Overflow for Secondary Pond)
   - Outfall 022 (Emergency Outfall for North Ditch)
   - Outfall 023 (Railroad Sump - Northeast corner of property)

Area	Stains (y/n)	Oil Sheen (y/n)	Solids/Foam (y/n)	Odors (y/n)	Color/Clarity (y/n)	Abnormal Conditions (y/n)
Outfalls						
Drainage Ditches						
Sump pumps						
Fueling Areas						
Vehicle Parking Areas						

_____ 2. Inspect ditches for abnormal conditions

3. Evaluate areas of existing erosion, erosion protection, or erosion susceptible areas
   - classified sand pile
   - clay pile
   - primary settling basin
   - secondary pond berms

Water Level _____

_____ 4. Inspect waste container for leaks Empty Waste Bin: _____ (Y/N)

_____ 5. Sump pump operation

Additional Checklist for visual site inspection during periods of activity at the Site

_____ 6. Inspect designated parking/fueling areas for construction vehicles for leaks/spills
   - Construction Parking Location _____
   - Construction refueling Location _____

_____ 7. Inspect construction vehicle for signs of fuel and lubricant leaks.

_____ 8. Inspect sediment and erosion control measures to ensure compliance with County permit

Major Observations from Checklist: _____

Actions Taken: _____

Appendix C-2

Comprehensive Inspection Form

APPENDIX C-2

COMPREHENSIVE INSPECTION FORM
(Completed Quarterly)

Inspection Date: _____ Time: _____

Name of Inspector(s): _____

Manager of SWPPP (signature): _____

Weather Conditions: _____

Checklist for visual comprehensive inspections

Y/N/NA

_____ 1. Maintain all non-structural controls on outfalls and drainage ditches

_____ 2. Evaluate good housekeeping practices on Site.

_____ 3. Inspect property boundaries and evaluate adequacy of current security measures

_____ 4. Inspect vegetation areas for signs of stress

_____ 5. Evaluate areas of existing erosion, erosion protection, or erosion susceptible areas

_____ 6. Evaluate record keeping and reporting

_____ 7. Evaluate adequacy of spill prevention and response procedures

_____ 8. Evaluate employee training

_____ 9. Review and evaluate routine inspection forms.

Major Observations from Checklist: _____

_____

_____

APPENDIX C-2

COMPREHENSIVE INSPECTION FORM (continued)

Area	Stains (y/n)	Oil Sheen (y/n)	Solids/Foam (y/n)	Odors (y/n)	Color/Clarity (y/n)	Abnormal Conditions (y/n)
Outfalls						
Drainage Ditches						
Sump pumps						
Fueling Areas						
Construction Vehicle Parking Areas						

Major Observations from Checklist:

Corrective Actions:

Implementation Schedule for Corrective Actions:

I certify that a comprehensive evaluation was conducted in accordance with the NPDES Permit. Unless otherwise noted above, the inspected areas are in compliance with the requirements of the SWPPP and NPDES Permit No. MI0059042.

Inspector's Signature Date

Appendix C-3

MDEQ Spill or Release Report

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

SPILL OR RELEASE REPORT

NOTE: Some regulations require a specific form to use and procedures to follow when reporting a release. Those forms and procedures **MUST** be used and followed if reporting under those regulations. This report form is to aid persons reporting releases under regulations that do not require a specific form. This report form is not required to be used. **To report a release, some regulations require a facility to call the PEAS Hotline at 800-292-4706, or DEQ District Office that oversees the county where it occurred, and other regulating agencies and provide the following information. A follow-up written report may be required. Keep a copy of this report as documentation that the release was reported. If you prefer to submit this report electronically by FAX or e-mail, contact the regulating agency for the correct telephone number or e-mail address.** See the DEQ website on Spill/Release Reporting for more reporting information.

Please print or type all information.

NAME AND TITLE OF PERSON SUBMITTING WRITTEN REPORT

TELEPHONE NUMBER (provide area code)

NAME OF BUSINESS

STREET ADDRESS

CITY | **STATE** | **ZIP CODE**

BUSINESS TELEPHONE NUMBER (provide area code)

RELEASE LOCATION (provide address if different than business, if known, and give directions to the spill location. Include nearest highway, town, road intersection, etc.)

