

STATE OF MICHIGAN
DEPARTMENT OF ATTORNEY GENERAL



6th Floor, G. Mennen Williams Building
525 West Ottawa Street
Lansing, MI 48933

P.O. Box 30755
Lansing, MI 48909
Telephone: (517) 373-7540
Fax: (517) 373-1610

BILL SCHUETTE
ATTORNEY GENERAL

WATER RESOURCES DIVISION

June 10, 2014

JUN 12 2014

ENFORCEMENT

UPS Overnight Mail

John C. Johnson
Miller Johnson Schroeder PLC
728 Pleasant Street, Suite 101
St. Joseph, MI 49085

Re: *Michigan Department of Environmental Quality and Dan Wyant v
Plaza One Management, Inc.
Ingham County Circuit Court No. 11-600-CE*

Dear Mr. Johnson:

Enclosed is an original Consent Judgment dated June 5, 2014 and Proof of Service for your records.

Sincerely,

A handwritten signature in black ink, appearing to read "Brian J. Negele".

Brian J. Negele
Assistant Attorney General
Environment, Natural Resources,
and Agriculture Division
P.O. Box 30755
Lansing, MI 48909
(517) 373-7540

BJN:jls
Enclosures
cc: Nicole Zacharda, MDEQ

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Fax: (517) 373-1610

June 10, 2014

Clerk of the Court
Ingham County Judicial Circuit Court
Veterans Memorial Courthouse
313 West Kalamazoo
Lansing, MI 48933

Re: *Michigan Department of Environmental Quality and Dan Wyant v
Plaza One Management, Inc.*
Ingham County Circuit Court No. 11-600-CE

Dear Clerk:

Enclosed is a Proof of Service showing service of a filed original of the Consent Judgment dated June 5, 2014 upon counsel of record. Please file accordingly.

Sincerely,

A handwritten signature in black ink, appearing to read "Brian J. Negele".

Brian J. Negele
Assistant Attorney General
Environment, Natural Resources,
and Agriculture Division
P.O. Box 30755
Lansing, MI 48909
(517) 373-7540

BJN:js
Enclosures
cc: Nicole Zacharda, MDEQ

STATE OF MICHIGAN
IN THE 30th JUDICIAL CIRCUIT
INGHAM COUNTY

MICHIGAN DEPARTMENT OF
ENVIRONMENTAL QUALITY and
DAN WYANT, Director of the
Michigan Department of Environmental Quality

Plaintiffs,

Docket No. 11-600-CE

v

Honorable Joyce A. Draganchuk

PLAZA ONE MANAGEMENT, INC.

Defendant.

Brian J. Negele (P41846)
Assistant Attorney General
Attorney for Plaintiffs
Michigan Department of Attorney
General
Environment, Natural Resources
and Agriculture Division
P.O. Box 30755
Lansing, Michigan 48909
(517) 373-7540
negeleb@michigan.gov

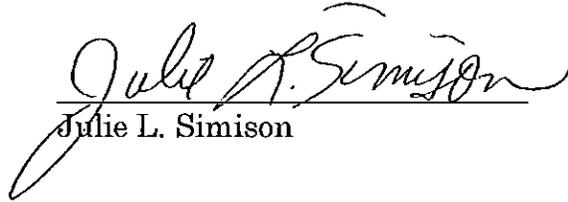
John C. Johnson (P33549)
Miller Johnson Schroeder PLC
Attorney for Defendant
728 Pleasant Street, Suite 101
St. Joseph, MI 49085
(269) 983-1000
jjohnson@MILawyers.net

PROOF OF SERVICE

On June 10, 2014, I sent by UPS overnight mail an original CONSENT
JUDGMENT entered with the Court on June 5, 2014 to:

John C. Johnson (P33549)
Miller Johnson Schroeder PLC
Attorney for Defendant
728 Pleasant Street, Suite 101
St. Joseph, MI 49085

I declare that the above statement is true to the best of my information,
knowledge and belief.


Julie L. Simison

LF:/Plaza One Mgmt/#2011-0005641-B-L/POS 2014-6-10

STATE OF MICHIGAN
CIRCUIT COURT FOR THE 30TH JUDICIAL CIRCUIT
INGHAM COUNTY

MICHIGAN DEPARTMENT OF
ENVIRONMENTAL QUALITY, and DAN
WYANT, Director of the Michigan Department
of Environmental Quality,

No. 11-600-CE

Plaintiffs,

HON. JOYCE DRAGANCHUK

v

PLAZA ONE MANAGEMENT, INC.,

Defendant.

Brian J. Negele (P41846)
Attorney for the Plaintiffs
Michigan Department of Attorney General
Environment, Natural Resources, and
Agriculture Division
P.O. Box 30755
Lansing, Michigan 48909
(517) 373-7540
negeleb@michigan.gov

John C. Johnson (P33549)
Miller Johnson Schroeder PLC
Attorney for Defendant
728 Pleasant Street, Suite 101
St. Joseph, MI 49085
(269) 983-1000
jjohnson@MILawyers.net

CONSENT JUDGMENT

At a session of said Court held in the courtroom, City of
Lansing, Michigan, on the 5th day of JUNE, 2014.

Present: Honorable Joyce Draganchuk, Circuit Court
Judge

The Parties agree that settlement of this action is in the public interest and consent to the entry of this Consent Judgment ("Judgment"), without further litigation, as the most appropriate means of resolving the allegations raised by Plaintiffs in the Complaint filed with the Court on May 25, 2011. This Judgment is consistent with and further refines the terms of the Default Judgment entered by the Court on August 31, 2011. As evidenced by the signatures below, the Parties agree to, and shall be bound by, the terms and findings of this Judgment.

The entry of this Judgment by Defendant is neither an admission or a denial of liability with respect to any issue dealt with in this Judgment nor an admission or denial of any factual allegations or legal conclusions stated or implied herein.

This Judgment requires the completion of specified activities by Defendant pursuant to Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), MCL 324.3101 et seq., at Defendant's sanitary wastewater treatment facility servicing the New Buffalo Plaza development that is the subject of the Complaint.

NOW, THEREFORE, before the taking any testimony, without trial of any issue of fact or law, and upon the consent of the Parties, by their attorneys, it is hereby ORDERED, ADJUDGED AND DECREED:

I. JURISDICTION AND VENUE

A. This Court has jurisdiction over the subject matter of this action pursuant to MCL 324.3115(1) and pursuant to MCL 600.605. This Court also has personal jurisdiction over the Defendant. Defendant waives all objections and defenses that it may have with respect to the jurisdiction of the Court.

B. Venue is proper in this circuit pursuant to MCL 324.3115(1).

C. The Court determines that the terms and conditions of this Judgment are reasonable, adequately resolve the environmental issues raised in the Complaint, and properly protect the interests of the people of the State of Michigan.

D. The Court shall retain jurisdiction over the Parties and subject matter of this action to enforce this Judgment and to resolve disputes arising under the same, including those that may be necessary for its construction, execution, or implementation.

II. PARTIES BOUND

Plaintiff Michigan Department of Environmental Quality (MDEQ) is a principal department within the Executive Branch of the State of Michigan pursuant to Executive Order 2011-1. The MDEQ is the state agency mandated to provide for the protection of the natural resources of the state from pollution, impairment, and destruction. MCL 324.101, MCL 324.301, MCL 324.501, and Executive Orders 1973-2, 1976-8, 1995-18, 2009-45, and 2011-1.

B. Plaintiff Dan Wyant is the Director of the MDEQ as appointed by Governor Rick Snyder.

C. Defendant, Plaza One Management, Inc. (Plaza One), is a Michigan corporation. Plaza One owns and operates a sanitary wastewater treatment facility located on the parcel of property bearing property identification number 11-13-0023-0003-01-0 (Facility) that formerly serviced the New Buffalo Plaza development located at 19250 LaPorte Road (also known as M-239), New Buffalo, Berrien County, Michigan (New Buffalo Plaza).

D. MDEQ, Dan Wyant and Plaza One are collectively referred to herein as the "Parties" and individually as a "Party."

E. The provisions of this Judgment shall be binding on the Parties, their officers, agents, successors and assigns. No change or changes in the ownership or other legal status of the Defendant, including, but not limited to, any transfer of assets or of real or personal property, shall in any way alter Defendant's responsibilities under this Judgment unless expressly agreed to by the MDEQ as an amendment to this Judgment. Defendant shall provide the MDEQ with written notice prior to the transfer of ownership of part or all of the Facility and shall also provide a copy of this Judgment to any subsequent owners or successors prior to the transfer of any ownership rights.

F. Defendant shall provide a copy of this Judgment to all contractors, subcontractors, and consultants that are retained to conduct any portion of the compliance activities to be performed pursuant to this Judgment, and to any

employees overseeing environmental management of the Facility, within 3 calendar days of the effective date of such retention.

G. Notwithstanding the terms of any contract(s) that Defendant may enter into with respect to the compliance activities to be performed pursuant to this Judgment, Defendant is responsible for compliance with the terms of this Judgment and shall ensure that its contractors, subcontractors, consultants, and employees perform all compliance activities in full conformance with the terms and conditions of this Judgment.

III. STATEMENT OF PURPOSE

A. In entering into this Judgment, it is the mutual intent of the Parties that Defendant will do the following consistent with the Default Judgment entered on August 31, 2011:

1. Connect all wastewater discharges from the New Buffalo Plaza to the New Buffalo Township sanitary sewer system;
2. Submit a closure plan for the Facility to the MDEQ for approval and implement the closure plan, once approved;
3. Reimburse Plaintiff for Costs of Surveillance and Enforcement (\$7,732.90) as well as for reasonable attorney's fees (\$6,332.00);
and
4. Pay a civil fine commensurate with the violations alleged in the Complaint (\$47,000.00) and in the future pay stipulated fines as

required by this Judgment for failures by Defendant to meet its obligations.

IV. COMPLIANCE WITH STATE AND FEDERAL LAWS

All actions required to be taken pursuant to this Judgment shall be undertaken in accordance with the requirements of all applicable or relevant and appropriate state and federal laws, rules, and regulations including the procurement of all necessary permits and approvals.

V. COMPLIANCE PROGRAM

A. On April 1, 2013, Plaza One submitted to the MDEQ a certification that all locations serviced by the Facility have been connected to the New Buffalo Township sanitary sewer system as of April 24, 2012, and that the lagoons associated with the Facility are fully disconnected from the New Buffalo Plaza sanitary sewer collection system and no longer receive wastewater generated at New Buffalo Plaza or any other known location.

B. On December 27, 2013, the MDEQ approved the closure plan for the Facility (appended as Exhibit A) subject to the revisions/comments listed in the MDEQ's December 27, 2013 approval letter (appended as Exhibit B). The closure plan shall be implemented by Plaza One to comply with Part II, Section D.8 of the Permit (appended as Exhibit C). The closure plan provides for the discharge of wastewater remaining in the lagoons and such discharge shall be in compliance with the Permit and shall occur prior to the termination of Certificate of Coverage

MIG580304 for the Permit issued to Plaza One (COC) set forth in Paragraph D., below.

C. Plaza One shall implement the closure plan in accordance with the schedule contained in the approved closure plan.

D. The COC shall terminate on the date MDEQ approves closure of the lagoons, and Plaza One shall not discharge to the waters of the state on or after that date without a valid permit in accordance with Part 31 of the NREPA.

E. Beginning with the effective date of this Judgment and lasting until the Facility lagoons are closed in accordance with Paragraph C, above, Plaza One shall comply with all provisions of Part I, Section A.3 of the Permit.

F. Plaza One shall submit all reports, work plans, specifications, schedules, or any other writing required by this section to the WRD Kalamazoo District Supervisor in accordance with Section X of this Judgment. The cover letter with each submittal shall identify the specific paragraph and requirement of this Judgment that the submittal is intended to satisfy.

VI. EMERGENCY RESPONSE

A. In the event of a discharge to surface waters or other spill of polluting materials to the ground or water attributable to Defendant's activities, Defendant shall undertake the following measures:

1. Upon the discovery of a discharge of any waste, wastewater, or other spill of polluting materials to the ground or water, Defendant shall take immediate corrective measures to contain

any losses of waste, wastewater, or other polluting material to prevent any further discharge or spill to waters of the state.

2. Defendant shall immediately upon discovery of any discharge of waste, wastewater, or other polluting material to surface waters of the state notify the WRD Kalamazoo District Office.

Emergency notification shall be as follows:

- a. Monday through Friday, during the hours of 8:00 AM to 5:00 PM, contact the MDEQ WRD Kalamazoo District Office at 269-567-3500.
- b. At all other times, contact the Pollution Emergency Alerting System (PEAS) Hotline at 800-292-4706.

3. In addition to the verbal notification requirement above, Defendant shall provide written notification to the WRD Kalamazoo District Supervisor and the Chief of WRD Wastewater Enforcement Unit within 10 calendar days following the discovery of any discharge of waste, wastewater, or other spill of polluting materials to the ground or water. The written notification shall include:

- a. A description and cause of the discharge or other spill, including an estimate of the discharge volume, and any analytical data in the possession of the Defendant related to the discharge or spill;

- b. The estimated duration of the discharge or other spill, including the date and time of the commencement and cessation of the discharge to the extent known;
- c. The corrective measures that were or will be implemented to prevent a future occurrence; and
- d. Copies of all pertinent records maintained pursuant to Section VIII of this Judgment.

VII. REPORTING

A. Defendant shall verbally report any violation of this Judgment, excluding discharges to surface waters or other spill of polluting materials to the ground or water reported in accordance with Section VI above, to the WRD Kalamazoo District Supervisor not later than the close of the next business day following detection of such violation, and shall provide a written report within 14 business days after detection of such violation to both the WRD Kalamazoo District Supervisor and the Chief of the WRD Wastewater Enforcement Unit. The written report shall include a detailed description of the violation, the precise cause or causes of the violation, a detailed description of any action taken or proposed to correct the violation, and a schedule for the implementation of any proposed corrective action. Defendant shall report any anticipated violation of this Judgment to the MDEQ, WRD Kalamazoo District Supervisor in advance of the relevant deadlines whenever reasonably practicable.

VIII. RECORD RETENTION AND ACCESS TO INFORMATION

A. Until five years after the termination of this Judgment, Defendant shall retain, and shall instruct its contractors, agents, and representatives to preserve, all non-identical copies of records and documents, including records or documents in electronic form, that this Judgment requires Defendant to create or maintain.

B. Upon MDEQ request, Defendant shall provide to the MDEQ copies of all documents and information within the possession or control of Defendant, its employees, contractors, agents, or representatives that this Judgment requires Defendant to create or maintain. Defendant shall not prevent its employees, contractors, agents, or representatives from discussing with MDEQ any relevant facts, except for privileged information, concerning the performance of activities undertaken pursuant to this Judgment.

C. This Judgment in no way limits or affects any right to obtain information held by the MDEQ pursuant to applicable laws, regulations, or permits, nor does it limit or affect any duty or obligation of Defendant to maintain records or information imposed by applicable laws, regulations, or permits.

IX. ACCESS

A. Upon the Effective Date of this Judgment and to the extent that the Facility covered by this Judgment is owned, controlled by, or available to Defendant or successors in interest, the MDEQ as well as its authorized employees, contractors and consultants shall, upon presentation of proper credentials, have access at all

reasonable times to the Facility for the purpose of conducting any activity for which access is required for the implementation of this Judgment or the continued evaluation of Defendant's compliance with Part 31 of the NREPA, including, but not limited to:

1. Monitoring activities taking place pursuant to this Judgment;
2. Verifying any data or information submitted to the MDEQ;
3. Conducting investigations relating to discharges of potentially injurious substances at or from the Facility;
4. Obtaining samples;
5. Assessing the need for corrective action or other response activities at or near the Facility;
6. Assessing pollution control structures to assure the effectiveness and integrity of the structure(s);
7. Inspecting and copying non-privileged records, inspection logs, contracts and other documents maintained pursuant to this Judgment;
8. Communicating with Defendant, Defendant's personnel, representatives, or consultants for the purpose of assessing compliance with this Judgment;
9. Determining whether the Facility is being used in a manner that is prohibited or restricted, or that may need to be prohibited or

restricted, by or pursuant to this Judgment or Part 31 of the NREPA;

10. Assuring the protection of public health, safety, and welfare and the environment; and

11. Conducting tests and inspections pursuant to Part 31 of the NREPA.

B. To the extent that property where activities are performed by the Defendant under this Judgment is owned or controlled by persons other than Defendant, Defendant shall use its best efforts to secure from such persons access for the Parties and their authorized employees, contractors and consultants. Defendant shall provide the MDEQ with a copy of each access agreement secured pursuant to this section. For purposes of this paragraph, "best efforts" includes, but is not limited to, providing reasonable consideration acceptable to the owner.

X. NOTICES

A. Except where this Judgment already identifies the persons to whom a document or information is to be submitted, any submittal, notice, report, documentation, or recitation required by this Judgment shall be submitted to the attention of:

For Plaintiffs: Kameron Jordan
WRD Kalamazoo District Supervisor
7953 Adobe Road
Kalamazoo, Michigan 49009-5026
269-567-3565
jordank@michigan.gov

and

Barry Selden
WRD Wastewater Enforcement Unit Chief
525 West Allegan Street
P.O. Box 30458
Lansing, Michigan 48909-7958
517-373-6437
seldenb@michigan.gov

For Defendant:

John C. Johnson
Miller Johnson Schroeder PLC
728 Pleasant Street, Suite 101
St. Joseph, MI 49085
269-983-1000
jjohnson@MILawyers.net

and

Harbor Country Management
Attn: James West
PO Box 550
New Buffalo, MI 49117
jim@dob43.com

Either Party may substitute others for those designated to receive such notices by providing written notice to the other Party. Notice sent as above is valid unless written notice of substitution is received at least 10 calendar days before notice is sent to one of the above.

**XI. DELAYS IN PERFORMANCE, EXTENSION
REQUESTS AND FORCE MAJEURE**

A. Defendant shall perform the requirements of this Judgment within the time limits specified in Section V of this Judgment, unless events which constitute a

Force Majeure prevent or delay performance or unless the WRD Chief grants an extension pursuant to Paragraph G of this section.

B. Any performance delay attributable to a Force Majeure shall not be deemed a violation of Defendant's obligations under this Judgment in accordance with this section. For this Judgment's purpose, Force Majeure means an occurrence or non-occurrence of the requirements under this Judgment arising from causes beyond the control of Defendant and for which Defendant is without fault for the occurrence or non-occurrence, including, but not limited to: an act of God; inordinate delay by the MDEQ in the approval of submissions required under this Judgment; and the acts or omissions of a third party not under contractual obligations to Defendant that could not have been avoided or overcome through Defendant's due diligence and that resulted in a delay of performance of an obligation under this Judgment. Force Majeure does not include, among other things, unanticipated or increased costs, changed financial circumstances (including a failure to obtain funding), or failure to apply for a permit or license as a result of Defendant's action or omission.

C. Defendant shall, by telephone or email, notify the WRD Kalamazoo District Supervisor within 48 hours of discovering any event which causes a delay in its compliance with any provision of this Judgment. Such initial notice shall be followed by written (including email) notice to both the WRD Kalamazoo District Supervisor and Chief of the WRD Wastewater Enforcement Unit within 10 calendar days and shall describe in detail the delay's anticipated length, the delay's precise

cause or causes, the measures that Defendant has taken to prevent or minimize the delay, and the timetable by which those measures shall be implemented. Defendant shall use all reasonable measures to avoid or minimize any such delay.

D. Defendant's failure to comply with the notice requirements of Paragraph C of this section shall render the Force Majeure provisions of this section void as to the particular incident involved. The MDEQ may, at its sole discretion and in appropriate circumstances, provide Defendant with a written waiver of the notice requirements of Paragraph C of this section.

E. If the Parties agree that the delay or anticipated delay was beyond the control of Defendant, this may be so stipulated, and the Parties may petition the Court for an appropriate Judgment modification. Defendant bears the burden of proving that any delay was beyond its reasonable control, and of showing that Defendant has met the requirements under this section.

F. In the absence of a Force Majeure, Defendant and the MDEQ agree that the WRD Chief may, but in no circumstances is obligated to, grant Defendant an extension of the specified deadlines set forth in this Judgment. Any extension shall be preceded by a timely written request, received by the MDEQ no later than 10 business days prior to the pertinent deadline, which shall include:

1. An identification of the specific deadline that will not be met.
2. A detailed description of what will prevent Defendant from meeting the deadline.

3. A description of the measures Defendant has taken or intends to take to meet the required deadline.
4. The length of the extension requested and the specific date on which the obligation will be met.

The WRD Chief shall respond promptly to such requests and shall not unreasonably withhold approval for such requests.

G. Any extension of the specified deadlines or other modifications and amendments of this Judgment shall be signed by both Parties, shall have as their effective date the date on which they are signed by the WRD Chief, and shall be incorporated into and become an enforceable part of this Judgment upon approval of the Court. A denial by the WRD Chief that an event constitutes a Force Majeure constitutes a final decision on the matter and is not subject to appeal and review by the Court.

H. An extension of one compliance date based upon a particular incident does not mean that Defendant qualifies for an extension of a subsequent compliance date without providing proof that an extension to a separate requirement under this Judgment is justified and the WRD Chief approves such extension as provided in this Section XI.

XII. REIMBURSEMENT OF COSTS AND PAYMENT OF CIVIL FINES

A. Defendant agrees to pay to the State of Michigan **\$14,064.90** as compensation for the Costs of Surveillance and Enforcement, as well as attorney's

fees, arising from past violations of Part 31 of the NREPA alleged in the Complaint and ordered in the Default Judgment.

B. Defendant agrees to pay a civil fine of **\$47,000.00** as full settlement of civil liability arising from past violations of Part 31 of the NREPA alleged in the Complaint.

C. Defendant shall pay the amounts listed in Paragraphs A and B of this section according to the following schedule until the entire amount is paid:

1. **\$10,000.00** within 30 calendar days after the Effective Date of this Judgment.
2. **\$10,000.00** on or before each anniversary of the Effective Date of this Judgment beginning in 2015, until paid in full.
3. In the event MDEQ approves closure of the lagoons prior to payment in full, the balance remaining unpaid, including any unpaid stipulated fines and interest accrued pursuant to Section XIII, shall be paid within 30 days after MDEQ approves closure of the lagoons.

D. Defendant shall pay such fine and Costs of Surveillance and Enforcement listed in Paragraphs A and B of this section by certified or cashier's checks made payable to the State of Michigan and mailed to the Michigan Department of Environmental Quality, Cashier's Office, P.O. Box 30657, Lansing, Michigan 48909-8157. To ensure proper credit, all payments made pursuant to this

Judgment must include the Payment Identification Number **WRD6003** on the face of the checks, or in the cover letter with the payments.

XIII. STIPULATED FINES

A. The Parties stipulate to the payment of stipulated fines by the Defendant in the following manner should violations of this Judgment occur:

1. Any failure to comply with any compliance date in this Judgment shall result in a stipulated fine of \$250.00 per day of violation.
2. A failure by Defendant to comply with any other provisions of this Judgment shall result in a stipulated fine of \$250.00 per day, per violation.

B. All stipulated fines shall be paid within 30 calendar days of Defendant's receipt of a demand from the MDEQ. Demands for payment shall be sent via certified mail to ensure accuracy regarding the date of receipt. Failure to make any payment required under this Judgment by the specified deadline constitutes a separate violation of this Judgment and is subject to an interest penalty calculated in accordance with Section 600.6013 of the Revised Judicature Act; MCL 600.6013.

C. Defendant shall pay all stipulated fines and interest penalties by certified or cashier's check made payable to the State of Michigan and mailed to the Michigan Department of Environmental Quality, Cashier's Office, P.O. Box 30657, Lansing, Michigan 48909-8157. To ensure proper credit, all payments made

pursuant to this Judgment must include the Payment Identification Number **WRD6003** on the face of the check, or in the cover letter with the payment.

D. Defendant agrees not to contest the legality of any stipulated fines or interest penalties assessed under this section, but reserves the right to dispute the factual basis upon which MDEQ demands stipulated fines or interest penalties.

E. Liability for or payment of stipulated fines under this Judgment shall not preclude the MDEQ from seeking injunctive relief or other relief to which the MDEQ is entitled for Defendant's failure to comply with other specific requirements of this Judgment, or failure to comply with Part 31 of the NREPA or any other applicable law, except that Plaintiffs shall not seek additional monetary relief for any violations for which Plaintiffs have accepted stipulated fines under this Judgment.

XIV. RESERVATION OF RIGHTS

A. With respect to any violations not expressly addressed and resolved by this Judgment, the MDEQ reserves the right to pursue any other remedies to which it is entitled for any failure to comply with the requirements of any state or federal law, including the NREPA and its rules.

B. This Judgment does not affect Defendant's responsibility to comply with any other applicable state, federal, or local laws or regulations including the procurement of required permits and/or approvals; or with any order of this or any other Court, including, without limitation, any corrective action or similar requirements under Part 31 of the NREPA or its rules or any amendments thereto.

C. This Judgment does not limit the rights of the Defendant or the State of Michigan against any third parties.

XV. GENERAL PROVISIONS

A. Severability

Should a court of competent jurisdiction declare any provision of this Judgment to be unenforceable, the remaining provisions shall remain in effect.

B. Modification

Any Party to this Judgment may petition the Court for modification of this Judgment including its termination prior to expiration of the effective period. Any modification must be in writing and approved by the Court. No Party may petition the Court for a modification of this Judgment without first having made a good faith effort to reach agreement with the other Party on the terms of any such modification. The Parties may petition the Court to modify any requirement or provision of this Judgment by mutual agreement or may modify this Judgment through a writing signed by authorized representatives of the Parties.

C. Other Laws

This Judgment in no way affects the Defendant's responsibility to comply with any other applicable state or federal laws or local regulations or with any order of this or any other Court including without limitation, any amendments to Part 31 of NREPA or its rules or regulations.

D. Settlement

This Judgment is in settlement and satisfaction of all civil claims against Defendant alleged by the MDEQ in the Complaint.

XVI. RETENTION OF JURISDICTION

Prior to termination of this Judgment in accordance with Section XVII below, this Court shall retain jurisdiction over this action to modify or enforce the terms of this Judgment, assess disputed stipulated fines, resolve all other disputes arising under its terms, or to take any action necessary or appropriate for construction or implementation of this Judgment.

XVII. TERMINATION

This Judgment shall terminate upon written request of Defendant and written approval from the MDEQ along with approval of this Court through the issuance of a Satisfaction of Judgment. The written request of Defendant shall include a certification by Defendant that it has (1) paid in full all fines and costs owed to the State of Michigan under this Judgment and (2) has not received a Notice Letter or other document from the MDEQ alleging a violation of Part 31 or this Judgment for the three consecutive years preceding Defendant's written request to terminate this Judgment. Provided that such certification is made and not reasonably disputed, the MDEQ will not withhold agreement to terminate this Judgment.

XVIII. SEPARATE DOCUMENTS

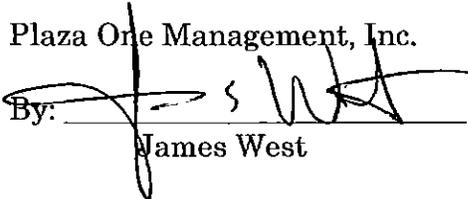
This Judgment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. This Judgment may be executed in duplicate original form.

XIX. SIGNATORIES

The signatories to this Judgment certify that they are authorized to execute this Judgment and to legally bind the Parties they represent to the requirements of this Judgment.

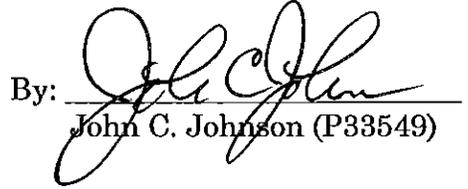
FOR DEFENDANT:

Plaza One Management, Inc.

By: 
James West

Dated: 4/15/14

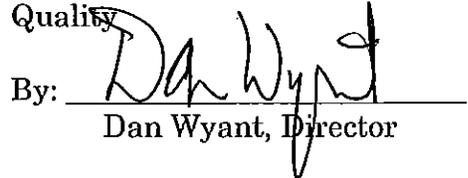
Its: President

By: 
John C. Johnson (P33549)

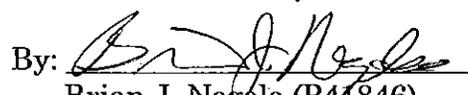
Dated: 4/28/2014

FOR PLAINTIFFS:

Michigan Department of Environmental
Quality

By: 
Dan Wyant, Director

Dated: 5.19.14

By: 
Brian J. Negele (P41846)
Assistant Attorney General
Michigan Department of Attorney
General
Environment, Natural Resources,
and
Agriculture Division

Dated: 05-08-2014

IT IS SO ORDERED, ADJUDGED AND DECREED THIS 5th day of
June, 2014.

JOYCE DRAGANCHUK

Honorable Joyce Draganchuk

(

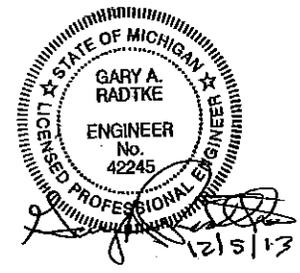
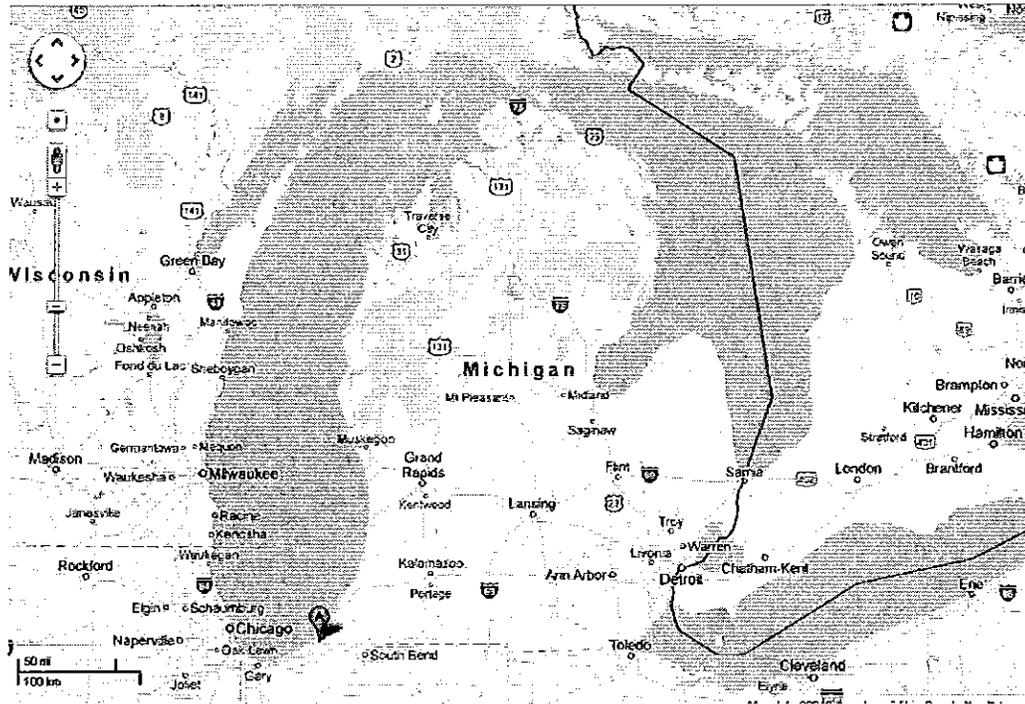
)



Radtke Engineering And Surveying, LLC.

Plaza One Lagoon Closure Plan

Prepared by Radtke Engineering And Surveying, LLC
12/6/13



Foreword

Below is the revision history and amendments made to the closure plan through the course of the review process.

Revision request letters to date:

#	Date	Subject	Department	Requestor
1	June 25 th 2013	Plaza One Lagoon Closure Plan Comments NPDES COC MIG580304 Designation: New Buffalo Plaza WWSL, Berien County	MDEQ	Dale Ehinger, P.E.
2	Week of October 21, 2013	Revision requests per phone conversation with Dale Ehinger on October 14, 2013	MDEQ	Dale Ehinger, P.E.
3	November 6, 2013	Final Plaza One Lagoon Closure Plan Comments NPDES COC MIG580304 Designation: New Buffalo Plaza WWSL, Berrien County	MDEQ	Dale Ehinger, P.E.

Responses to request letter #1

Number	Revision Request Description	Course of Action
1	Remove IPP section of report.	IPP Section removed report in its entirety.
2	Additional Discharge from Ponds	Item noted
3	Groundwater sampling and testing	Section C of the report has been expanded to include Ground and Surface Water methodology, parameters, sampling and testing guidance. Additionally, site and facility classification was completed to provide additional background on any inherent issues and provide a basis for sampling frequency, number of samples and type.
4	Groundwater sampling and testing	See item 3. above
5	Soil sampling and testing	Section C of the report has been expanded to include Soil sampling methodology, parameters, sampling and testing guidance. Additionally, site and facility classification was completed to provide additional background on any inherent issues and provide a basis for sampling frequency, number of samples and type.
6	Probiotic Approval	As of August 6, 2013; additional information including, dosing quantities has been sent to Ms. Kay Edly for approval of use.
7	Probiotic Usage	Schedule is include in plans see section A part 2.
8	Sludge Application and Disposal	Regulations noted, Discussion on process

		for classification and disposal of remaining sludge is discussed in section B part 2 as well as in D part 2. 115 Part 24 is discussed in section B part 1
9	Addition of Remedial Action Plan	Section D part 1 was expanded to include discussion on Remedial Action Planning.
Items		
1	Sludge testing Companies	Testing companies have been contacted and selection is underway.
2	Groundwater Testing	Groundwater testing has been included in plan per section C.
3	Aerator	Aerator specifications and selection are in process.
4	Sludge	Sludge depth sampling will be continuously completed as per the schedule in section A part 2 to monitor the progress of the Probiotic process.
5	Misc Tasks	Noted

Response to Revision #2

Items	Revision Request Description	Course of Action
1	Separate schedules by year per Dave Shipper	Schedules separated
2	Changed 2013 schedule to 2014 schedule	Completed as noted
3	Removed schedule item: Surface Water Discharge Permit	Use of existing Surface Water Discharge Permit is required
4	Moved Land Application Schedule item to year 2016	Completed as noted
5	Revised Waste to Water page 16	Completed as noted
6	Revised title for 2.2 to Lagoon Sampling – Water from Surface Water page 50	Completed as noted
7	Added note to reference Page 67 section 201	Completed as noted
8	Revised Line 5 of Groundwater Well Sampling Procedure page 51	Completed as noted
9	Removed parameters table from section 2.5 – noted use existing parameters	Completed as noted
10	Inserted note to section 3.2 Method and Process to follow Part 24 Biosolids Rule	Completed as noted
11	Inserted note on page 60 under section 4 Soil Sampling to reference page 67 note.	Completed as noted
12	Inserted additional testing parameter to section 4.3 Parameters.	Completed as noted
13	Revised section 4.4 sampling locations removing randomized depth locations and added note: Core to water table, pinpoint parameters, if none located use 2 feet above water table.	Completed as noted
14	Revised Section D1, inserted item 3 for contaminated water remedial plan	Completed as noted
15	Inserted general note referencing part 24 rules 115 for sludge and 201 for water	Completed as noted
16	Revised Ground Water Well location page 99-	Completed as noted

	relocating and centering north well above cell 3	
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Response to Revision #3

Items	Revision Request Description	Course of Action
1a.	Revised Closure schedule to eliminate work in 2013 and also removed Surface Water Discharge Application item from the 2017 schedule (page 11; page 14)	Revised all tables
1b.	Surface Water Discharge and Final Sludge Sample of Remaining and TLCP Analysis dates moved up one month earlier (page 14)	Revised all tables
1c.	Groundwater Sampling added to the schedule no later than March 1, 2017 (page 14)	Revised all tables
1d.	Groundwater sampling well installation added to schedule (page 11)	Revised all tables
1e.	Submit Land Application of Biosolids no later than May 1, 2017 (page 14)	Revised all tables
1f.	Remaining items in 2017 schedule moved up one month (page 14)	Revised all tables
2	Check Inertness of Sludge (page 13)	Changed tables
3	Waste Resources Division changed to Water Resources Divison (page 16)	Completed as noted
4	References to Surface Water changed to Lagoon Sampling (page 50)	Completed as noted
5	Removed item #3. Rinse with Methanol and item #4. Rinse with reagent Acetone (page 51)	Completed as noted
6	Groundwater sampling requirements will be in accordance with the enclosed well and sampling requirements (page 52)	Completed as noted
7	Sampling not consistent (page 54)	Completed as noted
8	Sludge sampling consistent (page 54)	Completed as noted
9	Part 201 (page 60)	Completed as noted
10	Testing before set date (page 60)	Completed as noted
11	Depth omitted from chart (pages 61, 62, 63)	Completed as noted
12	Developed Remedial Plan (page 66)	Completed as noted

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A. Introduction

This report outlines the proposed closure plan and provides background information on the required regulations and processes involved to obtain clean closure verification for the Plaza One Lagoon located in New Buffalo Township and as more specifically described below.

Location: State: Michigan

County: Berrien

Township: New Buffalo

Legal: SE ¼ of the NW ¼ of Section 23 Township 8S Range 21W

Description: (3) cell anaerobic wastewater treatment lagoon located approximately 1/3 mile southeast from the intersection of LaPorte Road and Wilson Road.

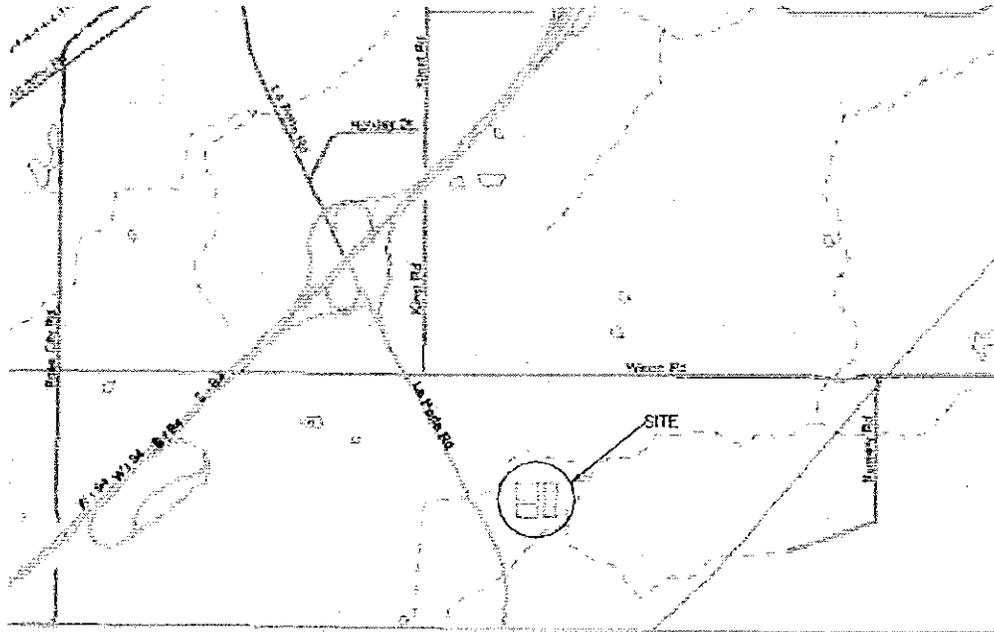


Figure 1 - Plaza One Lagoon Location Map

The proposed plan for the Plaza One Lagoon is a multi-phase process, with the ultimate goal of leaving an open area for wild life. In order to accomplish this in an environmentally friendly way, sludge reduction through probiotic dredging is being proposed. The reduction of sludge provided by the probiotic additive will allow for less haul off and subsequent placement of materials to land disposal.

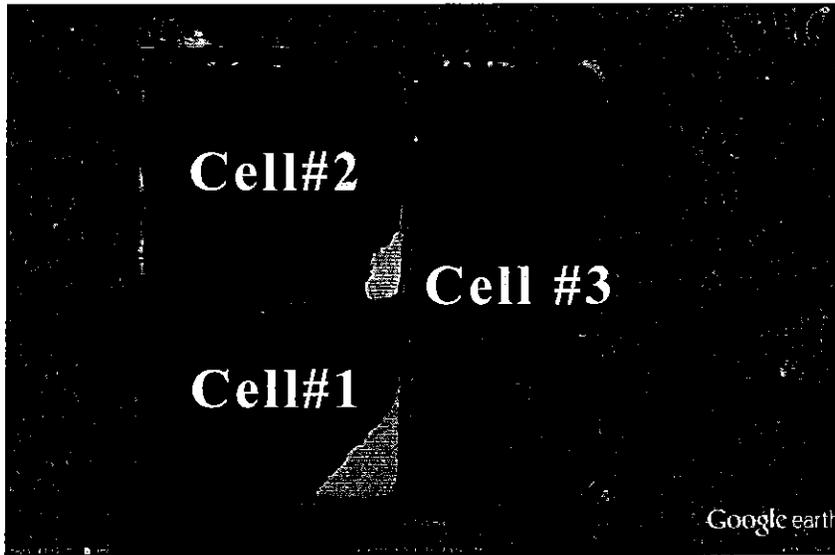


Figure 2- Aerial View Plaza One Lagoon

To date the following items are in progress or completed in association with the desired process and regulatory requirements:

	Item	Description	Status	Completion Date
1.	Boundary Survey	Parcel Boundary Irons were located and Boundary Survey	Complete	December 2012
2.	Sludge Depth Analysis	Sludge depth in all three cells was collected and used for volume calculations and stratification	Complete	October 2012
3.	DEQ Reviews	Responses to DEQ	Ongoing	November 11, 2013

Inclusive of the aforementioned items completed to date, the existing sludge depth analysis conducted on October 2, 2012 shows the Plaza One Lagoon to have a depth of sludge variation from 18 inches in the northwest corner of Cell #1 "South Lagoon" to 14 inches in the Southeast corner of Cell#2 "North Lagoon" to a final depth of 3.5 inches on Cell#3 "East Lagoon". As shown in the flow areas in the figure below, the depth follows the flow patterns, with greater depths located at inflow and discharge areas of each lagoon. The figure below represents the depth contours of each lagoon cell. Estimated haul off volumes were calculated from this contours and are shown in the table below:

Volume Calculations			
	Area (SQFT)	Average Depth of Sludge (FT)	Haul Yardage (CY)
Cell 1	85310	1.67	3687
Cell 2	106248	.917	3607
Cell 3	139892	.375	2186
		Total	9480*
* Does not include underlying soil haul off			

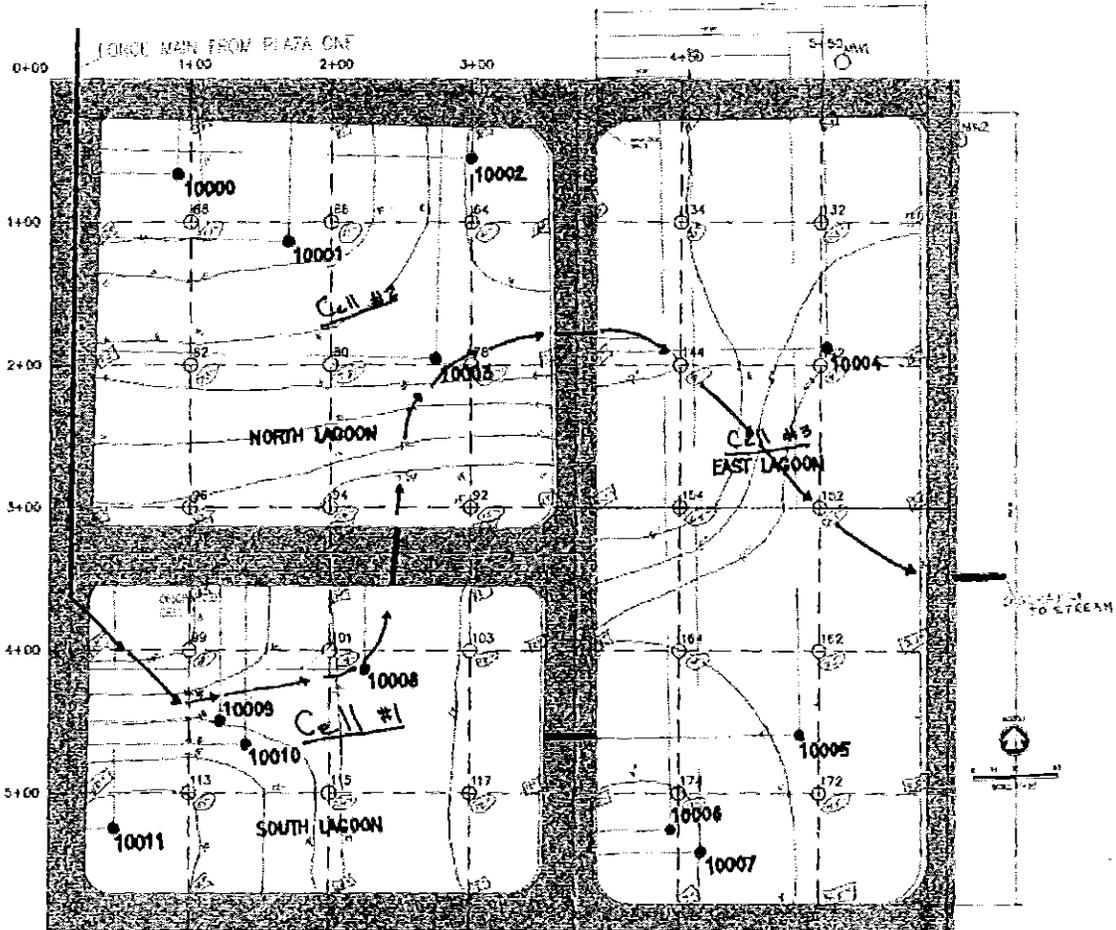


Figure 3 – Plaza One Lagoon

To reduce the depth, a probiotic product, Probiotic Scrubber, will be introduced into the lagoon cells. BioLynceus, LLC will provide Probiotic Scrubber II, which has the ability to reduce sludge depths one to three inches per month. The Probiotic is intended to work under warm conditions in summer months.

An overview of the product is provided below. This product is not a chemical but is live bacteria. A letter addressing this product is included in Exhibit 1. Additionally, the MSDS sheet, data sheet, and price quote can also be found in Exhibit 1 of this report.

1. Probiotic Overview

A Probiotic Dredging™ product from Biolyneus, LLC, Estes Park, CO will be used to bio augment the lagoon cells to reduce the amount of sludge that will ultimately have to be mechanically removed from the lagoon for closure. The product, Probiotic Scrubber II, is a proprietary formulation designed to assist in the natural digestion of the sludge.

Biolyneus has an 18-year track record of helping clients improve the effectiveness and maintenance of their waste water treatment systems. They provide all-natural, sustainable products consisting of bacteria in liquid form, formulated to naturally:

- **Reduce sludge (bio solids)**
- **Improve BOD/TSS treatment**
- **Mitigate fat, oil and grease (FOG) in collection systems**
- **Control odors**

In 1994 Biolyneus introduced clients to their proprietary method of removal of organics from wastewater lagoons using Probiotic Dredging™. In both fresh water and wastewater applications, the company has demonstrated an improvement of an average of one to three inches per month of material removed from the bottom of lakes and wastewater lagoons from around the country. Actual results may vary based on environmental conditions. Customers have found that this is a much more cost-effective and environmentally acceptable way of reducing the amount of sludge in their water bodies as compared to mechanical dredging, removal and disposal in land areas.

In order to achieve as much reduction in the existing sludge, at least two periods of application is intended. The first application will be completed in June to October of 2014. In November of 2013 and per the existing surface discharge permit for the property and MDEQ approval, surface water (as per MDEQ Discharge Permit No. MIG 580000 – Exhibit 2 attached) may be discharged to allow for better concentration levels of the probiotic additive to activate. Radtke Engineering And Surveying, LLC will introduce this product with an initial application of 80 gallons. From there on daily applications will be introduced in Cell#1 in the amount of 20oz. In Cells #2 and #3 monthly applications of 2.5 gallons per month will be introduced since sludge depth is not as significant. Additionally to better promote activation and since the lagoons are no longer receiving wastewater as of spring 2012, aeration will need to be supplied to the cells. The aeration will provide enough simulated inflow to allow for the probiotic additive to activate but will not be strong enough to cause disturbance of solids in the bottom of the lagoon. Prior to application the flow of the aeration will be tested and monitored to insure proper flow rates. The schedule outlined below provides additional information on the time frame and closure.