SITE IDENTIFICATION NUMBER AND OTHER IDENTIFYING NUMBERS (if applicable)

COUNTY | **TOWNSHIP** | **TIER/RANGE/SECTION (if known)**

RELEASE DATA. Complete all applicable categories. Check all the boxes that apply to the release. Provide the best available information regarding the release and its impacts. Attach additional pages if necessary.

DATE & TIME OF RELEASE (if known)

____/____/____

_____am/pm

DATE & TIME OF DISCOVERY

____/____/____

_____am/pm

DURATION OF RELEASE (if known)

_____ days

_____ hours

_____ minutes

TYPE OF INCIDENT

- ☐ Explosion
- ☐ Fire
- ☐ Leaking container
- ☐ Loading/unloading release
- ☐ Pipe/valve leak or rupture
- ☐ Vehicle accident
- ☐ Other _____

MATERIAL RELEASED (Chemical or trade name)

☐ **CHECK HERE IF ADDITIONAL MATERIALS LISTED ON ATTACHED PAGE.**

CAS NUMBER or HAZARDOUS WASTE CODE

ESTIMATED QUANTITY RELEASED (indicate unit e.g. lbs, gals, cu ft or yds)

PHYSICAL STATE RELEASED (indicate if solid, liquid, or gas)

FACTORS CONTRIBUTING TO RELEASE

- ☐ Equipment failure
- ☐ Operator error
- ☐ Faulty process design
- ☐ Training deficiencies
- ☐ Unusual weather conditions
- ☐ Other _____

SOURCE OF LOSS

- ☐ Container
- ☐ Railroad car
- ☐ Pipeline
- ☐ Ship
- ☐ Tank
- ☐ Tanker
- ☐ Truck
- ☐ Other _____

TYPE OF MATERIAL RELEASED

- ☐ Agricultural: manure, pesticide, fertilizer
- ☐ Chemicals
- ☐ Flammable or combustible liquid
- ☐ Hazardous waste
- ☐ Liquid industrial waste
- ☐ Oil/petroleum products or waste
- ☐ Salt
- ☐ Sewage
- ☐ Other_____
- ☐ Unknown

MATERIAL LISTED ON or DEFINED BY

- ☐ CAA Section 112(r) list (40 CFR Part 68)
- ☐ CERCLA Table 302.4 (40 CFR Part 302)
- ☐ EPCRA Extremely Hazardous Substance (40 CFR Part 355)
- ☐ Michigan Critical Materials Register or permit
- ☐ NREPA Part 31, Part 5 Rules polluting material
- ☐ NREPA Part 111 or RCRA hazardous waste
- ☐ NREPA Part 121 liquid industrial waste
- ☐ Other list _____
- ☐ Unknown

IMMEDIATE ACTIONS TAKEN

- ☐ Containment
- ☐ Dilution
- ☐ Evacuation
- ☐ Hazard removal
- ☐ Neutralization
- ☐ System shut down
- ☐ Diversion of release to treatment
- ☐ Decontamination of persons or equipment
- ☐ Monitoring
- ☐ Other _____

RELEASE REACHED

Distance from spill location to surface water, in feet_____

- ☐ Surface waters (include name of river, lake, drain involved) _____
- ☐ Drain connected to sanitary sewer (include name of wastewater treatment plant and/or street drain, if known) _____
- ☐ Drain connected to storm sewer (include name of drain or water body it discharges into, if known) _____
- ☐ Groundwater (indicate if it is a known or suspected drinking water source and include name of aquifer, if known) _____

_____

- ☐ Soils (include type e.g. clay, sand, loam, etc.) _____
- ☐ Ambient Air
- ☐ Spill contained on impervious surface

THIS IS A MASTER COPY. PLEASE MAKE COPIES AS NEEDED.

EXTENT OF INJURIES, IF ANY

WAS ANYONE HOSPITALIZED?
☐ Yes **NUMBER HOSPITALIZED:**___
☐ No

TOTAL NUMBER OF INJURIES TREATED ON-SITE:

DESCRIBE THE INCIDENT, THE TYPE OF EQUIPMENT INVOLVED IN THE RELEASE, HOW THE VOLUME OF LOSS WAS DETERMINED, ALONG WITH ANY RESULTING ENVIRONMENTAL DAMAGE CAUSED BY THE RELEASE. IDENTIFY WHO IMMEDIATELY RESPONDED TO THE INCIDENT (own employees or contractor — include cleanup company name, contact person, and telephone number). ALSO IDENTIFY WHO DID FURTHER CLEANUP ACTIVITIES, IF PERFORMED OR KNOWN WHEN REPORT SUBMITTED

☐ **CHECK HERE IF DESCRIPTION OR ADDITIONAL COMMENTS ARE INCLUDED ON ATTACHED PAGE**

ESTIMATED QUANTITY OF ANY RECOVERED MATERIALS AND A DESCRIPTION OF HOW THOSE MATERIALS WERE MANAGED (include disposal method if applicable)

☐ **CHECK HERE IF DESCRIPTION OR ADDITIONAL COMMENTS ARE INCLUDED ON ATTACHED PAGE**

ASSESSMENT OF ACTUAL OR POTENTIAL HAZARDS TO HUMAN HEALTH (include known acute or immediate and chronic or delayed effects, and where appropriate, advice regarding medical attention necessary for exposed individuals.)

☐ **CHECK HERE IF DESCRIPTION OR ADDITIONAL COMMENTS ARE INCLUDED ON ATTACHED PAGE**

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY NOTIFIED:

INITIAL CONTACT BY: ☐ **Telephone** ☐ **Fax** ☐ **Email** ☐ **Other**

DATE/TIME INITIAL CONTACT:_____

☐ PEAS: 800-292-4706 Log Number Assigned _____

☐ DEQ District or Field Office

- ☐ Baraga
- ☐ Bay City
- ☐ Cadillac
- ☐ Crystal Falls
- ☐ Detroit
- ☐ Gaylord
- ☐ Grand Rapids
- ☐ Gwinn
- ☐ Jackson
- ☐ Kalamazoo
- ☐ Lansing
- ☐ Newberry
- ☐ Warren
- ☐ Wyoming

DEQ Office locations are subject to change

Divisions or Offices Contacted:

- ☐ Air Quality
- ☐ Land & Water Management
- ☐ Office Geological Survey
- ☐ Remediation and Redevelopment
- ☐ Waste and Hazardous Materials
- ☐ Water Bureau

NAME AND TITLE OF PERSON MAKING INITIAL REPORT:

_____

DEQ STAFF CONTACTED & PHONE NUMBER:

OTHER ENTITIES NOTIFIED:

	Date:	Time:
☐ National Response Center (NRC): 800-424-8802	_____	_____
☐ US Coast Guard Office: ☐ Detroit ☐ Grand Haven ☐ Sault Ste. Marie	_____	_____
☐ US Department of Transportation	_____	_____
☐ US Environmental Protection Agency	_____	_____
☐ 911 (or primary public safety answering point)	_____	_____
☐ Local Fire Department	_____	_____
☐ Local Police and/or State Police	_____	_____
☐ Local Emergency Planning Committee	_____	_____
☐ State Emergency Response Commission via MI SARA Title III Program	_____	_____
☐ Wastewater Treatment Plant Authority	_____	_____
☐ Hazmat Team	_____	_____
☐ Local Health Department	_____	_____
☐ Department of Labor & Economic Growth MIOSHA	_____	_____
☐ Department of Labor & Economic Growth Fire Safety	_____	_____
☐ Michigan Department of Agriculture: 800-405-0101		
☐ Other _____		

PERSON CONTACTED & PHONE NUMBER:

DATE WRITTEN REPORT SUBMITTED	**SIGNATURE OF PERSON SUBMITTING WRITTEN REPORT**

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Appendix D

SESC permit

COUNTY OF SAGINAW

SOIL EROSION AND SEDIMENTATION CONTROL PERMIT

(Issued under the authority of Part 91, Soil Erosion and Sedimentation Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended)

Permittee:	Racer Trust	**Permit No:**	3196
Address:	2930 Ecorse Rd	**Issued:**	November 8, 2012
	Ypsilanti, MI 48198	**Expires:**	November 7, 2013
	(313) 486-2908	**Extended:**	
	Attn: David Favero		
On-Site Responsible Person:	**Michael Yenior**	**Telephone No:**	(989) 835-7771
Company:	Fisher Companies		(989) 615-9789
	614 Jefferson Ave., P.O. Box 1787		
	Midland, MI 48641		