2017 Estimated Schedule

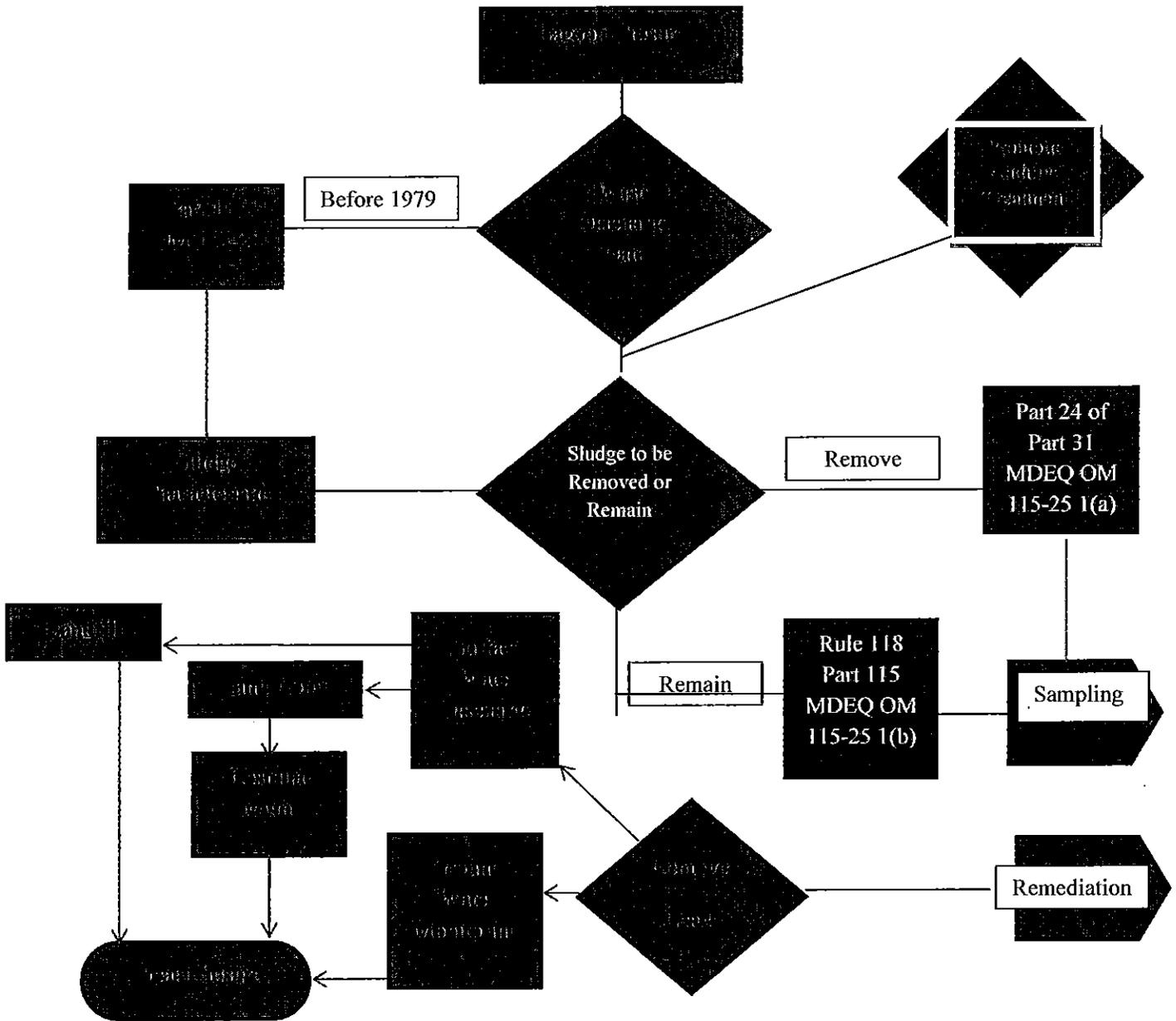
	Jan	Feb.	March	April	May	June	July	August	Sep	Oct	Nov.	Dec.
Ground Water Sampling												
Final Sludge Sample of remaining and TLCP Analysis												
Remediate Remaining Sludge – Land Application (2016)												
Clean Closure Verification												

- 1. Additional Testing of Underlying Soils per section C part 3
- 2. Underlying Soils may require dredging and haul off per section B part 2 and D part 1

As seen from the schedule above, the ProBiotic Scrubber II will be continually applied to the lagoon cells over the summer period 2014, 2015 and 2016. The estimated reduction of sludge could be as much as 2/3 of the original estimated yardage. At the end of the ProBiotic Scrubber II process, final depth of sludge will be determined and surface water quality will be tested. At this time all applications and regulations required to both dredge and land apply or landfill or leave in place will be completed.

The summaries of requirements are compiled in the following sections and pages of this report and summarized in the flow chart below.

3. Lagoon Closure Regulation Flow Chart



B. Regulation

As of the spring of 2012, the lagoons are not receiving wastewater from the Plaza One complex. The closure of the Lagoons will be in accordance to Michigan Department of Environmental Quality (MDEQ) Operational Memo 115-25 because wastewater discharge happened after 1978.

Accordingly, the closure plan will include process procedure and regulation in the following:

1. Sludge Characterization and Regulation of Sludge's to Remain
2. Verification of Clean Closure
3. Regulations under EPA 40 CFR 503, subpart C.
4. MDEQ Divisions
 - a. Water Resources Division (WRD)
 - b. Remediation and Redevelopment Division (RRD)
 - c. Office of Waste Management and Radiological Protection (OWMRP)
5. Other Considerations

1. Sludge Characterization and Regulation of Sludge's to Remain

Operational Memo 115-25 of MDEQ, characterizes sludge in two distinct categories in the closure process:

- 1a. Sludge's intended for removal from the lagoon
- 1b. Sludge's intended to remain in the lagoon.

The intent of the Plaza One lagoon closure plan is to evaluate all sludge within the lagoons after a period of exposure to a probiotic additive as described in the earlier sections of this report. For the sludge remaining after the probiotic dredging, evaluation will be done to determine if it can remain or if it will be removed and if land application is required it will be in accordance with 1(a) above and include requirements under the following criteria:

- c. Part 24 of Part 31, Water Resource Protection, of the NREPA for biosolids.

Part 24 establishes standards for the land application and recycling of biosolids originating from domestic sewage treatment systems and sanitary sewage treatment systems including:

1.1. Application

Permit Rules:

http://www.michigan.gov/documents/deq/wb-npdes-generalpermit-MIG960000_295004_7.pdf

Permitting: a residuals management program including all of the following:

- (i) Size and type of generating facility.
 - (ii) One year of records representing the volume and concentrations of pollutants in the biosolids.
 - (iii) Treatment process origin, for example, primary or secondary treatment and the volume of biosolids generated from each process.
 - (iv) A description of the treatment processes.
 - (v) Storage volume.
 - (vi) Transportation methods & spill prevention plan.
 - (vii) Land application method.
 - (viii) Land application site list.
 - (ix) Land application plan.
 - (x) Pathogen reduction method.
 - (xi) Vector attraction reduction method.
 - (xii) Monitoring program.
- (c) Upon approval by the department, the generating facility shall implement the approved residuals management program.
 - (d) A generating facility may modify the approved residuals management program by submitting a proposed modification to the department for approval. The modification shall become effective upon approval by the department.

Sampling: Requires sampling of both biosolids and the land that is to receive the biosolids. Biosolid (sludge) sampling and analysis is discussed in detail in the sampling section of this report.

Management Practices: Includes isolation distances as shown in Table 6 below:

Isolation Distance Requirements		
Isolation from existing:	Distance (feet)	
	Injection or surface application with incorporation*	Surface application without incorporation
Municipal well (type I or type IIA)**	2000	2000
Noncommunity public Water supply (type IIB or type III)	800	800
Domestic well	100	150
Homes	100	150
Commercial Buildings	100	150
Surface waters***	50	150

Frequency Monitoring: Frequency of monitoring for all of the following:

- (a) Total nitrogen (TN) or total Kjeldahl nitrogen (TKN).
- (b) Ammonium nitrogen (NH₄-N).
- (c) Nitrate nitrogen (NO₃-N).
- (d) Total phosphorus (P).
- (e) Total potassium (K).
- (f) Total solids.
- (g) Arsenic.
- (h) Cadmium.
- (i) Copper.
- (j) Lead.
- (k) Mercury.
- (l) Molybdenum.
- (m) Nickel.
- (n) Selenium.
- (o) Zinc.
- (p) The pathogen density requirements in R 323.2414(2)(a) and in R 323.2414(3)(c).
- (q) The vector attraction reduction requirements in R 323.2415(4)(a) through (d) and R 323.2415(4)(f) through (h).

as specified in Table 7 below:

English Dry Tons	Metric Dry Tons	Frequency
Greater than zero, but less than 320	Greater than zero, but less than 290	Once per year
Equal to or greater than 320, but less than 1,650	Equal to or greater than 290, but less than 1,500	Once per quarter (4 times per year)
Equal to or greater than 1,650, but less than 16,500	Equal to or greater than 1,500, but less than 15,000	Once per 60 days (6 times per year)
Equal to or greater than 16,500	Equal to or greater than 15,000	Once per month (12 times per year)

Recordkeeping: 5 year minimum including information required per Part 24 R323.2413(2).

Secondly, if in the sampling and analysis of the sludge indications of hazardous materials are identified; Part 111, Hazardous Waste Management, of the NREPA for hazardous wastes must be complied with.

Finally, if during probiotic dredging it is decided to leave any residual sludge in place, then the remaining sludge needs to be dealt with in accordance with item 1(b) and following:

d. Rule 118 of Part 115

Rule 118 of Part 115 allows for petitioning to classify waste as nonhazardous. In order to meet this criteria representative sampling needs to be conducted per US EPA publication, "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," SW-846 3rd edition. SW-846 outlines sampling procedure, quality assurance procedures, and randomized sampling plan development. As stated earlier, sampling will be discussed in greater depth in the sampling section of this report.

e. MDEQ Operational Memo 115-14

OM 115-14 outlines sampling numbers per lagoon cell, test protocols, Totals and TLCP, and acceptable detection limits as provided in sampling section of this report.

f. MDEQ Operational Memo 115-25

OM 115-25 provides additional regulations for sludge that remain in the lagoon. Since the Plaza One lagoon first received wastewater prior to October 7, 1993 the criteria in table 1 below must be used:

TABLE 1

Requirements for Management of Sludges from Lagoons Constructed BEFORE October 7, 1993
 (1/28/2002)

WASTE INFORMATION	GROUNDWATER INFORMATION		
	No impact – as demonstrated by hydrogeological information	Impact	Unknown
<u>Sludge Meets Inert Criteria</u>	<ul style="list-style-type: none"> • Deed Notice • Clean cover if the waste cannot support vegetation • Must consider gas management • Approved under site-specific designation per Part 115 	<ul style="list-style-type: none"> • Deed Restriction • Clean cover if the waste cannot support vegetation or impervious cover with gas management if RAP¹ requires • Develop/implement RAP • Groundwater Monitoring • Financial Assurance may be required • Possibly approved under consent order 	<p>If the lagoon is within 1,000 feet of surface water:</p> <ul style="list-style-type: none"> • SWQD must approve venting to surface water • Deed Restriction • Clean cover if the waste cannot support vegetation • Must consider gas management • Approved under site-specific designation per Part 115 with condition that generator is responsible if groundwater impact is discovered in the future <p>If the lagoon is over 1,000 feet from surface water – must perform hydrogeological investigation and follow criteria from appropriate column to the left</p>
<u>Sludge Exceeds Inert Criteria</u>	<ul style="list-style-type: none"> • Deed Restriction • Clean cover if the waste cannot support vegetation • Must consider gas management • Impervious cap or long term monitoring • Approved under site-specific designation per Part 115 	<ul style="list-style-type: none"> • Deed Restriction • Develop/implement RAP • Clean cover if the waste cannot support vegetation or impervious cover with gas management, if RAP requires • Groundwater Monitoring • Financial Assurance may be required • Possibly approved under consent order 	<p>If the lagoon is within 1,000 feet of surface water:</p> <ul style="list-style-type: none"> • SWQD must approve venting to surface water • Follow requirements under "no impact" column • Generator is responsible if groundwater impact is discovered in the future • If lagoon is over 1,000 feet from surface water - perform hydrogeological investigation and follow requirements under appropriate column to the left

¹ – RAP – Remedial Action Plan
² – TSCA – Toxic Substances Control Act

2. Clean Closure Verification

After characterization of sludge has been determined through 1(a) and/or 1(b) above, clean closure verification will be required. Accordingly, MDEQ OM 115-25 places criteria based on removal of sludge from the lagoon only and requires testing of the underlying soils.

a. Soil Remediation-uncontaminated

- i. Soil to remain in place must be characterized to be uncontaminated by Part 201 after testing. Testing Detection Limits:

http://www.michigan.gov/documents/deq/deq-rrd-OpMemo_2_Attachment1_283504_7.pdf

- ii. Soil to be removed and characterized as inert uncontaminated must meet requirements of Rule 115 or 116 of Part 115 as summarized in the following:

(3) A solid waste shall be considered to not pose a threat to groundwater if the concentration of each hazardous substance in the leachate of the waste is less than 1 of the following:

(a) The leachate concentration generated by background soil.

(b) The method detection limit for the substance in question.

(c) All of the following concentrations:

(i) For a carcinogen acting by a threshold or a nonthreshold mechanism, the concentration that represents an increased cancer risk of 1 in 1,000,000 calculated according to the procedures in R 299.5723.

(ii) For a hazardous substance that is not a carcinogen, a genotoxic teratogen, or a germ line mutagen, the concentration that represents the human life cycle safe concentration calculated according to the procedures in R 299.5725.

(iii) For a hazardous substance that has a secondary maximum contaminant level, that level.

(iv) For a hazardous substance that, singly or in combination with other hazardous substances present at the site, imparts adverse aesthetic characteristics to groundwater, the concentration that is documented as the taste or odor threshold or the concentration below which appearance or other aesthetic characteristics are not adversely affected. The criteria of this subdivision shall apply only when the level required by this subdivision is less than the level required by subdivision (a) or (b) of this subrule. A taste or odor threshold concentration or a concentration that adversely affects appearance shall be determined according to methods approved by the United States environmental protection agency.

(d) A concentration that is otherwise authorized pursuant to the provisions of act 245.

b. Soil Remediation- Contaminated

- i. If underlying soil exceeds testing detection limits (tdl) of Part 201, then proper removal and disposal of soils must be completed.

3. Regulation under EPA 40 CFR 503

Regulation under EPA 40 CFR 503 provides additional characteristics for Land Application, and Surface disposal of sludge. The document and its criteria can be viewed below:

[http://yosemite.epa.gov/r10/water.nsf/NPDES%2BPermits/Sewage%2BS825/\\$FILE/503-032007.pdf](http://yosemite.epa.gov/r10/water.nsf/NPDES%2BPermits/Sewage%2BS825/$FILE/503-032007.pdf)

4. Residuals Management Program

4.1. Definitions

Act means Act No. 451 of the Public Acts of 1994, as amended, being §324.101 et seq. of the Michigan Compiled Laws.

Aerobic digestion means the biochemical decomposition of organic matter in biosolids into carbon dioxide and water by microorganisms in the presence of air.

Agricultural land means land on which a food crop, a feed crop, or a fiber crop is grown. The term includes range land and land used as pasture.

Agronomic rate means the calculated biosolids application rate (dry weight basis) which provides the amount of plant available nitrogen (PAN) needed by the crop or vegetation grown on the land; which minimizes the amount of nitrogen that passes below the root zone of the crop or vegetation grown; and which considers the amounts of phosphate (P_2O_5) and potash (K_2O) added by the biosolids as part of the total nutrient management plan.

Biosolids means solid, semisolid, or liquid residues generated during the treatment of sanitary sewage or domestic sewage in a treatment works. The term "biosolids" 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.

Class A means biosolids that meet the requirement in R 323.2414(2)(b) and the requirements in R 323.2414(2)(c),(d),(e),(f),(g), or (h) with respect to pathogens.

Class B means biosolids that meet the requirements in R 323.2414 (3)(c),(d), or (e) with respect to pathogens.

Composite Sample is a number of proportional samples collected and mixed so as to be representative of the biosolids to be applied to land and soils that receive biosolids.

Cumulative pollutant loading rate (CPLR) means the maximum amount of an inorganic pollutant that can be applied to an area of land.

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 method detection level, regard that value as the detection level when calculating the daily concentration, and indicate that the result is "less than" the value reported.

Department means the director of the department of environmental quality or his or her designee.

Derivative means a product for land application derived from biosolids that does not include solid waste or other waste regulated under the act. A derivative does not include materials or treatment chemicals, that is, lime or ferric chloride, integral to wastewater treatment and biosolids unit processes.

Distributor means a person who applies, markets, or distributes, except at retail, a derivative.

Domestic sewage means waste and wastewater from humans or household operations that is discharged to, or otherwise enters, a treatment works.

Dry weight basis means calculated on the basis of having been dried at 105 degrees Celsius until reaching a constant mass that is essentially 100% solids content.

Exceptional quality (EQ) means biosolids or a derivative that meets all of the following criteria: (i) Pollutant ceiling concentrations in R 323.2409(5)(a). (ii) Pollutant concentrations in R 323.2409(5)(c). (iii) One of the vector attraction reduction options in R 323.2415(4)(a) to (h) and one of the class A pathogen reduction alternatives in R 323.2414(2)(a).

Forest means a tract of land that is thick with trees and underbrush.

Generator means a person who generates biosolids that are applied to land.

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

Groundwater means water below the land surface in the saturated zone.

Incorporation means the blending of surface-applied biosolids into the soil so that a significant amount of the biosolids is not present on the land surface within 1 hour after land application.

Injection means the placement of biosolids below the land surface so that a significant amount of the biosolids is not present on the land surface within 1 hour after land application.

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

Land application plan means the process a generator uses to identify and select land application sites that are not included in a land application site list. At a minimum a plan shall include all of the following: (i) A description of the geographical area covered by the plan. (ii) Identification of the criteria used for site selection. (iii) A description of how the sites are managed.

Land with a low potential for public exposure means land that the public uses infrequently. The term includes, but is not limited to, agricultural land, forest land, and a reclamation site located in an unpopulated area, for example, a strip mine located in a rural area.

Land with a high potential for public exposure means land that the public uses frequently. The term includes, but is not limited to, a public contact site and a reclamation site located in a populated area, for example, a construction site located in a city.

Listed land application site means a site which has been approved by the DEQ and is used for biosolids land application by a generator.

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. If any daily concentration is less than the method detection level, regard that value as the detection level when calculating the monthly concentration, and indicate that the result is "less than" the value reported.

Permit means 1 of the following: (i) A national pollutant discharge elimination system (NPDES) permit that is issued by the DEQ under section 3112(1) of the act to control wastewater discharges to the surface waters and to manage biosolids. (ii) A permit that is issued by the DEQ under section 3112(1) of the act to control wastewater discharges to the groundwaters and to manage biosolids. (iii) A biosolids permit issued by the DEQ.

Permitting authority means the DEQ.

Person means an individual, association, partnership, corporation, local unit, state or federal agency, or an agent or employee of any of the entities specified in this definition.

Person who prepares biosolids means either the person who generates biosolids during the treatment of domestic sewage or sanitary sewage in a treatment works or the person who derives a material from biosolids.

pH means the logarithm of the reciprocal of the hydrogen ion concentration measured at 25 degrees Celsius or measured at another temperature and then converted to an equivalent value at 25 degrees Celsius.

Pollutant means an organic substance, an inorganic substance, a combination of organic and inorganic substances, or a pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food chain, could, on the basis of information available to the administrator of EPA or the DEQ, cause death; disease; behavioral abnormalities; cancer; genetic mutations; physiological malfunctions, including malfunction in reproduction; or physical deformations in either organisms or offspring of the organisms.

Pollutant limit means a numerical value that describes the amount of a pollutant allowed per unit amount of biosolids, for example milligrams per kilogram of total solids; the amount of a pollutant that can be applied to a unit area of land, for example, kilograms per hectare or pounds per acre; or the volume of a material that can be applied to a unit area of land, for example, gallons per acre.

Public contact site means land that has a high potential for contact by the public. The term includes, but is not limited to, any of the following: (i) Public parks. (ii) Ball fields. (iii) Cemeteries. (iv) Plant nurseries. (v) Turf farms. (vi) Golf courses.

Reclamation site means drastically disturbed land that is reclaimed using biosolids. The term includes, but is not limited to, strip mines and construction sites.

Residuals Management Program means a program that is required by a generator's permit and is developed in accordance with R 323.2403(3)(a)to(d).

Retail means EQ biosolids or an EQ derivative sold directly to the consumer or through retail establishments in bags or other containers that have a load capacity of 1 metric ton (2200 pounds) or less of biosolids.

Septage means either liquid or solid material that is removed from any of the following that receive only domestic sewage. (i) A septic tank. (ii) A cesspool. (iii) A portable toilet. (iv) A Type III marine sanitation device. (v) A similar treatment works.

Site means a contiguous tract of land to which biosolids or a derivative are land applied in accordance with the requirements in these rules.

Specific oxygen uptake rate (SOUR) means the mass of oxygen consumed per unit time per unit mass of total solids (dry weight basis) in biosolids.

Surface application means the spraying or spreading of biosolids or derivatives onto the land surface for use as a soil conditioner or as a nutrient source for plant growth.

Surface water means any of the following: (i) Lakes. (ii) Rivers. (iii) Streams. (iv) Wetlands. (v) All other watercourses. (vi) Waters within the jurisdiction of this state. (vii) The Great Lakes bordering this state.

Treatment of" or "to treat", with respect to biosolids, means the preparation of biosolids for final use or disposal. The term includes, but is not limited to, the thickening, stabilization, and dewatering of biosolids. The term does not include the storage of biosolids.

Treatment works means either a federally owned, publicly owned, or privately owned device or system used to treat, including recycling and reclaiming, either domestic sewage or sanitary sewage.

Total solids means the materials in biosolids that remain as residue when biosolids are dried at 103 to 105 degrees Celsius.

Vector attraction means the characteristic of biosolids that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

Volatile solids means the amount of the total solids in biosolids lost when biosolids are combusted at 550 degrees Celsius in the presence of excess air.

Wetlands means areas that are inundated or saturated by surface water or groundwater at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

4.2. Resource Management Division District Office Addresses and County Jurisdictions

<u>DEQ DISTRICT OFFICES</u>	<u>TELEPHONE # FAX #</u>	<u>COUNTY JURISDICTIONS</u>		
CADILLAC DISTRICT OFFICE 120 WEST CHAPIN ST CADILLAC, MI 49601-2158	231-775-3960 231-775-1511	ALPENA ALCONA ANTRIM BENZIE	GRAND TRAVERSE KALKASKA LAKE LEELANAU	OSCEOLA OSCODA OTSEGO PRESQUE ISLE
SOUTHEAST MICHIGAN DISTRICT OFFICE 27700 DONALD CT WARREN, MI 48092-2793	586-753-3780	MACOMB OAKLAND ST. CLAIR BARRY		
GRAND RAPIDS DISTRICT OFFICE STATE OFFICE BUILDING 6TH FLOOR 350 OTTAWA N.W.	616-356-0500 616-356-0276	IONIA KENT MECOSTA MONTCALM	NEWAYGO OCEANA OTTAWA	
JACKSON DISTRICT OFFICE 301 EAST LOUIS GLICK HIGHWAY JACKSON, MI 49201-1556	517-780-7690 517-780-7855	HILLSDALE JACKSON LENAWEE		
UPPER PENINSULA DISTRICT OFFICE 420 5 TH STREET GWINN, MI 49841	906-346-8300 906-346-8528	ALGER BARAGA CHIPPEWA	HOUGHTON IRON KEWEENAW	MENOMINEE ONTONAGON SCHOOLCRAFT
KALAMAZOO DISTRICT OFFICE 7953 ADOBE ROAD KALAMAZOO, MI 49009	269-567-3500	ALLEGAN BERRIEN BRANCH	ST. JOSEPH VAN BUREN	
SAGINAW BAY DISTRICT OFFICE 503 NORTH EUCLID AVENUE BAY CITY, MI 48706-2965	989-686-8025 ext 8269	ARENAC BAY CLARE	ISABELLA MIDLAND OGEMAW	
LANSING DISTRICT OFFICE 525 WEST ALLEGAN STREET LANSING, MI 48933	517-335-6110	CLINTON EATON GENESEE	SHIAWASSEE	

4.3. Resource Management Division District Boundaries with County Divisions



5. Michigan Part 24 Rules Summary

5.1. Reporting / Recordkeeping Requirements

R 323.2416 Reporting:

- (2) Each biosolids generator and distributor shall annually report to the DEQ for each fiscal year, the number of dry tons of biosolids it generated or the number of dry tons of biosolids in derivatives it distributed that were applied to land in the state of Michigan in the state fiscal year. A biosolids generator located in the state of Michigan that land applies outside the state of Michigan will be assessed only an administrative fee and a fee for biosolids that are land applied in the state of Michigan. The report is due 30 days after the end of the state fiscal year.

- (3) A generator or distributor that land applied biosolids or a derivative to land within the state at any time during the previous state fiscal year shall report to the DEQ the information required in Record Keeping Requirements, R 323.2413 (3) to (8), except R 323.2413 (6) (b), (7) (b), and (8) (b), on or before October 30. **See summary of record keeping requirements**

(Optional) Submittal of the Biosolids Recycling Sheets (formerly sludge disposal sheets) with the annual report for each land application site used during the previous state fiscal year will help meet the record keeping requirements contained in R 323.2413 (f) (g) and (h). An electronic or hardcopy version of this form can be obtained on the DEQ's Biosolids web page or by contacting the appropriate District Office listed in Appendix A.

R 323.2413 Record Keeping:

- (1) A generator shall keep records for a minimum of 5 years unless a longer period is specified by the permitting authority.
- (2) A person who generates bulk biosolids or bulk derivatives, including a generator out of state shall keep the following records available for inspection and copying.
 - (a) Site information, of each application site, which includes the following:
 - (i) Plat map
 - (ii) Soil survey map, if available
 - (iii) Name and address of property owner and farm operator if different from owner
 - (iv) Latitude and Longitude

- (b) Written consent from the property owner and the farm operator if different from owner.
- (c) Written agreement between the generator and the farmer not to apply biosolids from other sources or septage to a listed land application site.
- (d) Biosolids analysis parameters listed in table 1 R 323.2409 at the frequency of analysis stated in table 7 of R 323.2412.
- (e) Soil fertility test results for each site.
- (f) Summary of all application activity, including:
 - (i) Site identification
 - (ii) Biosolids analysis
 - (iii) Total acres on the site
 - (iv) Acres used
 - (v) Application rate in dry tons per acre
 - (vi) Each nutrient required to be monitored in pounds per acre
 - (vii) Each pollutant listed in table 3, in pounds per acre
- (g) If biosolids have been applied that exceed table three limits than the generator shall keep records documenting the cumulative loading for life.
- (h) An annual summary, including the following:
 - (i) Biosolids volume generated
 - (ii) Total dry tons applied
 - (iii) Total dry tons disposed of by other methods
 - (iv) Total acres used
 - (v) Sites that received biosolids application subject to table 2 of R 323.2409 (5)
 - (b).

5.2. Rules Certification Requirement Citations

- Class A - person who derives R 323.2413(4)(b)
- Class A - person who prepares R 323.2413(5)(a)(ii)
- Class A - person who applies R 323.2413(5)(b)(ii)
- Class B - person who prepares R 323.2413(6)(a)(ii)
- Class B - person who applies R 323.2413(6)(b)(i)
- CPLR - person who prepares R 323.2413(7)(a)(ii)
- CPLR - person who applies R 323.2413(7)(b)(vi) for site information and R 323.2413(7)(b)(viii) for management practices
- Class B - person who applies R 323.2413(7)(b)(x) for site restrictions
- Class B - person who applies R 323.2413(7)(b)(xii) for injection or incorporation to meet VAR
- APLR - person who prepares R 323.2413(8)(c)

A person who prepares can be either a generator or a person who derives a material from biosolids.

5.3. 40 CFR Part 503 - Reporting / Recordkeeping / Certification Responsibilities

TYPE OF BIOSOLIDS	RECORDS THAT MUST BE KEPT	PERSON RESPONSIBLE		RECORDS TO REPORT
		PREPARER	APPLIER	
EQ Biosolids	Pollutant Concentrations	X		X
	Pathogen reduction certification and description	X		X
	Vector attraction reduction certification and description	X		X
PC Biosolids	Pollutant Concentrations	X		X
	Management practice certification and description		X	
	Site restriction certification and description (where Class B pathogen requirements are met)		X	
	Pathogen reduction certification and description	X		X
	Vector attraction reduction certification and description	X	*X	X
CPLR Biosolids	Pollutant Concentrations	X		X
	Pathogen reduction certification and description	X		X
	Management practice certification and description		X	
	Site restriction certification and description (where Class B pathogen requirements are met)		X	
	Pathogen reduction certification and description	X		X
	Vector attraction reduction certification and description	X	or *X	X
	Other information:		X	**X

	<p>Certification and description of information gathered (from previous applicator, landowner, or permitting authority re: existing CPLR at site from previous biosolids applications)</p> <p><u>Site location</u></p> <p><u>Number of hectares</u></p> <p><u>Amount of biosolids applied</u></p> <p><u>Cumulative amount of pollutant applied (including previous amounts)</u></p> <p><u>Date of application</u></p>		
APLR Biosolids	Pollutant Concentrations	X	X
Retail/sold or given away			
	Management practice certification and description	X	X
	Pathogen reduction certification and description	X	X
	Vector attraction reduction certification and description	X	X
	The AWBAR for the biosolids	X	X

*(The preparer certifies and describes vector attraction reduction methods other than injection and incorporation of biosolids into the soil. The applicator certifies when incorporating or injecting)

** (Some information reported when 90% or more of CPLRs is reached at a site)

6. Landowner Agreements

Rule 323.2413(2)(b) and (c) requires written consent from the property owner and the farm operator to apply biosolids and a written agreement not to apply biosolids from other sources or septage to a listed land application site. Beyond these requirements, comprehensive formal agreements with participating landowners covering other aspects of land application are not required by statute or rule, however the DEQ recommends that they be developed with each participating landowner. Formal agreements make clear that the owner and/or operator of the land is aware of and agrees with the restrictions that are included in the Part 24 rules. Past failures to make sure that all parties are aware of their responsibilities have resulted in confusion and in extreme cases, settlements negotiated to avoid litigation.

The agreement should identify the biosolids generator, the application contractor (if used) the landowner, the farm operator (if different from the landowner), the lands on the property that will be involved, and the crops to be grown.

The agreement should also make clear that agents of the generator, federal, state and local regulatory staff might access the land for the purpose of inspecting the site, applying biosolids, obtaining soil samples, and testing.

The agreement should make sure that the land owner and farm operator understand that the biosolids must be applied in accordance with requirements of the Part 24 Rules and the federal Part 503 requirements. The owner and operator must understand that certain site management criteria must be met for proper utilization of biosolids.

We recommend that the following requirements of the Part 24 Rules be considered when drafting up agreements:

- A landowner shall not harvest food crops that have harvested parts which touch the biosolids/soil mixture and which are totally above the land surface for 14 months after biosolids are applied.
- A landowner shall not harvest food crops that have harvested parts below the surface of the land for 20 months after biosolids are applied if the biosolids remain on the land surface for 4 months or longer before incorporation into the soil.
- A landowner shall not harvest food crops that have harvested parts below the surface of the land for 38 months after biosolids are applied if the biosolids remain on the land surface for less than 4 months before incorporation into the soil.
- A landowner shall not harvest food crops, feed crops, and fiber crops for 30 days after biosolids are applied.
- A landowner shall not graze animals on the land for 30 days after biosolids are applied.
- A land owner shall not harvest turf grown on land where biosolids are applied for 1 year after biosolids are applied if the harvested turf is placed on either land that has a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority.
- A landowner shall restrict public access to land that has a high potential for public exposure for 1 year after biosolids are applied.
- A landowner shall restrict public access to land with a low potential for public exposure for 30 days after biosolids are applied.

The generator could agree to furnish the farmer with the amount of nutrients applied so that the farmer can adjust their fertilizer usage accordingly.

Agreements should consider transfer or sale of the property, where a new owner might want to change the use or cropping of the land. Restrictions on cropping or public access may interfere with new plans until the appropriate amount of time has passed. It is the responsibility of the generator to ensure that the site restrictions are maintained regardless if the property is transferred or sold and a formal agreement is a good method to help maintain that control.

The generator may wish to make clear that they do not guarantee specific quantities or delivery dates of biosolids, or crop yields.

It is recommended that an attorney review the draft landowner agreement before it is implemented.

7. Agronomic Rate Calculations

7.1. Worksheet 1- Calculations for Determining PAN Mineralized From Residual Organic N Applied as Sewage Sludge in Previous Years

Residual N from previously-applied sewage sludge that will be mineralized and released as plant-available N (PAN) must be accounted for as part of the overall budget for PAN, when determining the agronomic N rate for sewage sludge (i.e., Worksheet 2). This residual N credit can be estimated for some sites using soil nitrate tests, but more commonly the PAN credit is estimated by multiplying a mineralization factor (K_{min}) times the amount of sludge organic N (Org-N) still remaining in the soil one and two years after sludge has been applied.

Instructions: Complete a separate chart for each year that sewage sludge was previously-applied. Studies and experience have shown that any residual sludge Org-N remaining 2-3 years after application will not contribute significantly to PAN normally mineralized from soil organic matter decomposition. Therefore, calculating PAN credits beyond the third year is usually not necessary. To determine total mineralized Org-N released as PAN, sum the values under Mineralized Org-N (Column D) for the "Growing Season Year" for which you are planning a new sludge application to estimate the residual N credit for sludge applications the previous two years.

A. Year of Growing Season ¹	B. Starting Org-N ² (lb/acre)	C. Mineralization Rate ³ (K_{min})	D. Mineralized Org-N ⁴ or PAN (lb/acre)	E. Org-N Remaining ⁵ (lb/acre)
0-1 (sludge applied)				
1-2 (one year later)				
2-3 (two years later)				

¹Begin with the growing season (i.e., year the crop will be grown) for which sewage sludge was applied and continue two more years (i.e., two more growing seasons).

²For the first year, this equals the percent Org-N in the sludge times the rate of application. For years 1-2 and 2-3, this quantity equals the amount of Org-N remaining from the previous year (i.e., column E).

³The mineralization rate is the fraction of sludge Org-N expected to be released as PAN for the year being calculated.

Example mineralization rates can be found in Table 7-7.

⁴Multiply column C times column B and round to the nearest whole pound.

⁵Subtract column D from column B and round to the nearest whole pound.

Table 7-7. Estimated mineralization rates (K_{min}) for different sewage sludges (from Sommers et al, 1981).

Time After Sewage Sludge Application (Years)	Fraction (K_{min})* of Organic N Mineralized From the Following Stages:			
	Unstabilized	Aerobically	Anaerobically	Composted
	Primary and Waste	Digested	Digested	
0-1	0.40	0.30	0.20	0.10
1-2	0.20	0.15	0.10	0.05
2-3	0.10	0.08	0.05	-†
3-4	0.05	0.04		

* Fraction of the sludge organic N (Org-N) initially applied, or remaining in the soil, that will be mineralized during the time interval shown. K_{min} values are provided as examples only and may be quite different for different sewage sludges, soils, and climates. Therefore, site-specific data, or the best judgement of individuals familiar with N dynamics in the soil-plant system, should always be used in preference to these suggested K_{min} values.

† Once the mineralization rate becomes less than 3% (i.e., 0.03), no net gain of PAN above that normally obtained from the mineralization of soil organic matter is expected. Therefore, additional credits for residual sludge N do not need to be calculated.

7.1.1. Example Worksheet 1

Assume that anaerobically digested sewage sludge with 2.5% Org-N (dry weight basis) was applied at a rate of 3 ton/acre for the 1996 growing season. For the 1997 growing season, 2 ton/acre of a sludge containing 3.0% Org-N was applied to the same site. For the 1998 growing season, you want to calculate the amount of PAN that will be mineralized from the sludge Org-N applied in the previous 2 years.

In 1996, the sludge Org-N applied = $2.5 \text{ lb Org-N} \times 3 \text{ ton sludge} \times 2000 \text{ lb sludge} = 150 \text{ lb Org-N/acre}$

100 lb sludge acre ton sludge

In 1997, the sludge Org-N applied = $3.0 \text{ lb Org-N} \times 2 \text{ ton sludge} \times 2000 \text{ lb sludge} = 120 \text{ lb Org-N/acre}$

100 lb sludge acre ton sludge

Use Worksheet 1 to calculate the PAN released during the 1998 growing season from the sludge applied in 1996 and 1997.

A. Growing Season	B. Year of Starting Org-N (lb/acre)	C. Mineralization Rate (K_{min})	D. Mineralized Org-N (lb/acre)	E. Org-N Remaining (lb/acre)
1996 Sludge Application				
0-1 (1986 Application)	150	0.20	30	120
1-2 (1987)	120	0.10	12	108
2-3 (1988)	108	0.05	5	103
1997 Sludge Application				
0-1 (1987 Application)	120	0.20	24	96
1-2 (1988)	96	0.10	10	86
2-3 (1989)	86	0.05	4	82

To determine the total amount of PAN mineralized in 1998 from sludge applied in 1996 and 1997, add the

Mineralized Org-N (or PAN) value in the 1998 row under column D for each year's chart

(i.e., $5 + 10 = 15 \text{ lb PAN/acre}$). Therefore, the total PAN, or mineralized Org-N, for the 1998 growing season from previous sludge applications equals 15 lb/acre.

F. Year of Growing Season	G. Starting Org-N (lb/acre)	H. Mineralization Rate (K _{min})	I. Mineralized Org-N (lb/acre)	J. Org-N Remaining (lb/acre)
_____ Sludge Application				
0-1 (____ Application)				
1-2 (____)				
2-3 (____)				
_____ Sludge Application				
0-1 (____ Application)				
1-2 (____)				
2-3 (____)				

7.2. Worksheet 2-Nitrogen Budget Sheet for Determining the Agronomic N Rate for Sewage Sludge Applications

Symbols and Abbreviations Used

Org-N = Organic N content of the sewage sludge obtained from analytical testing and determined by subtracting ($\text{NO}_3\text{-N} + \text{NH}_4\text{-N}$) from total N, usually given in percent (%); the resulting concentration should be converted to lb/ton (dry weight basis).

$\text{NH}_4\text{-N}$ = Ammonium N content of the sewage sludge obtained from analytical testing and usually given in percent (%); then convert to lb/ton (d.w. basis).

$\text{NO}_3\text{-N}$ = Nitrate N content of the sewage sludge obtained from analytical testing and often given in mg/kg; then convert to lb/ton (d.w. basis).

K_{min} = Mineralization rate for the sewage sludge expressed as a fraction of the sludge Org-N expected to be released as PAN for the year being calculated; example mineralization rates for different sewage sludges can be found in Table 7-7.

K_{vol} = Volatilization factor for estimating the amount of $\text{NH}_4\text{-N}$ remaining after loss to the atmosphere as ammonia and expressed as a fraction (e.g., if $K_{\text{vol}} = 1.0$, 100% of the $\text{NH}_4\text{-N}$ is retained and contributes to PAN; if $K_{\text{vol}} = 0.5$, then $(0.5 \times \text{NH}_4\text{-N Content})$ estimates the amount of $\text{NH}_4\text{-N}$ contributing to PAN).

PAN = Plant-available N which is determined by calculating: $\text{NO}_3\text{-N} + K_{\text{vol}}(\text{NH}_4\text{-N}) + K_{\text{min}}(\text{Org-N})$

Helpful Conversions

	$\text{mg/kg} \times 0.002 = \text{lb/ton}$	$\text{lb/acre} \times 1.12 = \text{kg/ha}$	$(\text{lb/ton}) / 2 = \text{kg/mt}$
kg)	$\% \times 20 = \text{lb/ton}$	$\text{ton/acre} \times 2.24 = \text{mt/ha}$	$(\text{mt} = \text{metric ton} = 1000$

1. Total N requirement of crop to be grown
 _____ lb/acre

(obtain information from Cooperative Extension Service agricultural agents, USDA Natural Resource Conservation Service Conservationists, or other agronomy professionals).

2. Nitrogen provided from other N sources added or mineralized in the soil
 - a. N from a previous legume crop (legume credit) or green manure crop
 _____ lb/acre
 - b. N from supplemental fertilizers already, or expected to be added
 _____ lb/acre
 - c. Estimate of available N from previous sludge applications (From Worksheet 1)
 _____ lb/acre

- d. Estimate of available N from a previous manure application (obtain mineralization factors from land-grant university to calculate similarly as for previous sewage sludge applications).
- e. Soil nitrate test of available N present in soil [this quantity can be substituted _____ lb/acre in place of (a + d + e), if test is conducted properly; do not use this test value if estimates for a, d and c are used]

Total N available from existing, expected, and planned sources of N (add a+b+c+d+e or b+c+f)

- 3. Loss of available N by denitrification, immobilization, or NH_4^+ fixation _____ lb/acre (check with state regulatory for regulatory for approval, before using this site-specific factor).

- 4. Calculate the adjusted fertilizer N requirement for the crop to be grown _____ lb/acre (subtract Total N for 2 from 1; amount for 3 can be added to this difference, only if 3 is approved for this additional adjustment).

- 5. Determine the PAN/dry ton for the sludge that will be applied _____ lb/acre
 [i.e.. $\text{NO}_3\text{-N} + K_{\text{vol}} (\text{NH}_4\text{-N}) + K_{\text{min}} (\text{Org-N}) = \text{PAN}$]

- 6. Calculate the agronomic N rate of sewage sludge (Divide 4 by 5) _____ lb/ton

- 7. Convert the rate of sewage sludge in dry tons/acre into gallons/acre, cubic yards/acre, or wet tons/acre, since the sludge will be applied to land as a liquid or as a wet cake material.

8. Notification Requirements

8.1. R323.2408

- (4)(a) A generator or distributor shall provide written notification not less than ten days before the initial land application. This notification shall be provided to the Resource Management Division district office, county health department, city, village, or township clerk in the jurisdiction of the land application site (See sample letter on Page 40). The notification shall include a cover letter comprised of the following:
- (i) The proposed land application activity
 - (ii) The site location by latitude and longitude
 - (iii) A plat map identifying the site
 - (iv) The name and address of the property owner
 - (v) The name and address of the farm operator if different than the owner
 - (vi) A record of biosolids monitoring information containing the following:
 - (A) The most current monitoring results of the following:
 - (1) Arsenic
 - (2) Cadmium
 - (3) Copper
 - (4) Lead
 - (5) Mercury
 - (6) Molybdenum
 - (7) Nickel
 - (8) Selenium
 - (9) Zinc
 - (B) Applicable limitations
 - (C) Name, address, and phone number of the generator or distributor
- (c) A person who prepares bulk biosolids that are applied to agricultural land, a forest, a public contact site, or a reclamation site, shall provide the person who applies the bulk biosolids with written notification of the concentration of the total nutrients, on a dry weight basis, in the bulk biosolids required to be monitored.
- (d) A person who prepares bulk biosolids and provides the bulk biosolids to another person who prepares or applies these biosolids shall provide them with the proper notice and necessary information to comply with requirements in this part
- (e) A person who applies bulk biosolids to the land shall provide the owner or leaseholder of the land on which the bulk biosolids are applied notice and necessary information to comply with all requirements in this part

- (f) A person who land applies bulk biosolids subject to the cumulative pollutant loading rate in R 323.2409(5) (b) shall provide written notice, before the initial application of bulk biosolids to a land application site by the applier, to the permitting authority for the state in which the bulk biosolids will be applied. The permitting authority shall retain, and provide access to, the notice. The notice shall include the following information:
- (i) The location, by latitude and longitude, of the land application site.
 - (ii) The name, address, telephone number, and national pollutant discharge elimination system (NPDES) permit number, if appropriate, of the person who will apply the bulk biosolids.

8.2. Notification Letter Example

Facility Letterhead

Date:

To: County Health Department/ Township Clerk

Address

Subject: Biosolids Application Notification

Generator is preparing to apply biosolids (sewage sludge) on land located in township name (See attached plat map), owned by Name/Address of Property owner and operator, if different. This notice is provided in accordance with Michigan Part 24 Biosolids Rules, to inform you of our activities within your area, and to give you a basic understanding of the fertilizer value of this material. Generator will provide you free of charge any additional information as needed including any record created in accordance with State rules pertaining to the actual biosolids application.

The following analytical data represents the average contents of the biosolids that will be applied in your area. The U.S. EPA has developed the maximum limits from over 20 years of research. These limits represent a *conservative* annual application rate and at no time shall biosolids be applied which exceed any of these maximum values.

Most Recent Biosolids Average Analysis in mg/kg (dry weight basis)

<i>Constituent</i>	<u>Concentration</u>	<u>Max. Allowable Concentration Limit</u>
Arsenic (As)		75
Cadmium (Cd)		85
Copper (Cu)		4300
Lead (Pb)		840
Mercury (Hg)		57
Molybdenum (Mo)		75
Nickel (Ni)		420
Selenium (Se)		100
Zinc (Zn)		7500
Nitrogen (N)		Ag Rate
Phosphorus (P)		Ag Rate
Potassium (K)		Ag Rate

Biosolids are the nutrient-rich organic materials produced during the biological and physical treatment of wastewater. The solids treated during this process produce a stabilized liquid or semi-solid material that contains nutrients required for crop growth, as well as organic matter to condition the soil. Treated biosolids contain the three primary crop nutrients: nitrogen, phosphorus, and potassium. They also contain nutrients that crops need in smaller amounts. These “micronutrients” are not commonly found in commercial fertilizers.

The DEQ’s, Resource Management Division, regulates the land application of biosolids. The program is endorsed by the Michigan Department of Agriculture and Rural Development, Michigan State University, Michigan Farm Bureau, Michigan Water Environment Association, Michigan Municipal League, U.S. Environmental Protection Agency, U.S. Department of Agriculture, and the U.S. Food and Drug Administration.

9. MDEQ Divisions

- a. Water Resources Division (WRD), for Part 31, Water Resources Protection (Part 31), of the Natural Resources and Environmental Protection Act; 1994 PA 451, as amended (NREPA)
- b. Remediation and Redevelopment Division (RRD), Part 201, Environmental Remediation (Part 201), of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA)
- c. Office of Waste Management and Radiological Protection (OWMRP), for Part 115, Solid Waste Management (Part 115), of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, Michigan Compiled Laws 324. 1150 et seq.; and the administrative rules promulgated pursuant to Part 115.

10. Other Considerations

- a. Removal of liquids from the lagoon.
 - i. Groundwater or Surface water discharge permit per Part 31
- b. Construction activity including earth moving activities.
 - i. Soil Erosion and Sedimentation Control. NREPA Part 91
<http://www.legislature.mi.gov/documents/mcl/pdf/mcl-451-1994-II-2-SOIL-CONSERVATION-EROSION-AND-SEDIMENTATION-CONTROL-91.pdf>
 - ii. Storm Water Permit (SWPP) NREPA Part 31
- c. Groundwater contamination
 - i. Remediation in accordance with Part 201

C. Sampling and Testing

This section discusses the methodology, parameters and scheduling for the required testing of the following:

1. Ground and Surface Water
2. Sludge
3. Soil Sampling

1. Site Characterization

To determining the number of samples and locations for sampling and testing, the following existing site and facility characteristics were reviewed.

Hydrological Watershed	Inflow Locations
Soils	Outfall Locations
Existing Surface Topography	
Existing Depth to Ground Water	
Existing Surrounding Environmental Features	

1.1 Hydrological Watershed

The existing lagoon site as previously mention consists of (3) anaerobic waste treatment cells located in the USGS HUC12 hydrological zone 040400010206 as designated and shown in the map below.

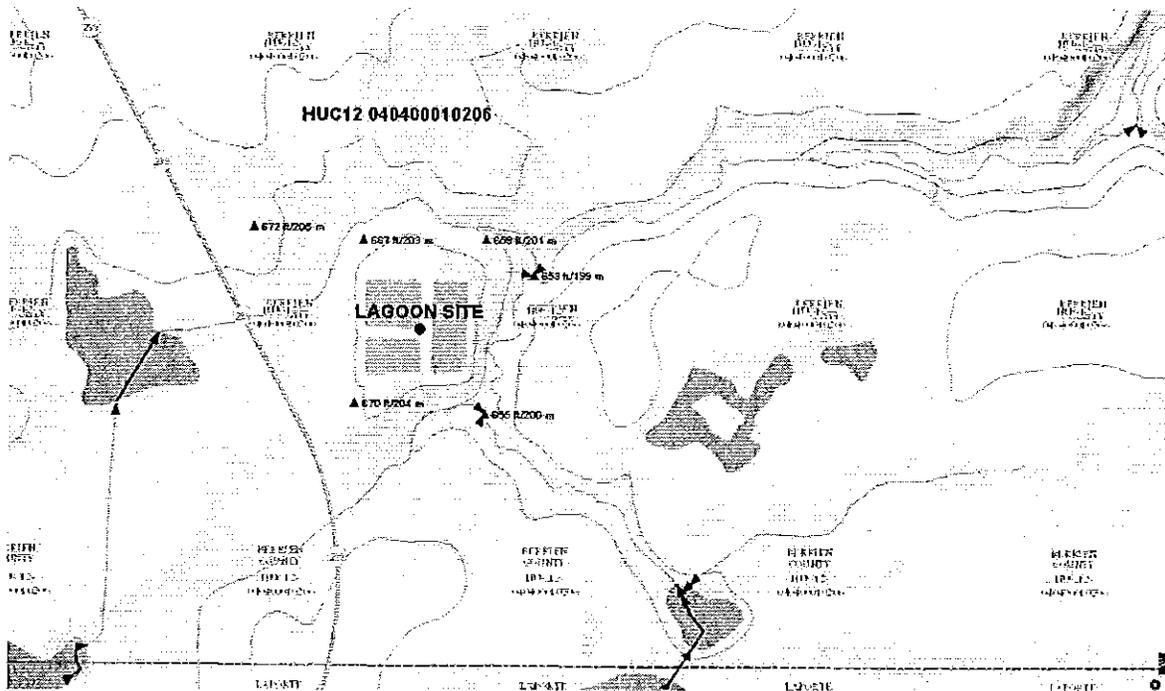


Figure 4 - Watershed Map

HUC12 040400010206 is contributing sub-basin to the Little Calumet-Galien Watershed with an outfall to Lake Michigan. The existing lagoon was constructed with two piped outfall locations as per the plans completed by R.W Petrie & Associates in 1966 and found in the exhibits section.