Permitted Activity: All demolition, fill, grading, seeding and above ground construction to fill settling ponds, cap and seed, with appurtenances, at former Nodular Iron Treatment Plant, as shown on plans prepared by applicant. 15.0 Acre(s)

Project Location: **Town:** 13N **Range:** 5E **Sections:** 8

City or Township: Buena Vista Township
Address:

Permit Conditions:

1. The permitted activity shall be completed in accordance with the approved plans and specifications, and the attached general and specific conditions.

2. This permit does not waive the necessity for obtaining all other required federal, state, or local permits.

3. Permittee shall notify the permitting agency within one week after completing the permitted activity or one week prior to the permit expiration date, which ever comes first.

Matthew D. Rappley
Saginaw County Public Works Commissioner

(989) 790-5258
Telephone Number

THIS PERMIT MUST BE POSTED AT THE PROJECT SITE.

GENERAL CONDITIONS

In accordance with Rule 1709 promulgated under the authority of Part 91, Soil Erosion and Sedimentation Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and in addition to the information on the attached plan(s) and special conditions, the following general conditions apply to the earth change authorized by this permit:

X Design, construct, and complete the earth change in a manner that limits the exposed area of disturbed land for the shortest period of time.

X Remove sediment caused by accelerated soil erosion from runoff water before it leaves the site of the earth change.

X Temporary or permanent control measures shall be designed and installed to convey water around, through, or from the earth change at a non-erosive velocity.

X Install temporary soil erosion and sedimentation control measures before or upon commencement of the earth change activity and maintain the measures on a daily basis. Remove temporary soil erosion and sedimentation control measures after permanent soil erosion measures are in place and the area is stabilized. (Stabilized means the establishment of vegetation or the proper placement, grading, or covering of soil to ensure its resistance to soil erosion, sliding, or other earth movement.)

X Complete permanent soil erosion control measures for the earth change within five calendar days after final grading or upon completion of the final earth change. If it is not possible to permanently stabilize the earth change, then maintain temporary soil erosion and sedimentation control measures until permanent soil erosion control measures are in place and the area is stabilized.

SPECIFIC CONDITIONS

- Seeding of disturbed areas.
- Temporary erosion control measures to be maintained by contractor.
- Permanent erosion control measures to be maintained by owner.

Appendix E

Employee Training Form

Appendix E - EMPLOYEE TRAINING FORM

Date of Session:

Trainer	
Print:	Signature:

Topics Covered:

Attendee Name	**Attendee Signature**

Appendix F

Annual SWPPP Review Form

Appendix F - ANNUAL SWPPP REVIEW FORM

Facility Information		
Designated Name:	Certificate of Coverage No.:	
Facility Contact Information		
Name:	Telephone No.:	
Email Address:		Certification No:
Backup Facility Contact Information		
Name:	Telephone No.:	
Email Address:		Certification No:
Certified Operator Information		
Name:	Telephone No.:	
Email Address:		Certification No:

SWPPP Review Checklist

1) Facility general information is current and accurate	Yes	No	
2) Site map is current and accurate	Yes	No	
3) Significant material inventory is current and accurate	Yes	No	
4) New exposures, processes and related controls have been documented appropriately in the SWPPP	Yes	No	NA
5) Spills have been recorded and reported as appropriate	Yes	No	NA
6) Employee SWPPP training was conducted and documented	Yes	No	
7) Records of routine preventative maintenance and housekeeping inspections are available in the SWPPP file	Yes	No	
8) Comprehensive site inspections have been completed, certified and filed in the SWPPP file	Yes	No	
9) Corrective actions noted in the inspection reports have been completed	Yes	No	
10) SWPPP has been reviewed and signed by the Certified Storm Water Operator and the Permittee or designated representative	Yes	No	

Additional Comments (use additional sheets if necessary):

I certify that the above information is correct	
Name:	Signature / Date:

SUBMIT THIS FORM TO THE DISTRICT OFFICE IDENTIFIED ON YOUR CERTIFICATE OF COVERAGE ON OR BEFORE **JANUARY 10TH** OF EACH YEAR