1.2 Soils

The existing onsite soils were reviewed from historical plan data, small test pits and GIS soils data obtained from the USGS. The map below provides USGS Soil Survey Data for the site and surrounding area.



Figure 5 - Soils Map

Berrien County, Michigan (MI021)			
Map Unit Symbol	Map Unit Name	Acre	Percent of AOI
28B	Rimer loamy fine sand, 0 to 4 percent slopes	51.4	15.8%
20	Cohoctah sandy loam	4.9	1.5%
34B	Elount loam, 0 to 4 percent slopes	81.2	25.1%
38	Fewamo silt loam	104.7	32.3%
37	Granby loamy fine sand	6.3	1.9%
42A	Morocco loamy sand, 0 to 2 percent slopes	37.1	11.5%
57A	Tretford loamy sand, 0 to 2 percent slopes	16.2	5.0%
65F	Udorthernis and Udipsamments, 18 to 60 percent slopes	13.4	4.1%
W	Water	6.8	2.7%
Totals for Area of Interest		324.1	100.0%

As shown the site consists of mostly sandy soil types, with mixed loamy characteristics. Additionally, the soil boring data from the original plans provides consistent data of sand type soils.

1.3 Topography

The existing lagoons comprise the majority of the site. Cell#1 and Cell#2 are smaller at approximately 1.5 and 2.0 acres in size. Cell#3 is approximately 2.5 acres in size. All three ponds as determined by plans and field data are approximately 7 feet in depth. The surrounding area flows away from each of these features, with the overall surrounding area exhibiting a surface flow pattern from southwest to northeast as shown in figure 4 above.

1.4 Groundwater Depth

The existing depth to groundwater was determined from GIS data provided by MGIC and USGS. The existing groundwater depth is estimated to be from a minimum 5' below surface to above 15' feet below surface.

1.5 Existing Environmental Features

Existing environmental features were then examined to determine any impact from lagoon discharge, seepage or contamination. Surrounding the site is existing Agricultural use types. Residential structures are located along Wilson Road and have water and sanitary utility services. Based on the topography, outfall locations and existing utility services provide to the surrounding area, facility discharge would exhibit a minimal impact on quality of life.

1.6 Facility

1.6.1 Inflow

The existing facility received sanitary inflow from a 6" force main off of Wilson road and provided service to the now existing Gas service station located at the Southeast corner of Wilson Road and State Road 239. The inflow was designed to be split between Cell#1 and Cell#2, however from sludge depth sampling it was determined that Pond#1 was the main inflow location, and that the existing 6" inflow line into Cell#2 was shut-off by the existing valve at some point. Provided in the exhibits sections is the pond configuration from the design plans produced by R.W Petrie & Associates, Inc.

1.6.2 Outflow

The existing outflow of the facility was originally design with two separate discharge points. One located from Cell#1 and the second from Cell #3. Both outlets open into Blood Run Creek. While facility was designed with these discharges pipes, through the past few years discharge for all three ponds was completed by pumping and overland discharge piping at the approximate location of Pond#3's discharge point.

2 Ground and Surface Water

2.1 Methodology

Both surface and groundwater sampling will be in accordance with the process, quality assurance practices and field operation outlined in USEPA (Nov 1992), RCRA Ground Water Monitoring, Technical Guidance document and as follows.

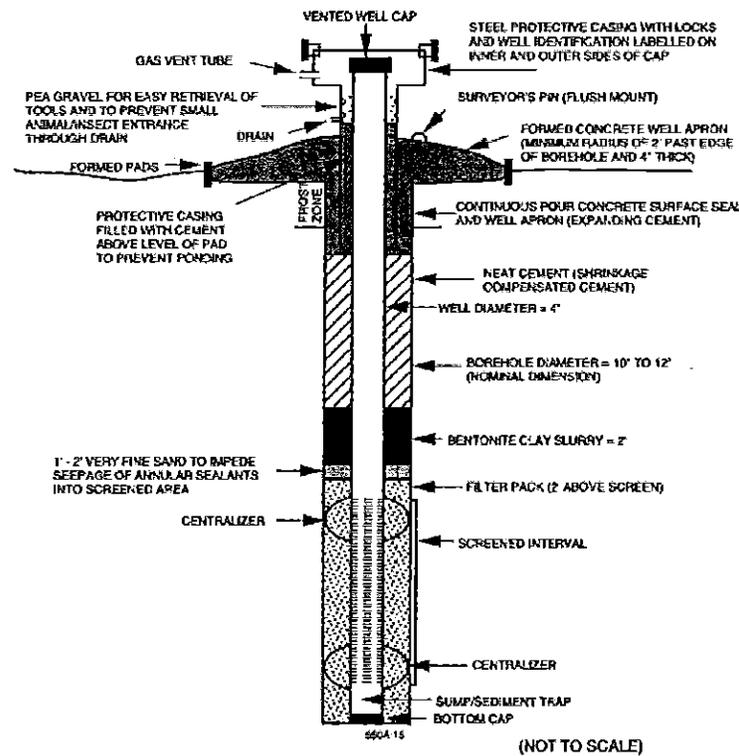
2.2 Lagoon Sampling - Water

Lagoon sampling will be completed by grab samples. Lagoon samples will be collected from each of the three ponds. Sample locations shall be established based on the existing discharge permit and guidance from the MDEQ Hydro geologist recommendations. For the lagoon sampling, samples will be collected five feet from the edges of the pond and one foot below the surface.

NOTE: Page 65- Section 201

2.3 Groundwater

Groundwater sampling locations will be per the attached map, Groundwater Well Locations. Three detection monitoring wells will be constructed onsite with the south east up-gradient well to be used for background monitoring. The wells will be 4" in diameter and drilled using a hollow-stemmed auger to a depth sufficient to reach the existing groundwater onsite per the previous section groundwater depth. The well construction shown in the figure below, will be 12" overall diameter, include casing filtration and screening with well head protection provided by a concrete enclosure ring.



CROSS-SECTION OF TYPICAL MONITORING WELL

2.4 Procedure

Sample collection for groundwater from the monitoring wells will be based on the following procedure

Groundwater Well Sampling Procedure

	Step	Description	Instrumentation/ Equipment
1.	Sampling Goals	Identification of Harmful Parameters per Parameters Section	
2.	Water Level	Identify Groundwater level in well	Steel Tape coated with carpenters chalk
3.	Purge Well	Purge groundwater from well at rate of .05 gal/min	Portable pump
4.	Sample Well	Grab Sample	Grab Sampler Device
5.	Decontaminate Equipment	Sterilize testing equipment prior to next sample	1. Wash with non-phosphate detergent 2. Rinse Tap Water 5. Rinse with Organic Free Water
6.	Preserve Samples	Additives in sample containers provided by lab	
7.	Chain of Custody	Record Contact until lab is reached.	
8.	Turn over	Turn samples over to lab for analysis for Parameters specified	

2.5 Parameters

Surface water testing parameters will as required in Rule 64, 60 and 53 Part 4 of ACT 451. "Michigan Water Quality Standards".

Other recommended tests include Volatile organics (VOC's) Total Organic Carbon (TOC), Semi-Volatile (SVOC's) and Metals and cyanides.

Groundwater sampling requirements will be in accordance with the enclosed well and sampling requirements.

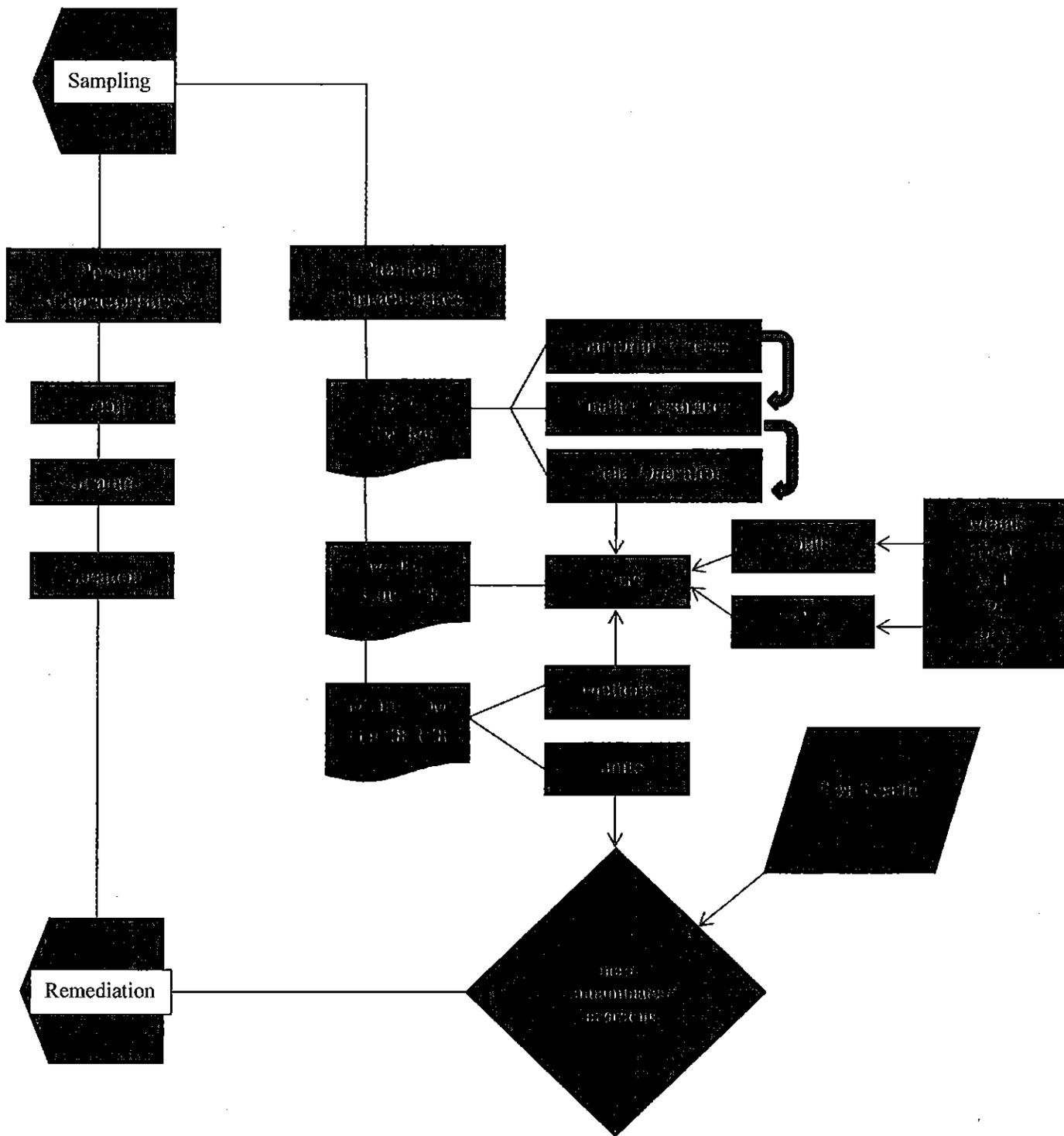
2.6 Schedule

Ground water sampling will be provided after monitoring well installation. Monitoring well construction will begin after approval of the lagoon closure plan and is expected to take up-to 8 weeks. After installation, a 30 day period of re-charge is recommended to clear any contamination from the well area due to construction activities. After initial testing, and reporting, a semiannual schedule will be followed. In the event of contaminated findings, a quarterly testing program will be established until the source of contamination can be justified and cleared.

Surface water testing will be in accordance with the existing discharge permit, semiannually. In the case of surface water discharge, surface water testing will take place at least two weeks prior to the discharge event.

3. Sludge Sampling

3.1 Flow Chart



3.2 Methodology and Process

To date, the Plaza One Lagoon, depth sampling and totals of sludge classification tests have been proposed. The method of sampling will be in conjunction with the process, quality assurance procedures and field operations outlined in EPA SW 846. NOTE: See page 67 -115

1. Method of Sampling

a. Randomized Sampling

A randomized sampling procedure will be used to select sampling points for each lagoon. The points Longitude and Latitude coordinates will be determined using lengths determined from an origin designated on each cell of the lagoon. A total of 4 sampling points for each cell will be sampled.

Sample locations developed using randomizer, random number charts, found at <http://www.randomizer.org/form.htm>

b. Sludges will be sampled in accordance with the sampling and analysis plan that will be developed under the Part 24, Land Application of Biosolids (Part 24 Biosolids Rules), promulgated pursuant to Part 31, Water Resources Protection, of the NREPA.

3.3 Parameters

Follow Part 24 Sample of Sludges --Biosolid Rules

Sludges will be sampled in accordance with the sampling and analysis plan that will be developed under the Part 24 Biosolids Rules.

Sludge samplings will be taken from the points established in this report. The samples will be submitted to a certified testing lab for analysis of totals of the following items:

Item	METHOD
Metals	6020 (3050B)
SVOC	8270C (3546)
VOC	8260B (5030B)
Mercury	7471A
PCB'S	8082

The sampling guidelines, equipment and location details of the sample plan are outlined as follows.

3.4 Sampling Equipment

1. Sludge Judge, 3/4" PVC tube
2. Sampling Bottles
 - a. Supplied by Lab.
3. Steel bottom boat
4. Clean/distilled water supply

3.5 Sampling Locations

Cell	Sampling Point	Coordinates		Point #
		E_W (FT)	N_S (FT)	
1 South Lagoon	1	18	171	10011
	2	122	111	10010
	3	59	197	10008
	4	95	93	10009
2 North Lagoon	1	263	22	10002
	2	55	38	10000
	3	241	163	10003
	4	134	83	10001
3 East Lagoon	1	161	346	10004
	2	66	513	10007
	3	137	432	10005
	4	45	499	10006

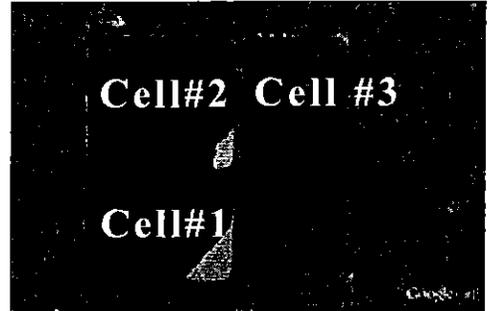
Drawing: P002-12010.02-Samplegrid.dwg

Point File:P002-12010.02SludgesSamplepoints

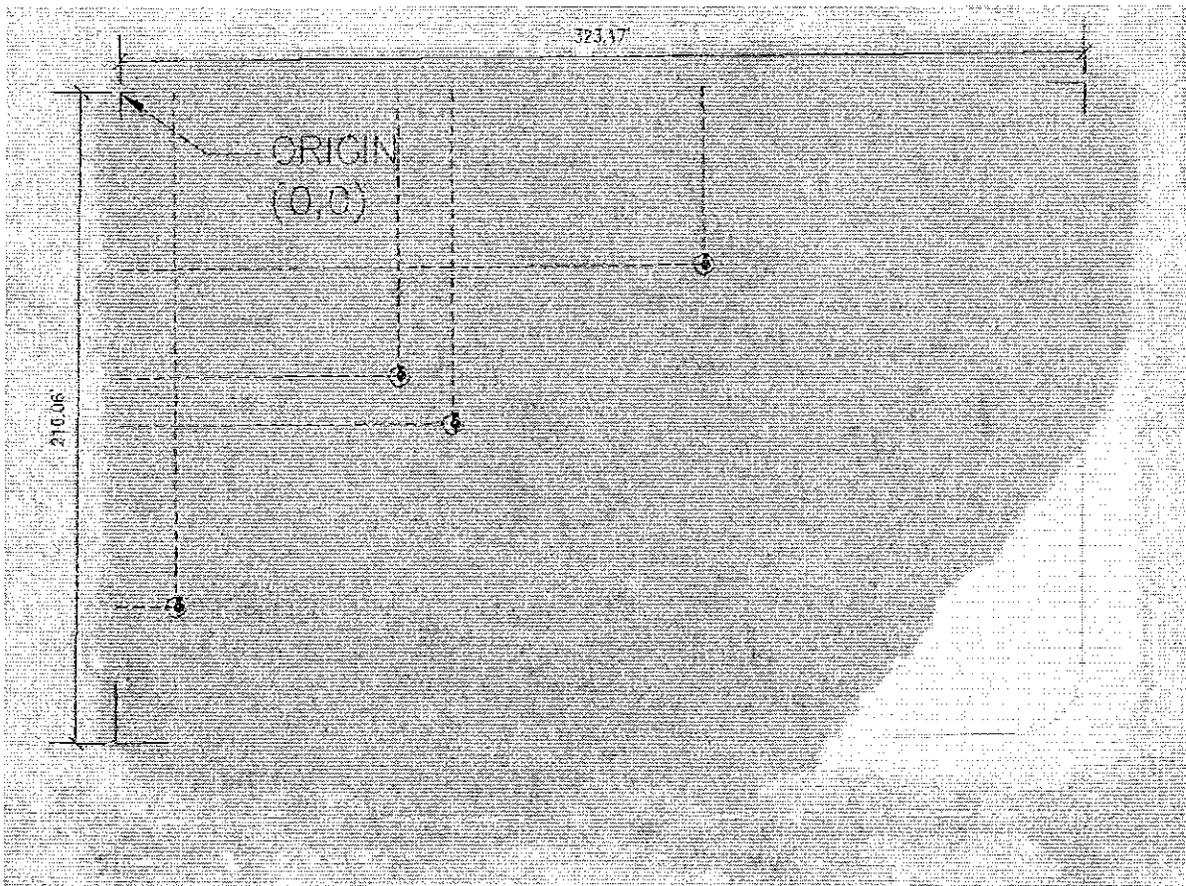
3.6 Drawing Exhibits

North

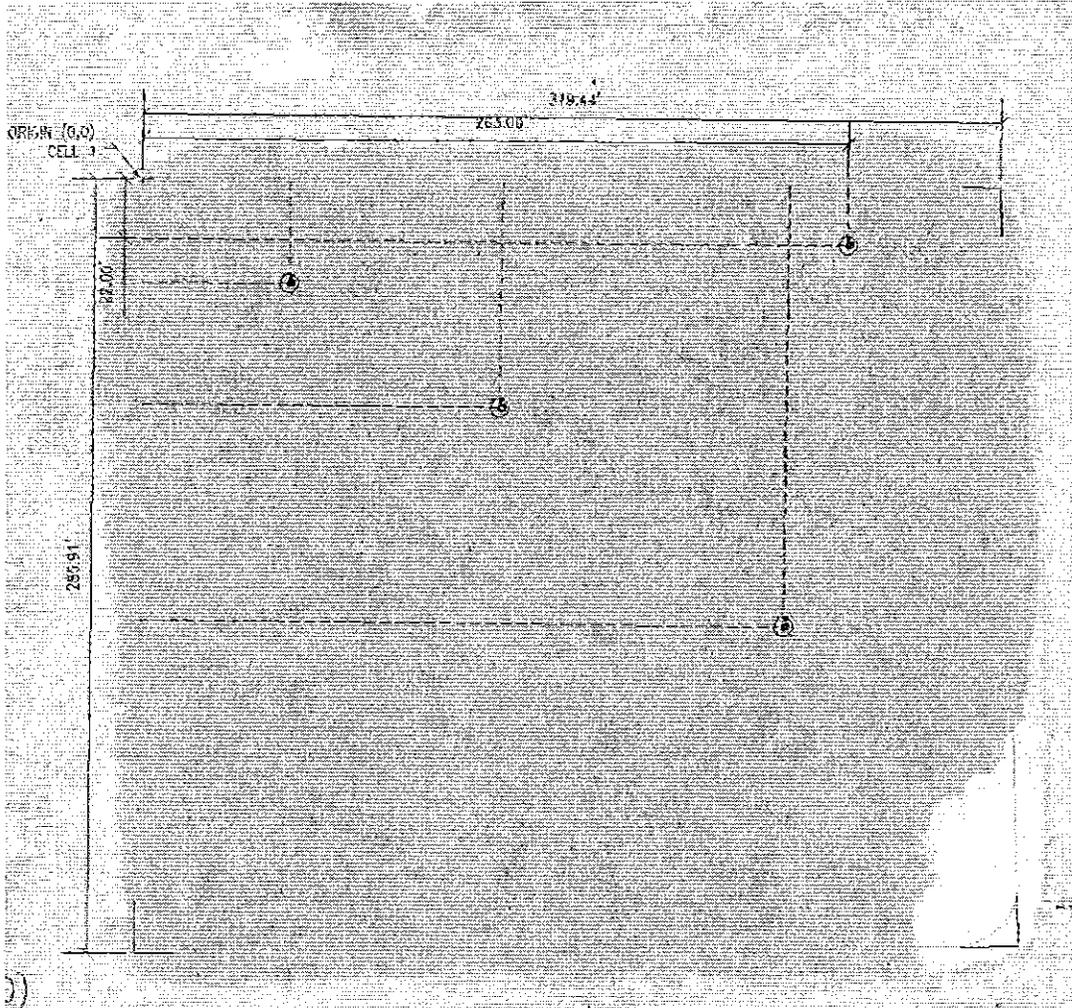
South



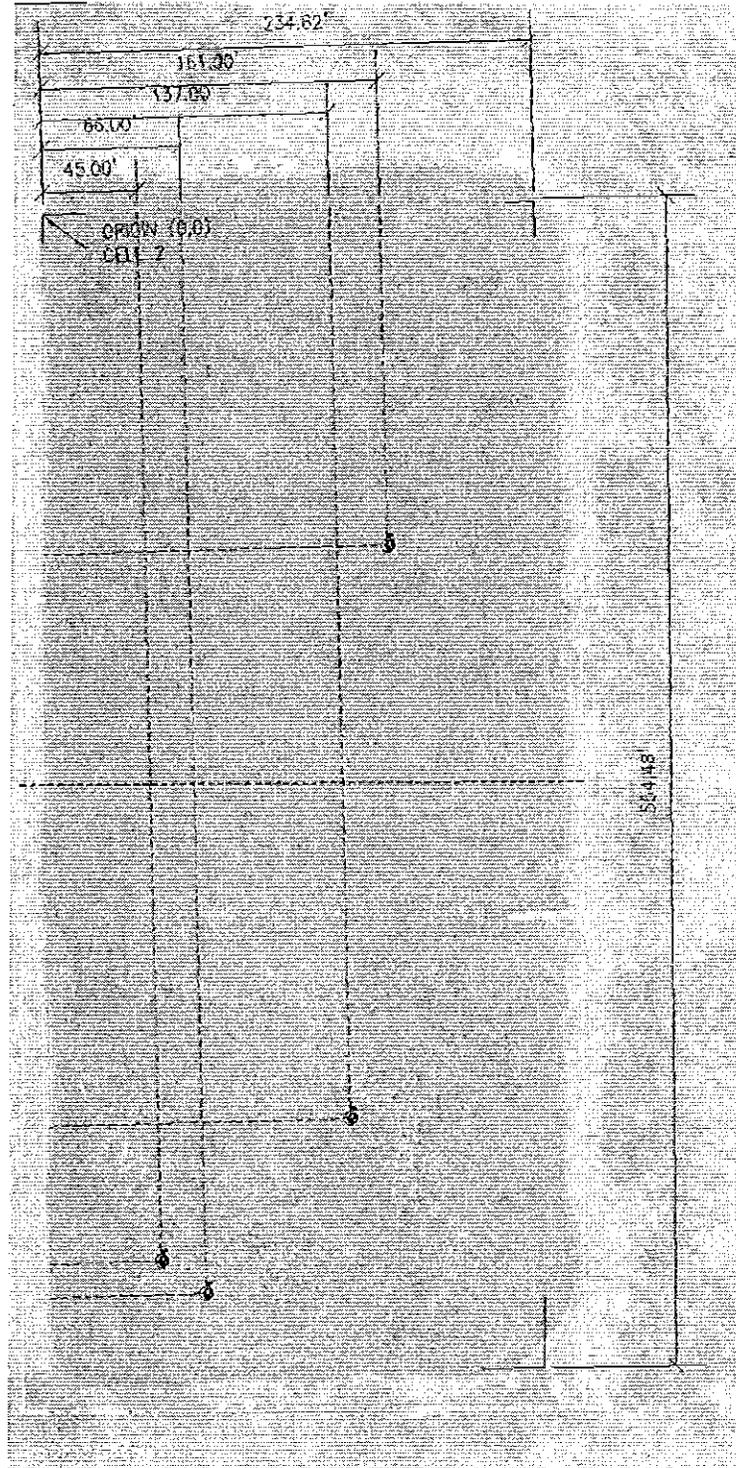
East



Drawing 1 - Cell 1 South Lagoon



Drawing 2 - Cell 2 North Lagoon



Drawing 3 - Cell 3 East Lagoon

3.7 Procedure

1. Locate sampling point location through shore reference markers and GPS coordinates; See Drawing: P002-12010.02-Samplegrid.dwg
2. Insert sludge judge into lagoon until bottom is reached
3. Cap tube and remove sample.
4. Record sludge depth.
5. Photograph sample in tube, showing any stratification layers
6. Remove cap and place sample in appropriate sampling bottle and seal.
 - a. Bottles are marked for type of testing required. (2) Sample bottles per sampling point. (1) for Metals, PCB and PC, no preservatives, (1) for VOC's and SVOC's, require preservatives.
7. Record the following information:
 - a. Sample number
 - b. Signature of collector
 - c. Date, Time of collection
 - d. Waste type, i.e. sludge classified by consistency, liquefied,
 - e. Signature of person involved in chain of possession
 - f. Dates of Possession

3.8 Quality Assurance Practices

1. Clean sampling equipment prior to next sampling to prevent cross contamination
2. Samples should be composted directly into container.
3. Samples should be adequately documented in Sampling Log. Included information:
 - a. Sample Number (format as Cell#:Sample Point#:Sample#)
 - b. Type of sample (all our samples will be "Grab" type)
 - c. Date and Time of sample collection
 - d. Sample location
 - e. Preservatives
 - f. Collector Name
 - g. Miscellaneous Information about collection if required.
4. Samples for organic volatiles (VOC) or semi-volatiles (SVOC) require preservatives, care should be taken to pack sample in container avoiding any air entrapment.
5. Chain of Custody
 - a. Document supplied by lab upon sample bottle pick-up
 - b. Person-Person transfer must be recorder through sampling process.

4. Soil Sampling

4.1 Methodology

After surface water discharge, sludge reduction efforts and eventual sludge remediation, soil samples will be taken to classify the insitu soils. Sampling and testing of these soils will be in accordance with the MDEQ (2002, "Sampling Strategies and Statistics Training Materials and Part 201 Cleanup Criteria."

NOTE: See page 67 -201 Note

4.2 Process

Soil sampling of the three lagoons will be based on statistical random sampling using a gridded overlay of the lagoon ponds. A grid interval of 50' was used based on the acreage of each individual pond. The following number of samples will be used based on 25% of the gridded points available.

Cell	Grid Point Available	Percentage Applied	# Sampling Locations
Cell #1	48	25%	12
Cell #2	42		11
Cell#3	55		14
Total Sample Locations			39

Ground water sampling and testing – which may remove soil testing.

4.3 Parameters

Soil samplings will be taken from the points established in this report. The soil sample parameters will be developed after the sludge and ground water have been evaluated.

(See Exhibit 7 - New Buffalo Plaza Work Plan attached)

Additionally, limits and criteria for testing will include and be in accordance with the revised criteria list for Part 201 Attachment #2.

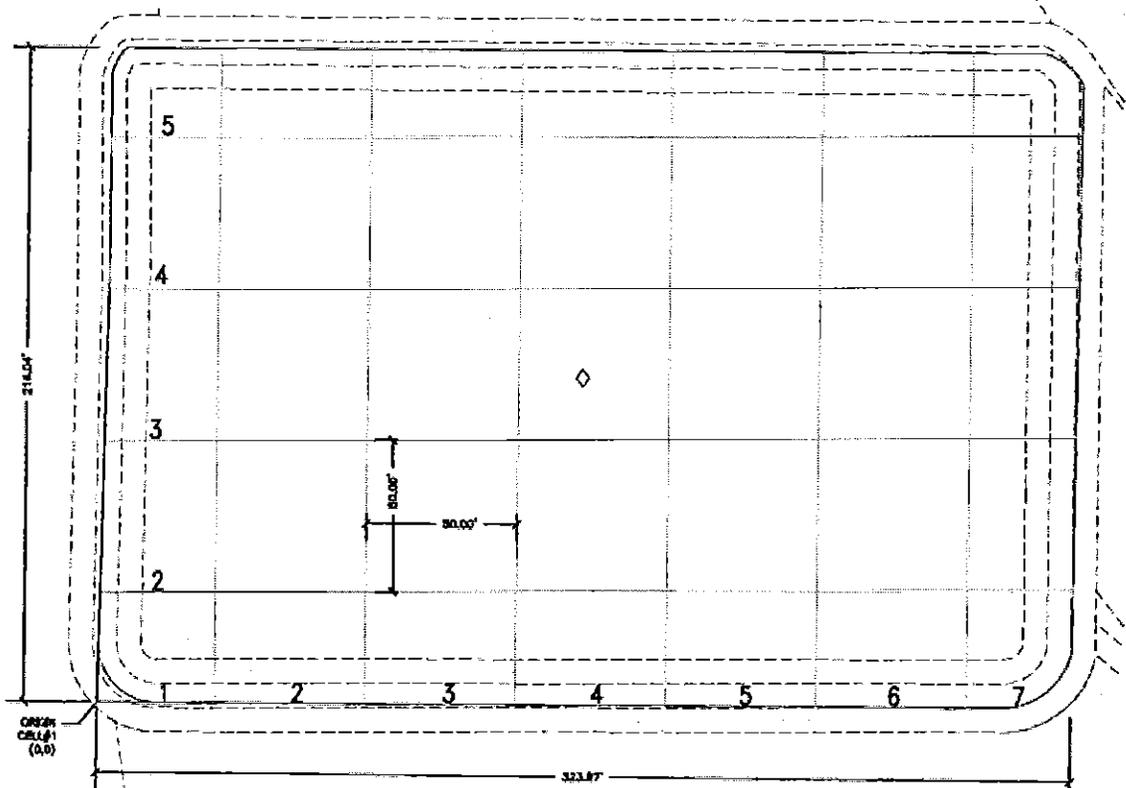
4.4 Sampling Locations

The cell grid was then assigned a numbers along its x and y axis. Using this number combination the appropriate grid was chosen. Finally, random numbers 1:50 were again selected and applied as the coordinate within the gridded box. This final coordinate was established as the sampling point for each cell sample. Sample depth was determined using random number collection with maximum depth determined to be 5 feet.

Cell#1 Soil Sampling Locations

Sample #	X axis Number	Y-Axis Number	X -coordinate	Y-coordinate
1	7	1	1	1
2	7	3	4	28
3	1	3	10	33
4	6	2	11	42
5	3	2	21	45
6	3	2	24	20
7	3	3	20	49
8	6	4	33	12
9	1	5	50	46
10	1	2	42	21
11	6	3	23	43
12	7	2	26	20

DEPTH: Core to Water Table, pinpoint contaminants, if none located use 2ft above water table

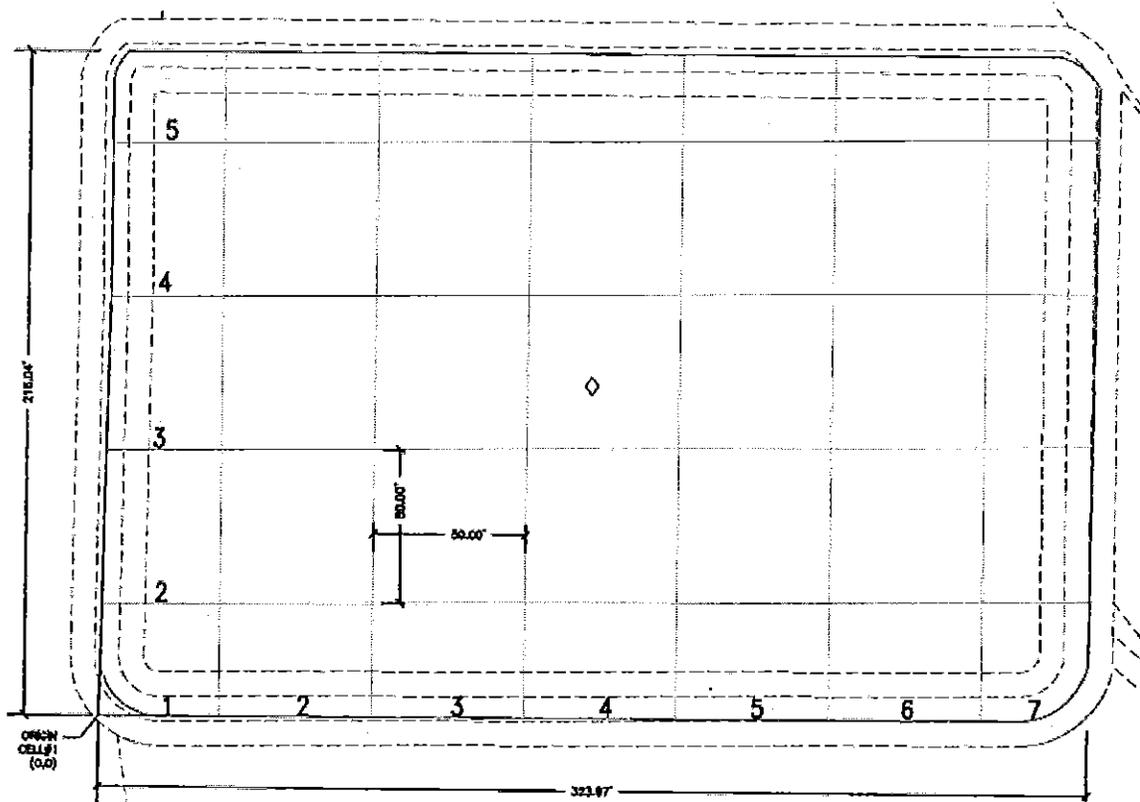


① POND#1 - GRIDDED VIEW 50' INTERVALS
 Scale: 1:30

Cell#2 Soil Sampling Locations

Sample #	X axis Number	Y-Axis Number	X -coordinate	Y-coordinate
1	6	1	21	9
2	2	1	17	36
3	3	2	9	48
4	5	5	15	12
5	7	4	2	38
6	2	4	25	34
7	2	5	26	48
8	6	5	8	16
9	4	1	3	21
10	1	1	33	1
11	6	5	43	1

See Note on page 61 for Depth



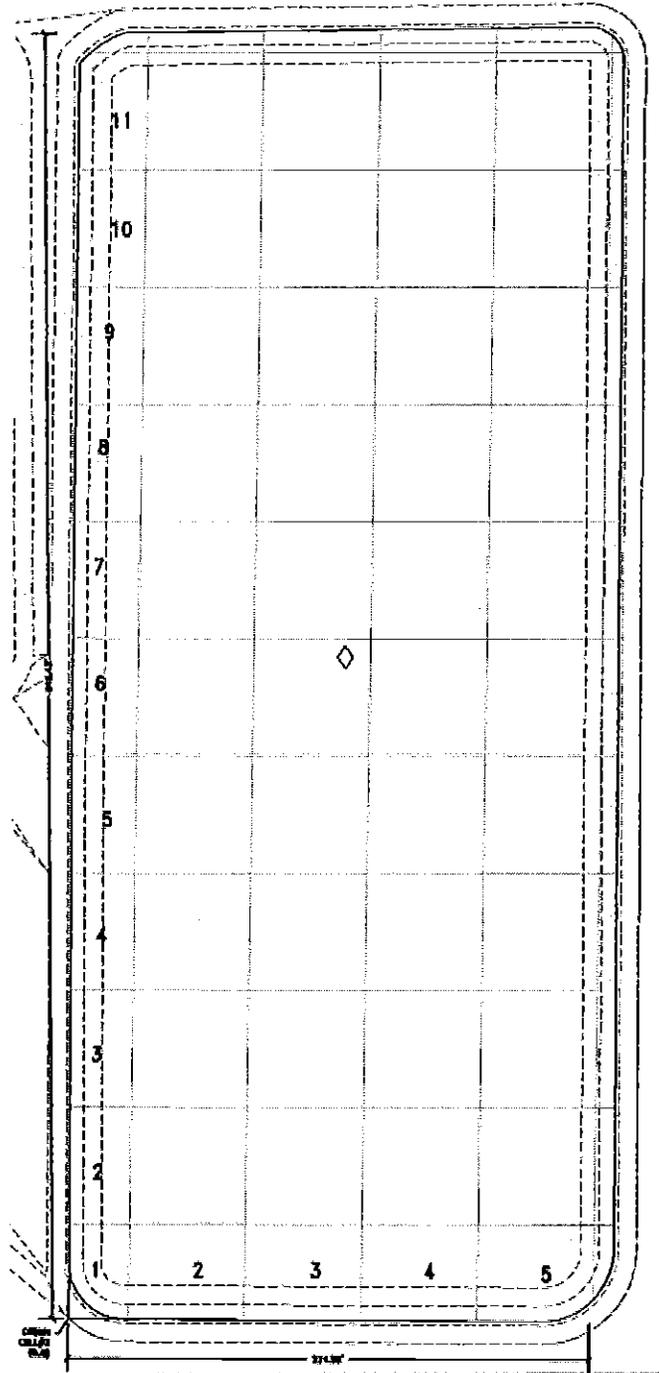
② POND#2- GRIDDED VIEW 50' INTERVALS

Scale: 1:30

Cell#3 Soil Sampling Locations

Sample #	X axis Number	Y-Axis Number	X -coordinate	Y-coordinate
1	4	4	19	13
2	1	10	15	35
3	2	10	3	37
4	3	7	21	25
5	2	3	10	21
6	3	2	5	23
7	1	8	46	29
8	2	11	20	9
9	3	8	14	46
10	1	8	40	11
11	2	4	25	50
12	4	6	30	17
13	1	10	25	20
14	1	3	27	42

See note on page 61 for depth sampling.



3 POND#3- GRIDDED VIEW 50' INTERVALS
SCALE: 1/2" = 100'

4.5 Procedure

8. Locate sampling point location through shore reference markers and GPS coordinates
9. Using Hollow Stemmed Auger Bore Hole until desired depth is reached
10. Place tailings in sampling container
11. Record depth.
12. Photograph sample in container, showing any stratification layers
13. Record the following information:
 - a. Sample number
 - b. Signature of collector
 - c. Date, Time of collection
 - d. Type
 - e. Signature of person involved in chain of possession
 - f. Dates of Possession

4.6 Quality Assurance Practices

6. Clean sampling equipment prior to next sampling to prevent cross contamination
7. Samples should be composted directly into container.
8. Samples should be adequately documented in Sampling Log. Included information:
 - a. Sample Number (format as Cell#:Sample Point#:Sample#)
 - b. Type of sample (all our samples will be "Grab" type)
 - c. Date and Time of sample collection
 - d. Sample location
 - e. Preservatives
 - f. Collector Name
 - g. Miscellaneous Information about collection if required.
9. Samples for organic volatiles (VOC) or semi-volatiles (SVOC) require preservatives, care should be taken to pack sample in container avoiding any air entrapment.
10. Chain of Custody
 - a. Document supplied by lab upon sample bottle pick-up
 - b. Person-Person transfer must be recorder through sampling process.

4.7 Schedule

Final soil sampling will not commence until classification of the remaining sludge is complete and appropriate forms of removal are enacted. After sludge, initial samples will be taken and soil classified per Part 201. Once soil classification is achieved, a determination on final clean up will be determined. In the following Clean Closure section, a Remedial Action Plan is included in the case of soil samples exceeding the Part 201 criteria.

D. Clean Closure and Conclusion

As previously shown in the closure schedule and after the Probiotic Scrubber II treatment, clean closure will be verified after the following remediation steps,

1. Final sludge depth analysis will be performed to allow for calculation of final haul off yardage.
2. Classification of the sludge will be determined. The sludge will be analyzed by a certified laboratory. After results the appropriate method of disposal will be used based on item 4. below.
3. Permits for increased discharge of surface water will be submitted to MDEQ.
4. Depending on the sludge analysis, the final disposal will be determined:
 - a. If testing proves that the material can remain, this step is completed.
 - b. If testing proves that the material must be removed and can be land applied, the permitting process will be started.
 - c. If testing proves that land application will not be allowed, then the material will be disposed of according to appropriate regulations. This may require disposal in a landfill approved to accept this type of material.
5. Clean Closure, final soil testing will be performed to verify all contaminants are removed or within acceptable limits. If soils need to be removed, then Item #4 procedures will be followed.

It is estimated that in October of 2016 dredging of the remaining sludge will commence. The remaining sludge will be either land applied or hauled to an appropriate designated landfill site. After dredging of both sludge and any contaminated underlying soils, a final soils test, per the soil testing parameters established in the sampling and testing section, will be concluded to verify all materials that pose a hazard to the existing area are within limits or completely removed. If contamination is found the following Remedial Action plan will be put into place.

1. Remedial Action Plan

Pursuant to Part 201 and Part 213, and as discussed in section B 2, if the remaining insitu soils are found to be contaminated with hazardous materials, the following scenarios will be reviewed and applied.

1. The remaining soils will be remediated and hauled-off to an appropriate classified disposal facility.
2. If removal of remaining soils is not feasible, and per RRD operational memo no. 1 dated December 10, 2004 the facility will be classified under the remedial criteria outline. In doing so, the site will be evaluated and criteria will be established based on the remaining hazards identified. Pathways will be

determined and a site specific remedial action will be requested. After the remedial action steps, a Tier 2 or 3 closure will be sought under Part 213.

3. If contaminated ground water is noted, than a remedial action plan to correct this is needed.

GENERAL NOTE:

Compliance with part 24 is required

115 – for sludge

201 - for water

2. Final Verification

After verification and closure, projected in to be in early 2017, the site and regulations will be reviewed for its potential conversion to a public nature preserve or wetlands.

E. Referenced Standards and Documentation

1. EPA (2012) "SW-846 ONLINE CHAPTER 9 SAMPLING PLAN"
<http://www.epa.gov/waste/hazard/testmethods/sw846/online/>
2. EPA (1989) " POTW Sludge Sampling and Guidance Document"
EPA-833-B-89-100
3. EPA, Office of Solid Waste (2002) "RCRA Waste Sampling Draft Technical Guidance"
EPA-530-D-02-002
4. EPA (2012), "Guide to Part 503 Rule-Chapter 6"
http://water.epa.gov/scitech/wastetech/biosolids/503pe_index.cfm
5. Michigan Department of Environmental Quality, (2002) " Operational Memo 115-25"
Retrieved from: http://www.michigan.gov/documents/deq/deq-wmd-opmemo-115-25_231330_7.pdf
6. Michigan Department of Environment Quality, (1999) " Part 24 Land Application of Biosolids"
Retrieved from: http://www.michigan.gov/deq/0,4561,7-135-3313_3683_3720-9615--,00.html
7. Michigan Department of Environmental Quality " Operational Memo Gen 08 Rev 08"
8. Michigan Department of Environmental Quality " RRD Operational Memo no. 1
9. Michigan Department of Environmental Quality, " Sampling Strategies and Statistics Training Materials for Part 201 cleanup."

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1.1. Probiotic Scrubber II MSDS Sheet



Providing Biological Solutions for water, soil, plants

MATERIAL SAFETY DATA SHEET
 ProBiotic Scrubber II™

Product Identification

Product Name: ProBiotic Scrubber II™
 Common Names/Synonyms: BioScrubber™

Hazardous Ingredients / Identity

Complies with OSHA 29 CFR XV11-19.10, 1200 Section (1) "trade secrets." Contains no hazardous components under OSHA definitions.

Physical & Chemical Characteristics

Boiling Point, degrees F: >210° @ 1 AMT
 Specific Gravity (H2O=1): 1.0360
 Avg. Weight per Gallon: 8.5 lbs.
 Vapor Pressure (mm hg): 17 mm @ 65° F
 Vapor density (air=1): .62
 Solubility In Water: 22%
 Percent volatile: N.A.
 Appearance & Odor: Brown liquid, mild odor
 Evaporation Rate: 0.08
 Melting Point: None
 Avg. pH: 7.7

Fire & Explosion Data

Flash Point: None
 Method used: p-in closed cup
 Auto-ignition temp: None
 Special fire procedures: None
 Extinguisher media: None, product decomposes without flame
 Unusual fire & Explosion hazards: None

Physical Hazards (Reactivity Data)

Stability: None known
 Condition to avoid: None known
 Incompatibility (materials to avoid): This material will neutralize acids.
 Hazardous decomposition products: None, material is non-combustible
 Hazardous polymerization: Will not occur

Health Hazards

Acute: None
 Chronic: None
 Signs & Symptoms of exposure: May dry out sensitive skin after prolonged contact, will stain skin
 Medical conditions generally aggravated by exposure: None
 Chemical listed as potential carcinogen: No
 National toxicology program: No
 I.A.R.C. Monographs: No
 OSHA: No
 Emergency & First Aid Procedures: None, See physician if needed
 Routes of entry: Inhalation: None
 Eyes: Rinse thoroughly with water for 15 min
 Skin: None
 Ingestion: Dilute w/ water, see physician

Special Precaution & Spill/Leak Procedures

Precautions for handling & storage: Do not let product freeze. Product will stratify at 32° degrees F. Do not allow product to freeze. May be thawed and remixed.
 Other precautions: Area of spill may become slippery
 Steps for released or spilled: No special requirements known
 Waste disposal methods: Dispose of material in accordance with all local, state & federal laws & regulations.

Special Protection Information

Normal
 N/A
 Local exhaust / ventilation: Not required
 Mechanical: Not required
 Respiratory protection: Not required
 Protective gloves: Not required
 Eye protection: Normal industrial hygiene
 Other protective clothing/equip: None
 Work hygiene practices: None

FOR EMERGENCY ASSISTANCE INVOLVING PROBIOTIC SCRUBBER II™, please call Global Organics® Products at 623-932-1522 or 800-471-1522. ProBiotic Scrubber II™ is a registered trademark of and is distributed by BioLynceus LLC. This product is manufactured by Global Organics®.

1.2. ProBiotic Scrubber II Data Sheet



ProBiotic Scrubber II™

ProBiotic Scrubber II™ is a scientific formulation of BioStimulants, Amino Acids, Humic Acid, Fulvic Acid, Minerals and Micronutrients, which enhances biological degradation and increases bio-oxidation in water and soil.

Derivation

Derived from kelp, blue-green algae, *B. licheniformis*, *B. subtilis*, *S.cerevisiae* & *P.stutzeri*, minerals and micronutrients.

Density

8.50 lb per gallon
 1.02 kg per liter

Application Information

All recommendations below are general in nature. Special formulations and rates may be required for a specific situation. When using a gravity feed pump ProBiotic Scrubber I™ may be substituted for ProBiotic Scrubber II™ with modified recommendations. Contact a sales representative.

WASTEWATER LAGOONS (Industrial, Municipal or Animal Waste)

- *Reduces noxious odors
- *Improves solids digestion
- *Improves grease reduction
- *Improves aeration
- *Reduces total suspended solids
- *Cleans collection & trunk lines
- *Probiotic Dredging™ of sludge
- *Reduces sludge handling
- *Removes solids & grease from lift stations

DIRECTIONS for use on Industrial & Municipal Treatment: Initial inoculation required as needed to activate lagoon, apply 2 gallons per day per million gallons of wastewater flow for 10 days. Make application as far upstream in the wastewater flow as possible for most efficient treatment. After 10 days, apply 1 gallon per day per million gallons of wastewater flow. **Minimum application for plants processing less than 120,000 gallons per day:** Inject 20 ounces per day minimum, or roughly 1 gallon per week. Use a metering pump when possible, or hand apply. ProBiotic Scrubber II™ may be diluted with water to achieve pump setting.

DIRECTIONS for Dairy Waste Treatment: To activate, spray lagoon surface with 1 gallon per each 2000 to 5000 sf of surface area. Add 1 gallon per 200 cows per week by metering pump or weekly application. Free-stall operations may require 1 gallon per 100 cows per week by metering pump. *Dairies milking more than twice per day will require higher treatment levels.*

DIRECTIONS for Hog or Beef Waste Treatment: To activate, inoculate lagoon surface with 1 gallon per each 2000 to 5000 sf of surface area or 10 gallons per 1 million gallons of waste liquid. Then add 2 gallons per quarter million gallons of waste stream entering lagoon per week, or 2 gallons per 500 sows per week. A metering pump is recommended.

Keep Away From Children - Not for Human Consumption
 Note: buyer assumes all risk of use, storage and handling of this material. Neither the manufacturer, seller, nor its agents, make any warranty, expressed or implied, concerning this product, except in conformity with statements on the label. Information regarding this product can be obtained from BioLynceus. Do not allow product to freeze.

ProBiotic Scrubber II™ is a registered trademark of and is distributed by BioLynceus LLC.

Information regarding the contents and levels of metals in this product is available by calling 1-800-471-1152.

Manufactured by
 Global Organics
 16121 West Eddie Albert Way
 Goodyear, AZ 85338 USA
 TEL: 602-932-7777

1.3. Probiotic –MDEQ Application for Use

Ms. Kay Edly, Aquatic Biologist
Michigan Department of Environmental Quality
Water Resources Division, Permits Section
525 West Allegan St.
P.O. Box 30458
Lansing, MI. 48909-7958

RE: Wastewater Treatment Additive Request
Plaza One Wastewater Treatment Facility, New Buffalo, MI
MIG 580000

Dear Ms. Edly,

We Plaza One, Inc. are hereby requesting the Department's approval to add a probiotic product, *ProBiotic Scrubber II™*, from Biolynceus, Estes Park, CO, to our wastewater treatment facility to aid in reducing sludge build-up. We are providing the following information to you to aid you in your approval:

1. The water treatment additive Material Safety Data Sheet (MSDS).

An MSDS for the product is attached. Proprietary formula information for *ProBiotic Scrubber II™* had previously been submitted to Mr. Bill Dimond, William F. Dimond, Aquatic Biology Specialist, MI Corps Program Manager, MDEQ-WRD-SWAS, on April 15, 2013. Via email on April 29, 2013, Mr. Dimond indicated the product is approvable in Michigan for use in sewage treatment lagoons, provided the label directions are followed.

2. The proposed water treatment additive discharge concentration with supporting calculations.

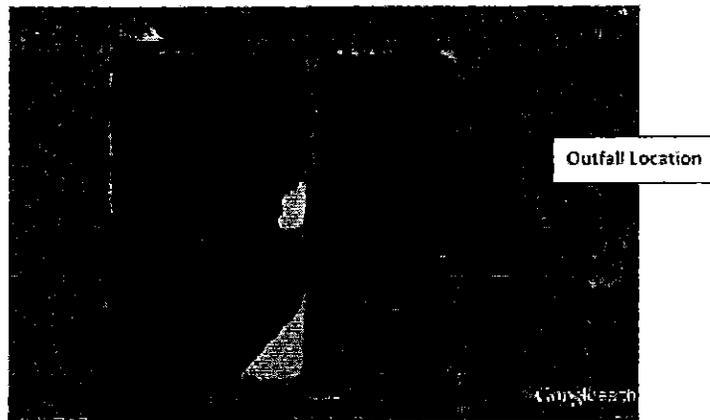
The product is added at a concentration of 1 ppm (1 gal/million gallons wastewater). Once added, some of the bacteria from the product will die off and some will reproduce. In addition, some of the same, naturally occurring bacteria in the product is typically already in the wastewater. Consequently there is no way of determining the discharge concentration of the product.

Biolynceus reports that independent acute toxicity tests (LC50 lab results) performed for *ProBiotic Scrubber II™* showed that at a 0.001% dilution rate (1,000 to 1) 38 out of 40 test subjects survived or a 95% survival rate. The test was performed at three different dilution rates to prove that the product is safe. The product is directed to be used at 1 ppm (0.0001%), so at the recommended usage, or even at a somewhat higher usage, lethal toxicity should not be a concern.

3. Discharge Frequency

The discharge of the lagoons, permitted under Wastewater Stabilization Lagoon Effluent No. MIG 580000, will be held until the minimum number of effective applications is used to reduce the existing sludge depth by at least one to three inches. As per the Lagoon Closure Schedule continuous application of the product is expected to happen in the summer months of 2013, 2014 and additionally 2015 if desired reduction in sludge is seen as effective. Therefore discharge of any lagoon will not commence until the summer of 2016.

4. Discharge Outfall Location



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

No removal treatment is necessary.

6. The water treatment additive function (i.e., microbiocids, flocculants, etc.).

The product is used for bio augmentation of the wastewater to improve digestion of accumulated solids/sludge.

Wastewater Treatment Additive Request
Plaza One Wastewater Treatment Facility, New Buffalo, MI
MIG 580000
Page 3

Thank you for your attention to this matter. If you need additional information or have any questions, please contact our engineer, Mr. Gary Radtke, P.E., Radtke Engineering And Surveying, LLC, La Porte, IN, at (219) 873-1100 ext. 101.

Sincerely,

NEW BUFFALO RESIDENTIAL, LLC



Mr. Harry Goldsborough
Representative

CC: Mr. Gary Radtke, P.E., Radtke Engineering And Surveying, LLC

1.4 Probiotic – Approval Correspondence Letters

Re: FW: Fwd: New Buffalo Plaza WWSL - ProBiotic Scrubber II Request <https://mail.google.com/mail/u/0/?ui=2&ikb=497&as=print>

Subject: Re: FW: Fwd: New Buffalo Plaza WWSL - ProBiotic Scrubber II Request
From: Steve <steve@radtke-engineering.com>
Date: 8/6/2013 11:04 AM
To: "Edly, Kay (DEQ)" <EDLYK@michigan.gov>
CC: Ed Recktenwall <ed@radtke-engineering.com>, gary@radtke-engineering.com, Christine Waldschmidt <chris@radtke-engineering.com>

Hello Kay,

Here are the proposed treatments for 3 years, years 2014, 2015, and 2016:

There will be an initial 80 gallon dose in all 3 cells, then through the months of June thru October, there will be 20 oz daily in cell 1 and 2.5 gallons per month in cells 2 and 3.

See lagoon closure report schedule. If you need a copy, please request from Dale Ehinger.

Thank you,

Steve Fleming
Radtke Engineering

On 7/22/2013 2:00 PM, Edly, Kay (DEQ) wrote:

Hi Steve,
Thanks for forwarding the report. We realize that it would be difficult to calculate a proposed discharge concentration for the product. However, we'll still need to know the maximum number of treatments that are proposed, the amount of product used for each treatment, and the volume of water in the lagoon at the time of each treatment. Can you please provide this information?

Please let me know if you have any questions.

Thanks,
Kay

From: Steve [<mailto:steve@radtke-engineering.com>]
Sent: Friday, July 12, 2013 11:35 AM
To: Edly, Kay (DEQ)
Cc: Gary Radtke
Subject: Re: FW: Fwd: New Buffalo Plaza WWSL - ProBiotic Scrubber II Request

Hello Kay,

Here is our Probiotic Scrubber II section of our Lagoon Closure Report. If you have not received a copy yet, this should answer more of your questions. The concentration is addressed in section 2 as well as toxicity dilution rates, test subject survival rates and directed usage. I will inquire more toxicity information from the supplier while you review the attached report. Please contact me with any other question or concerns.

Re: FW: Fwd: New Buffalo Plaza WWSL - ProBioEic Scrubber II Request imap://imap.googlemail.com:993/fetch?UID=INBOX:497;header=print

Thank you,

Steve

On 7/12/2013 8:39 AM, Edly, Kay (DEQ) wrote:

Hi Steve,
Could you also let me know the maximum number of treatments that will be conducted, and the maximum dosing concentration for these treatments?

Thanks,
Kay

From: Edly, Kay (DEQ)
Sent: Friday, July 12, 2013 9:22 AM
To: 'Steve'
Subject: RE: Fwd: New Buffalo Plaza WWSL - ProBiotic Scrubber II Request

Hi Steve,
Thanks for forwarding the information. Do you have any other aquatic toxicity data for the product? If not, can you contact your supplier for the product and ask them if they have any other aquatic toxicity data for the product?

Thanks,
Kay

From: Steve [<mailto:steve@radtke-engineering.com>]
Sent: Thursday, July 11, 2013 1:44 PM
To: Edly, Kay (DEQ)
Cc: Gary Radtke
Subject: Fwd: Fwd: New Buffalo Plaza WWSL - ProBiotic Scrubber II Request

----- Original Message -----
Subject: Fwd: New Buffalo Plaza WWSL - ProBiotic Scrubber II Request
Date: Thu, 11 Jul 2013 12:37:43 -0500
From: Gary Radtke <gary@radtke-engineering.com>
To: Steve Fleming <steve@radtke-engineering.com>

Hello Kay,

Here is the email from May 31 along with the toxicity testing for the probiotic scrubber II.

Thank you!

Re: FW: Fwd: New Buffalo Plaza WWSL - ProBiotic Scrubber II Request inap://inap.googlemail.com/993/fetch?UID=:INBOX:497?reader=print

Steve Fleming
Radtke Engineering
cell- 219-213-1556
office- 219-873-1100 ext. 106

----- Original Message -----

Subject: New Buffalo Plaza WWSL - ProBiotic Scrubber II Request
Date: Fri, 31 May 2013 15:28:27 -0400
From: Edly, Kay (DEQ) <EDLYK@michigan.gov>
To: 'gary@radtke-engineering.com' <gary@radtke-engineering.com>

Hi Gary,

I received the water treatment additive request to discharge ProBiotic Scrubber II submitted by New Buffalo Plaza WWSL. We'll need some additional information to review the request. Could you please respond to the following:

1. We'll need to know the maximum number of treatments that will be conducted, and the maximum dosing concentration for these treatments.
2. Item #2 of the attached request mentions that aquatic toxicity tests have been conducted on the product, ProBiotic Scrubber II. Would you happen to have the test results that you could forward to me?
3. Also, Mr. Harry Goldsborough signed the request letter. However, his contact information is not included in the letter. Would you happen to have an email address for Mr. Goldsborough, I'll need to cc him on our correspondence.

Thanks for the additional information, and please let me know if you have any questions.

Thanks,
Kay

Kay Edly, Aquatic Biologist
Michigan Department of Environmental Quality
Water Resources Division, Permits Section
525 West Allegan St.
P.O. Box 30458
Lansing, MI. 48908-7958
phone: 517-373-4033
fax: 517-373-9958

Re: FW: Fwd: New Buffalo Plaza WWSL - ProBiotic Scrubber II Request

imap://imap.googlemail.com/993?fetch=UID&INBOX=497?header=print

--
Steve Fleming
Radtke Engineering

2. DEQ Original Discharge Permit No. MIG580000

PERMIT NO. MIG580000

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

WASTEWATER STABILIZATION LAGOON EFFLUENT

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 431, Public Acts of 1994, as amended (the "Michigan Act"), Parts 31 and 41, and Michigan Executive Orders 1991-31, 1995-4 and 1995-18, properly treated wastewater stabilization lagoon effluent is authorized to be discharged seasonally from facilities specified in individual "certificates of coverage" in accordance with effluent limitations, monitoring requirements and other conditions set forth in this general National Pollutant Discharge Elimination System (NPDES) permit (the "permit").

The applicability of this permit shall be limited to seasonal (spring/fall) discharges of sanitary wastewater which 1) have been adequately treated by a wastewater stabilization lagoon, 2) are not subject to the industrial pretreatment program requirements under the Michigan Act and Rules 323.2301 through 323.2317 of the Michigan Administrative Code (Part 23 Rules) and 3) have been determined by the Michigan Department of Environmental Quality (the "Department") not to need an individual NPDES permit. Aerobic lagoons, both mechanically aerated and non-mechanically aerated, which discharge treated sanitary wastewater are included. The lagoon system shall 1) meet accepted design standards as determined by the Department, and 2) comply with secondary treatment standards for lagoon systems in Part 1, A.1. and other requirements and limitations stated herein. Discharges which may cause or contribute to a violation of a water quality standard are not authorized by this permit.

In order to constitute a valid authorization to discharge, this permit must be complemented by a certificate of coverage issued by the Department. The certificate of coverage will specify whether the total phosphorus limitation applies to the individual facility.

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

The terms and conditions of this general permit shall apply to an individual facility on the effective date of a certificate of coverage for the facility. The Department may grant a contested case hearing on this general 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 general permit in accordance with Rule 2192(c) (Rule 321.2192 of the Michigan Administrative Code).

This general permit shall take effect 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. MIG580000, expiring October 1, 1999.

This general permit shall expire at midnight, April 1, 2009.

Issued _____

D. Steven Eldredge
Chief, Surface Water Permits Section
Water Division

PERMIT NO. MGS80000

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PART I

Section A. Effluent Limitations And Monitoring Requirements

1. Final Effluent Limitations

During the period beginning on the effective date of this permit and the effective date of 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 treated sanitary wastewater to the surface waters of the state of Michigan. 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				Frequency of Analysis	Sample Type
	Monthly	7-Day	Daily	Units	Monthly	7-Day	Daily	Units		
Flow (see b. below)	(report)	---	(report)	MGD	---	---	---	---	Daily	Report Total Daily Flow
Biochemical Oxygen Demand (BOD ₅)	---	---	---	---	30	45	---	mg/l	see c. below	Composite
Total Suspended Solids	---	---	---	---	70	160	---	mg/l	see c. below	Composite
Mar-May	---	---	---	---	40	45	---	mg/l	see c. below	Composite
Oct-Dec	---	---	---	---	---	---	---	---	---	---
Ammonia Nitrogen (as N)	---	---	---	---	(report)	---	---	mg/l	see c. below	Composite
Total Phosphorus (as P)	---	---	---	---	(report)	---	---	mg/l	see c. below	Composite
Fecal Coliform Bacteria	---	---	---	---	200	400	---	cfu/100 ml	see c. below	Grab
					Minimum Daily		Maximum Daily			
pH	---	---	---	---	6.5	---	10	S.U.	see c. below	Grab
Dissolved Oxygen	---	---	---	---	5.0	---	---	mg/l	Daily	Grab

a. **Narrative Standard**
 The receiving water shall contain no unnatural turbidity, color, oil films, floating solids, foam, settleable solids, or deposits as a result of this discharge.

b. **Discharge Periods**
 Effluent shall be discharged during high flow conditions in the spring and fall of each year. There shall be no discharge from June 1 to September 30 and from January 1 to February 28. In addition, there shall be no discharge during periods of significant ice cover on the receiving stream unless authorized by the Department.

c. **Discharge Management**
 The discharge is to be managed consistent with the following requirements.

- 1) **Cell Isolation** - The permittee shall enclose a cell from cells receiving untreated sanitary wastewater at least two weeks in advance of a proposed discharge. There shall be no discharge from unisolated cells.
- 2) **Pre-Discharge Sampling** - The permittee shall sample the isolated cell for Biochemical Oxygen Demand, Total Suspended Solids, Ammonia Nitrogen, Total Phosphorus, Fecal Coliform Bacteria and pH no more than two weeks in advance of a proposed discharge. Samples shall be drawn from a point approximately five feet from the edge of the cell and one foot beneath the water surface.

2/28 to 6/11
 9/30 to 1/11

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PART I

Section A. Effluent Limitations And Monitoring Requirements

- 3) **Discharge Approval Required** - The permittee shall notify and receive approval from the Department prior to the discharge of any effluent. The notification shall include the results of six pre-discharge effluent samples and the results of a Dissolved Oxygen sample taken within the last 12 hours.
- 4) **Discharge Duration** - Discharge duration shall not exceed 10 consecutive days, with a minimum non-discharge period of 5 days between each discharge.
- 5) **Discharge Sampling Frequency - Flow and Dissolved Oxygen** shall be measured daily during discharge. All other parameters shall be measured every other day during discharge. The Department may approve alternate sampling frequencies which are demonstrated to be representative of the discharge.
- 6) **Discharge Sample Type and Location** - The sampling for Biochemical Oxygen Demand, Total Suspended Solids, Total Phosphorus and Ammonia Nitrogen shall be 3-portion composite samples of the effluent. The sampling for Dissolved Oxygen, Fecal Coliform Bacteria and pH shall be grab samples of the effluent.
- d. **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.
- e. **Construction Approval**
 This permit does not authorize the construction or modification of any physical structures of the wastewater treatment facility. The permittee shall receive approval of plans and specifications from the Department before commencing construction of the wastewater treatment facility necessary for compliance with this permit.

2. Additional Final Effluent Limitation for Total Phosphorus

If the Department determines it necessary to control phosphorus discharges to protect downstream water quality, the discharge shall be limited and monitored by the permittee as specified below. Such determination will be indicated on the certificate of coverage.

Parameter	Maximum Limits for Quantity or Loading			Maximum Limits for Quality or Concentration			Frequency of Analysis	Sample Type
	Monthly	7-Day	Daily	Monthly	7-Day	Daily		
Total Phosphorus				1.0		mg/l	see A.1.c.5)	Composite above

3. Facility Operation and Maintenance

The permittee shall comply with the inspection, operation and maintenance program requirements specified below. An alternate facility operations program may be approved by the Department.

- a. **Lagoon Inspection**
 The permittee shall inspect the lagoon facilities three times weekly year-round unless otherwise authorized by the Department. These inspections shall include:
 - 1) the lagoon dikes for vegetative growth, erosion, slumping, animal burrowing or breakthrough, and condition of lagoon levees.
 - 2) the lagoon for growth of aquatic plants, offensive odors, insect infestations, scum, floating sludge, and septic conditions.

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PART I

Section A. Effluent Limitations And Monitoring Requirements

- 3) the depth of the water in each cell and the freeboard,
- 4) the control structures and pump stations to assure that valves, gates and alarms are set correctly and properly functioning;
- 5) the lagoon security fence and warning signs; and
- 6) analysis for Dissolved Oxygen in each lagoon cell at least one time weekly, except when the lagoons are not covered.

The permittee shall initiate steps to correct any condition that is not in accordance with the facility maintenance program outlined in Part I.A.3.b. of this permit. A record of the inspections shall be maintained by the permittee for a period of three years.

b. Facility Maintenance

The permittee shall implement a Facility Maintenance Program that incorporates the following management practices unless otherwise authorized by the Department.

- 1) Vegetation shall be maintained to a height not more than 6 inches above the ground on lagoon dikes.
- 2) Not more than 10% of the water surface shall be covered by floating vegetation and not more than 10% of the water perimeter may have emergent rooted aquatic plants.
- 3) Dike damage caused by erosion, slumping or animal burrowing shall be corrected immediately and steps taken to prevent occurrences in the future.
- 4) The integrity of the lagoon liner shall be protected. Liner damages shall be corrected immediately and steps taken to prevent future occurrences.
- 5) The occurrence of scum, floating sludge, offensive odors, insect infestations, and septic conditions shall be minimized.
- 6) A schedule for the inspection and maintenance of the collection system, lift stations, mechanical and electrical systems, transfer stations, and control structures shall be developed and implemented.

c. Lagoon Drawdown Conditions

The permittee shall observe the following conditions when drawing down a cell for transfer or discharge unless otherwise authorized by the Department.

- 1) Water discharged shall be removed from the surface two feet of the cell at a rate of less than one foot per day.
- 2) The permittee shall maintain a minimum of two feet of freeboard in all cells at all times. Upon written notification, the Department may require a minimum of three feet of freeboard for larger systems.
- 3) The permittee shall maintain a minimum of two feet of water in all cells at all times.

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PART I

Section A. Effluent 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 Surface Water Quality Assessment Section, Water Division, Department of Environmental Quality, P.O. Box 30273, 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/deq>) and on the left side of the screen click on Water, Water Quality Monitoring, and 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:

- a. Material Safety Data Sheet;
- b. the proposed water additive discharge concentration;
- 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. microbicide, flocculant, etc.);
- g. a 48-hour LC₅₀ or EC₅₀ 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 323.105(2) of the Water Quality Standards.

Prior to submitting the request, the permittee may contact the Surface Water Quality Assessment Section by telephone at 517-335-1188 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.

5. Special Condition – Testing for Lagoon Exfiltration/Leakage

If the Department determines the permittee needs to conduct an exfiltration test on the wastewater stabilization lagoon to verify and assure the control of leakage to the groundwaters and/or surface waters of the state, the following conditions shall apply:

- a. Within 120 days of notification by the Department, the permittee shall submit an approvable lagoon exfiltration study plan to the Department. The purpose of the study plan is to verify the integrity of the lagoon seal or determine the rate of leakage from the lagoon treatment system. The study shall include procedures, time schedules, staff, sampling locations, sampling frequencies, and sampling methods used, as appropriate.
- b. Within 60 days of approval of the lagoon exfiltration study plan, the permittee shall implement the study plan.
- c. Within 1 year of approval of the study plan, the permittee shall complete and submit a final report on the lagoon exfiltration study with supporting data to the Department. Based on review of the findings, the Department may continue the general permit coverage or terminate the Certificate of Coverage by requiring the permittee to apply for and obtain an individual NPDES permit for the discharge.

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PART I

Section A. Effluent Limitations And Monitoring Requirements

6. Residuals Management Program for Land Application of Biosolids

If it is understood the permittee does not currently land apply biosolids or prepare biosolids for land application, and therefore is not required to immediately develop a Residuals Management Program (RMP) in accordance with the Part 24 Rules of the Michigan Administrative Code. Alternative biosolids recycling and/or disposal activities, including incineration and landfiling, shall be conducted in accordance with Part E.L.D.7. of this permit. In the event the permittee proposes to prepare biosolids for land application or land apply biosolids, an RMP shall be submitted to the Department for approval, and implemented as follows:

- a. **Program Development**
At a minimum, the program submittal shall include:
 - 1) a description of the type and size of facility generating the biosolids;
 - 2) a description of the biosolids treatment processes (including the volume of biosolids generated from each process);
 - 3) storage volume provided, if applicable;
 - 4) transportation methods and spill prevention plan;
 - 5) a description of the land application method;
 - 6) a listing of the required information on all land application sites, information on initial application notifications required by R323.2408 and class B biosolids site remediation notifications, if applicable, as specified in R323.2414(3)(f);
 - 7) a land application plan which shows compliance with the applicable management requirements identified in R323.2410 and the loading rates and limitations as specified in R323.2408, R323.2409 and R323.2417;
 - 8) a description of the pathogen reduction method used to comply with R323.2411, R323.2414 and R323.2418;
 - 9) a description of the vector attraction reduction method used to comply with R323.2413; and
 - 10) information on monitoring program, monitoring frequencies pursuant to R323.2412, and one year of records representing the volume and concentrations of pollutants in the biosolids.
- b. **RMP Implementation**
The permittee shall implement the RMP immediately upon approval from the Department. Upon RMP approval, the permittee may land apply bulk biosolids, and the approved RMP becomes an enforceable requirement of this permit.
- c. **Modifications to the Approved RMP**
The permittee shall submit proposed modifications to its RMP to the Department for approval. The approved modification shall become effective upon the date of approval. Upon written notification, the Department may impose additional requirements and/or limitations to the approved RMP as necessary to protect public health and the environment from any adverse effect of a pollutant in the biosolids.
- d. **Recordkeeping**
Records required by R323.2413 shall be kept for a minimum of five years. However, the records documenting cumulative loading for sites subject to cumulative pollutant loading rates shall be kept as long as the site receives biosolids.
- e. **Annual Report**
The permittee shall report the number of dry tons of biosolids generated that were applied to the land in the State of Michigan in the state fiscal year (October 1 through September 30). The annual report shall include information required in R323.2413(2)(h) and R323.2413 (3) to (8), except R323.2413 (6)(b), (7)(b), and (8)(b). The report shall be submitted to the Department on or before October 31 of each year.

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PART I

Section A. Effluent Limitations And Monitoring Requirements

7. 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.

8. Connection to Public Sanitary Sewer System

✓ All wastewaters from private facilities shall be connected to public sanitary sewer systems made available by any local governmental unit, within (18) months from the date when said sewer system becomes available. At that time, discharges to surface waters are no longer authorized and the certificate of coverage shall be terminated.

9. 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, 2004. 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.

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PART I

Section A. Effluent Limitations And Monitoring Requirements

10. Requirement to Obtain Individual Permit

The Department may require any person who is authorized to discharge by a certificate of coverage and 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 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;
- 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 and limitations are promulgated for point source discharges subject to this permit; and
- e. the Department determines that the criteria under which the permit was issued 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)

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PART II

Section A. Definitions

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

Acute toxic unit (TU_a) means $100/IC_{50}$, where the IC_{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 a toxic transformation product, accumulates in aquatic organisms by a human health bioaccumulation factor of more than 1000 after considering metabolism and other physicochemical 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 3 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, semi-solid, or liquid residues generated during the treatment of sanitary sewage or domestic sewage in a treatment works. This includes, but is not limited to, sludge or solids removed in primary, secondary, or advanced wastewater treatment processes and a derivative of the removed sludge 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, report 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.

EC₁₀ 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.

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PART II

Section A. Definitions

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.

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 concentrations for the month in the "MAXIMUM" column under "QUALITY OR CONCENTRATION" on the DMRs.

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.

LC₅₀ means the toxicant concentration that would cause a 25% reduction in a conquantal 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 403 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including Title I, 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.

LC₅₀ 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.

Monthly frequency of analysis 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 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.

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PART II

Section A. Definitions

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 DMAs.

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.

NOAEL means the highest tested dose or concentration of a substance that 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.

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.

Quarterly frequency of analysis 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-191, 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 wastewaters), contributes a process wastewater 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 403.5(f)(6)).

Tier I value means a value for aquatic life, human health or wildlife calculated under R 321.1057 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 321.1057 of the Water Quality Standards using a tier II toxicity database.

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

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PART II

Section A. Definitions

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 frequency of analysis 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 frequency of analysis 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.

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 limitation. 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.

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.

Preventing Pollution is the Best Solution

The Michigan Department of Environmental Quality (DEQ) encourages you to consider pollution prevention alternatives. In some cases pollution prevention may allow you to avoid the need to discharge pollutants which would otherwise require permit limitations -- or even avoid the need for permits altogether! Pollution prevention can:

- Save Money
- Reduce Waste
- Aid Permit Compliance
- Protect Our Environment
- Improve Corporate Image
- Reduce Liability

The DEQ is helping Michigan's industries save money, reduce waste and protect our environment through pollution prevention. DEQ staff can provide pollution prevention assistance through telephone consultations, technical workshops and seminars, and informational publications. They can also put you directly in touch with local support networks and national pollution prevention resources. For more information, contact the Michigan Department of Environmental Quality, Environmental Science and Services Division, at 1-800-662-5276 or visit our homepage at <http://www.michigan.gov/deq>.

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PART II

Section B. Monitoring Procedures

1. Representative Samples

4 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(S) 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 Surface Water Permits Section, Water Division, 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 date 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.

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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 the facility's certificate of coverage, the permittee shall notify the Department within 14 days following the effective date of the certificate of coverage, and then 60 days prior to the commencement of the discharge.

2. Submittal Requirements for Self-Monitoring Data

Unless instructed on the effluent limits page to conduct "retained self-monitoring," the permittee shall submit self-monitoring data on the Environmental Protection Agency's Discharge Monitoring Report (DMR) form (monthly summary information) and the Department's Daily Discharge Monitoring Report form (daily information) to PLS-Data Entry, Water Division, Michigan Department of Environmental Quality, P.O. Box 30277, Lansing, Michigan, 48909-2777, for each calendar month of the authorized discharge period(s). The forms shall be postmarked no later than the 10th day of the month following each month of the authorized discharge period(s).

Alternative Daily Discharge Monitoring Report formats may be used if they provide equivalent reporting details and are approved by the Department. For information on electronic submittal of this information, contact the Department.

3. Retained Self-Monitoring Requirements

If instructed on the effluent limits page (or otherwise authorized by the Department in accordance with the provisions of this permit) 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 Department (Department as defined on the certificate of coverage). Retained self-monitoring results are public information and shall be promptly provided to the public upon written request from the public.

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 year's 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 grabstream samples.

Retained self-monitoring may be denied to a permittee by notification in writing from the Department. In such cases, the permittee shall submit self-monitoring data in accordance with Part II.C.2., above. Such a denial may be rescinded by the Department upon written notification to the permittee.

Rescission or modification of this permit or rescission or modification of an individual permittee's authorization to discharge shall not affect previous approval or denial for retained self-monitoring unless the Department provides notification in writing to the permittee.

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.

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PART II

Section C. Reporting Requirements

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.

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 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 3 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 (call 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 (clear-up and/or recovery) measures taken, and preventative measures taken or a schedule for completion of measures to be taken to prevent recurrence 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 condition; 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 proceeding, the permittee, seeking to establish the occurrence of an upset, has the burden of proof.

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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 in the certificate of coverage (if the notice is provided after regular working hours, use the following number: 1-800-292-4566) 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 recurrence of the bypass; and other information as required by the Department.
- e. Bypasses 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 ensure 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.

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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 certificate of coverage 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 schedule.

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 notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Department 30 days prior to the actual transfer of ownership or control.

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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 reinstatement, 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 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.

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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 wastewater, 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 306 of the Federal Act and Rule 2428 (Rule 323-2428 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.

PERMIT NO. MIGS0009

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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. Facility Construction

This permit does not authorize or approve the construction or modification of any physical structures or facilities. Approval for such construction for a POTW must be by permit issued under Part 41 of the Michigan Act. Approval for such construction for a mobile home park, campground or marina shall be from the Water Division, Michigan Department of Environmental Quality. Approval for such construction for a hospital, nursing home or extended care facility shall be from the Division of Health Facilities and Services, Michigan Department of Consumer and Industry Services upon request.

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 310 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 or approvals as may be required by law.

3. Monitoring Well Location

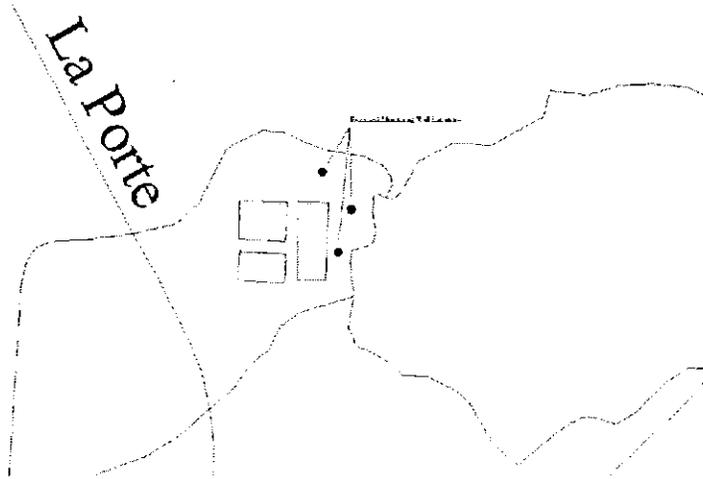
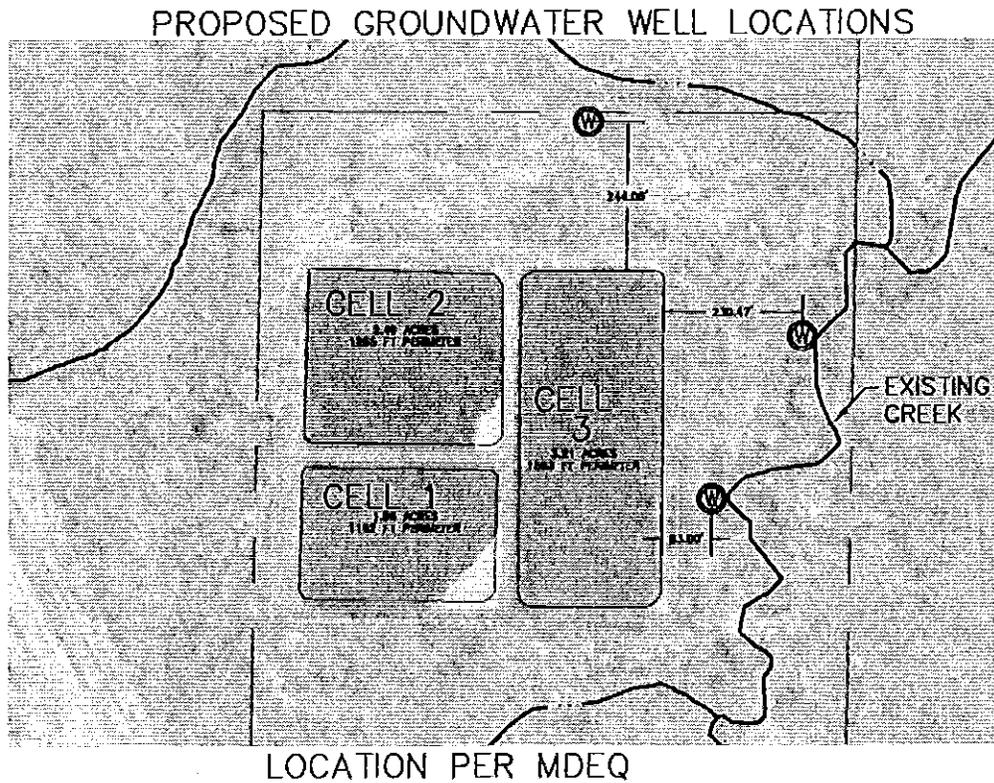


Figure 6 -MDEQ PROVIDED WELL LOCATION MAP



LOCATION PER MDEQ
DISTANCES ARE APPROXIMATIONS AND WILL BE FIELD VERIFIED
Figure 7 - APPROXIMATE MONITORING WELL LOCATIONS

4. DEQ Review Letter dated March 5, 2013



STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
KALAMAZOO DISTRICT OFFICE



March 5, 2013

Mr. James West
Plaza One Management
P.O. Box 157
New Buffalo, Michigan 49117

CAR Review 3/13/13

Dear Mr. West:

SUBJECT: Plaza One Lagoon Closure Plan Comments
National Pollutant Discharge Elimination System (NPDES)
Certificate of Coverage (COC) MICH500304
Designated Name: New Buffalo Plaza WWSL, Berrien County

This office has completed the review of the Draft Lagoon Closure Plan (Plan) for the New Buffalo Plaza (NBP) Wastewater Treatment Lagoons provided to me for an informal review prior to submittal of a revised Plan. Please provide the information requested below within the revised Plan, which will be subject to DEQ review and approval. I believe the information I am requesting will be required by each of the Office/Divisions (identified below) as part of their review. The revised Plan may require additional modifications depending on staff input.

1. We will need the Wastewater Additive Approval Letter from the Surface Water Assessment Section included in the Plan to allow Probiotic Scrubber II from BioLyneceus, LLC to be used as a wastewater treatment additive.

If you have not already determined the potential of concentrating hazardous constituents in the sludge by digestion, it may be in your best interest to evaluate the potential.

3. The DEQ entities that will potentially be involved in the review and were listed in the Plan have changed. The new divisions, offices and associated legal authority are listed below, but all submittals should be sent to me for dispersal.

- Water Resources Division (WRD), for Part 31, Water Resources Protection (Part 31), of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA)

- Remediation and Redevelopment Division (RRD), Part 201, Environmental Remediation (Part 201), of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA)

- Office of Waste Management and Radiological Protection (OWMRP), for Part 115, Solid Waste Management (Part 115), of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, Michigan Compiled

Mr. James West
Page 2
March 5, 2013

Laws 324.11501 et seq.; and the administrative rules promulgated pursuant to Part 115.

4. It is our understanding that NBP intends to land apply sludge from the lagoon under Part 24 of Part 31. Please contact Mr. Dave Schipper, of the Biosolids Program at 616-356-0276, to find out what he will need to approve the application of biosolids. The Residuals Management Program, sampling procedures (number of samples, sample locations, etc.) and supporting information shall be submitted with the lagoon closure plan for review and approval.
5. ~~The Plan does not consider the option of leaving the sludge in place if it meets the inert criteria under Part 115. The sludge sampling results from the November 14, 2012, sampling event shall be provided in the revised Plan.~~ The revised plan should reflect the results of the sampling and whether the sludge meets the inertness criteria.
6. Any discharge of water from the lagoon to surface waters of the state shall be conducted under the existing (extended) New Buffalo-Plaza NPDES Surface Water Discharge Permit. A discharge of liquids associated with the sludge will be handled in accordance with Part 24 or Part 115 depending on the method of land application selected.
7. Once the sludge has been removed the remaining soils will need to be tested and meet the requirements of Part 201. Please propose the number and location of samples that will be taken from each lagoon (in accordance with Sampling Strategies and Statistics Training Materials (S³TM) at http://www.michigan.gov/deq/0,4561,7-135-3311_4109_9846--,00.html and the parameters that will be tested. (My recommendation would be Arsenic, Cadmium, Copper, Lead, Mercury (Total), Molybdenum, Nickel, Selenium, Zinc, Ammonia Nitrogen, Nitrite, Nitrate, Chloride, Phosphorous, Potassium, pH, Total Hardness, PCB, VOC's and SVOC's. There may be additional parameters following the review of the Plan.)
8. Currently, there are no groundwater monitoring wells to determine if there has been a groundwater impact from the wastewater treatment system. Operational Memo 115-25 (Table 1) requires an evaluation of the groundwater quality at the Groundwater/Surface Water Interface (GSI) to determine if there are adverse impacts to the surface water. Three groundwater sampling locations adjacent to the Blood Run Creek have been approved in previous correspondence. The installation of temporary sampling wells is acceptable. A schedule for installation and sampling of the GSI wells shall be added to the revised Plan. (My sampling recommendation would be Arsenic, Cadmium, Copper, Lead, Mercury (Total), Molybdenum, Nickel,

Mr. James West
Page 3
March 5, 2013

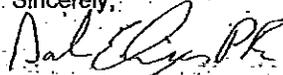
Selenium, Zinc, Ammonia Nitrogen, Nitrite, Nitrate, Chloride, Sodium, Phosphorous, Potassium, Iron, Manganese, pH, Total Hardness, PCB, VOC's and SVOC's. There may be additional parameters following the review of the plan.) If the groundwater samples from the GSI wells exceed the GSI criteria then a Remedial Action Plan may have to be developed.

9. Please be advised that if a wetland is created the wetland will likely become a regulated wetland once the lagoon is no longer considered a wastewater treatment lagoon. In addition, Operational Memo 115-25 requires the disposal/recycling of all solid waste associated with the construction, operation, or closure of the Lagoons. ~~Please identify how NBP intends to address the issue of the force main, site piping and valves.~~

Sampling of the sludge, soils, and/or groundwater may result in the need for additional investigation or a change in disposal method. Without a hydrogeological study to verify the groundwater has not been impacted, options for final closure may be limited and include encumbrances such as deed restrictions. It is suggested that NBP work with its legal counsel and consultants to evaluate the endpoints NBP seeks to attain for this property under a variety of options set forth under state law. Inclusion of final goals for the property will aid NBP and the DEQ in ascertaining whether the path toward the identified goal(s) is achievable.

Please provide a revised Lagoon Closure Plan addressing the issues listed above by May 6, 2013. If you are unable to complete the Plan by this date please contact me to discuss an alternate submittal date. If you have any questions or comments regarding this letter, please contact me by email at ehingerd@michigan.gov, by mail at 7953 Adobe Road, Kalamazoo, Michigan 49009-5025, or at the number provided below.

Sincerely,



Dale Ehinger, P.E.
Environmental Engineer
Kalamazoo District Office
Water Resources Division
269-567-3571

DE:DMM

~~cc: Mr. Gary Radtke, Radtke and Associates, Inc.
Ms. Nicole Zacharda, Enforcement Unit~~

5. DEQ Review Letter dated June 25, 2013



STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
KALAMAZOO DISTRICT OFFICE



June 25, 2013

Mr. James West
Plaza One Management
P.O. Box 157
New Buffalo, Michigan 49117

Dear Mr. West:

SUBJECT: Plaza One Lagoon Closure Plan Comments
National Pollutant Discharge Elimination System (NPDES)
Certificate of Coverage (COC) MIG580304
Designated Name: New Buffalo Plaza WWSL, Berrien County

This office has completed a review of the Proposed Lagoon Closure Plan (Plan) for the New Buffalo Plaza Lagoons. Based on our review, we have the following questions and recommendations that need to be addressed before the Plan can be approved:

1. Please remove the IPP section in the Plan. The IPP program is implemented by municipalities and is intended to regulate what the municipality receives from industry.
2. Discharges from the New Buffalo Plaza lagoons are currently authorized/regulated under NPDES General Permit COC #MIG580304. Any discharge from the lagoons shall be in accordance with this current authorization which remains in effect until the lagoon closure is completed. Plaza One Management should not need an additional surface water discharge authorization to implement the lagoon closure plan.
3. Groundwater sampling wells shall be installed in the locations identified by the Groundwater Permit Section Hydrogeologist. The methodology for groundwater sampling well installation, development and sampling shall be included in the Plan and will be reviewed by the Hydrogeologist before the wells are installed. Please see the attached map to adjust the sampling well locations.
4. The Plan shall include the groundwater parameters that will be tested, the number of samples you intend to take for each parameter and a schedule for when the sampling will occur.
5. The Plan shall include the number of soil samples required for each lagoon and soil sampling locations as required in Statistical Sampling Guidance Document (S3TM - Sampling Strategies and Statistics Training Materials for Part 201 Cleanup Criteria). The Plan shall also include the methodology used to collect the samples, the number of samples for each parameter you intend to take and a schedule for when the sampling will occur. The Part 201, Environmental Remediation (Part 201), of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), limits can be found in Attachment 2: Revised Criteria List at the following (http://www.michigan.gov/deq/0,1607,7-135-3311_4109_9846_30022-101581-00.html#RRD_01).
6. The intended use of Probiotic Scrubber II has not been approved for this application at the time of this letter. Please work with Ms. Kay Edly to get the use of the product approved and if possible provide an approval letter with the revised Plan.

Mr. James West
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June 25, 2013

7. The Probiotic Scrubber II literature indicates that we can expect variable sludge digestion results due to numerous variables. Please provide a schedule for the full round of Probiotic Scrubber II applications and subsequent sludge sampling/removal, groundwater sampling and soil sampling. In addition please include an alternate schedule that kicks in if the Probiotic Scrubber II provides accelerated sludge digestion or if it is deemed ineffective and its use is discontinued.
8. The sludge application/disposal information has been reviewed by our Biosolids Staff. If you intend to try to show the sludge is inert and leave it onsite you will need to provide testing that shows the sludge meets the inertness criteria under Part 115, Solid Waste Management, of the NREPA. If the sludge is not inert and you intend to land apply the Biosolids under the Part 24, Land Application of Biosolids (Part 24), promulgated under Part 31, Water Resources Protection, of the NREPA, you will need to develop a Residuals Management Plan. Either way, you should include the testing requirements for Part 115, Part 24, and the landfill if the other two options are not available or as cost effective.
9. A section should be added to the Plan that addresses the potential need for a Remedial Action Plan. A Remedial Action Plan will be required if the soil testing results exceed the Part 201 criteria and/or the groundwater samples exceed the Part 201 requirements and the Surface Water Assessment Section determines the samples exceed the Groundwater Surface water Interface Criteria. The Remedial Action Plan is the plan that will be developed to deal with the contamination should the issue arise.

On June 5, 2013 we received the Plaza One Closure Update and Anticipated Schedule for 2014 from Radtke Engineering and Surveying, LLC. The anticipated schedule covers numerous topics which will be discussed below.

Item I. Sludge Testing Company

Please include this item in the Lagoon Closure Plan. Most of the contract labs (like KAR Labs, DLZ, Trace Analytical Labs, etc.) that process environmental samples for Part 201 projects should meet your needs, but you should verify they have the capability to process the samples you will be taking. Please Note that we do not recommend any particular Lab, but we do suggest that you get several quotes and references.

Item II. Ground Water Testing

These items have been covered in the review of the Proposed Lagoon Closure Plan section of this letter (see Item #3). This item shall be included in the Lagoon Closure Plan schedule.

Item III. Aerator

This item should be covered in the application of Probiotic Scrubber II and Sludge Digestion. All equipment should be evaluated and selected prior to Plan approval so that the Plan may be implemented as quickly as feasible once the Plan has been approved.

Item IV. Sludge

The sludge sampling program should be set up to provide for an ongoing evaluation of the sludge digestion process and generate the sample results required for land application of the remaining sludge upon completion of the digestion process, if necessary. The sludge sampling schedule shall be included in the Lagoon Closure Plan Schedule. Plaza One Management will also be required to develop a Residuals Management Plan (RMP) for the

Mr. James West
Page 3
June 25, 2013

disposal of the remaining sludge if the sludge is not inert under Part 145. If you intend to land apply the sludge regardless of the inertness test results, then the RMP should be developed and included in the Lagoon Closure Plan.

Item V. Misc. ongoing tasks performed by Radtke Engineering and Surveying, LLC
All tasks pertinent to the implementation of the Lagoon Closure Plan should be included in the Plan.

It is our expectation that the Lagoon Closure Plan be approved as quickly as possible and once approved the Plan should be implemented as soon as it is practical. Upon approval of the Lagoon Closure Plan, we expect Plaza One Management to initiate the sludge digestion process if there is a reasonable portion of the treatment season remaining.

Please provide a revised Lagoon Closure Plan addressing the issues listed above by July 27, 2013. If you are unable to complete the Plan by this date please contact me to discuss an alternate submittal date. If you have any questions or comments regarding this letter, please contact me by email at ehingerd@michigan.gov or by mail at 7953 Adobe Road, Kalamazoo, Michigan 49009-5025, or at the number provided below.

Sincerely,



Dale Ehinger, P.E.
Environmental Engineer
Kalamazoo District Office
Water Resources Division
269-567-3571

DE:DMM

Enclosure

cc: Mr. Gary Radtke, Radtke and Associates, Inc.
Ms. Nicole Zacharda, Enforcement Unit, DEQ
Mr. Brian Negele, Department of Attorney General

6. DEQ Review Letter dated November 6, 2013



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
KALAMAZOO DISTRICT OFFICE



DAN WYANT
DIRECTOR

November 6, 2013

VIA EMAIL

Mr. James West
Plaza One Management
P.O. Box 157
New Buffalo, Michigan 49117

Dear Mr. West:

SUBJECT: Final Plaza One Lagoon Closure Plan Comments
National Pollutant Discharge Elimination System (NPDES)
Certificate of Coverage (COC) MIG580304
Designated Name: New Buffalo Plaza WWSL, Berrien County

Mr. Gary Radtke, of Radtke Engineering and Survey (REAS), sent an email on October 31, 2013, requesting written comments from the October 22, 2013, conference call regarding the New Buffalo Plaza Lagoon Closure Plan review. Based on our review, the following items need to be revised:

1. 2013 – 2017 Closure Schedules:
 - a. Revise Closure schedule to eliminate work in 2013 and also remove the Surface Water Discharge Application item from the 2017 schedule.
 - b. The Surface Water Discharge and Final Sludge Sample of Remaining and TLCP Analysis dates shall be moved up one month earlier.
 - c. Groundwater sampling should be added to the schedule no later than March 1, 2017.
 - d. Groundwater sampling well installation should be added to the schedule.
 - e. Submit Land Application of Biosolids should be added to the schedule no later than May 1, 2017. There should be at least a couple months after the Biosolids land application for development of the Biosolids application program.
 - f. Remaining items in 2017 schedule shall be moved up one month.
2. Page 13 - Section 1, If you would like to pursue a designation of inertness for the sludge (to potentially leave the sludge in place) the groundwater sampling will have to be completed first. Once you have the groundwater data, we can determine the constituents of concern and a sampling plan can be put together in accordance with Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, of 1994 PA 451, as amended (NREPA). If you intend to follow this path the groundwater monitoring wells should be installed well in advance of 2017.
3. Page 13 - Section B, 4, A, WRD is listed as Waste Resources Division. It should be listed as Water Resources Division.
4. Page 47 - Section of 2.2, References to Surface Water should be changed to Lagoon Sampling.
5. Page 48 - Section 2.4, 5, Remove item "3. Rinse with Methanol" and item "4. Rinse with reagent Acetone".

Mr. James West
Page 2
November 6, 2013

6. Page 49 - Section 2.5, Groundwater sampling requirements will be in accordance with the enclosed well and sampling requirements.
7. Page 51 - 3.2, The method of sampling the sludge does not appear consistent with the Biosolids regulations. Specify sludges will be sampled in accordance with the sampling and analysis plan that will be developed under the Part 24, Land Application of Biosolids (Part 24 Biosolids Rules), promulgated pursuant to Part 31, Water Resources Protection, of the NREPA,.
8. Page 51 - 3.3, The sludge sampling parameters do not appear consistent with the Biosolids regulations. Specify sludges will be sampled in accordance with the sampling and analysis plan that will be developed under the Part 24 Biosolids Rules.
9. Page 57 - 4.1, At the end of the paragraph add "and Part 201 Cleanup Criteria".
10. Page 57 - 4.3, We will not know what parameters or if the soils will need to be sampled until we have the results of the sludge and groundwater samples. You should eliminate the table and add something along the lines of "soil sampling parameters will be developed after the sludge and groundwater samples have been evaluated." This may eliminate the need to conduct soil sampling.
11. Page 58, 59, 60, Omit the Depth column in all three charts. Using a random depth would increase the number of samples required dramatically. An alternative method would be to core soil samples to the water table and pinpoint contaminants using best professional judgment and equipment like photoionization detectors. If a contaminated zone cannot be located the sample shall be taken 2 feet above the water table.
12. Page 63 - 1, A Part 201 Remedial Action Plan can be initiated by the presence of contaminated soils or contaminated water. If contaminants in the soils or water are found to be above the Part 201, Environmental Remediation, of the NREPA, values a remedial action plan will be required. The potential need for groundwater remediation should be added to this section.

Please make the necessary revisions and resubmit the Final Lagoon Closure Plan by December 6, 2013. If you have any questions, please contact me at 269-567-3571 or ehingerd@michigan.gov.

Sincerely,



Dale Ehinger, P.E.
District Engineer
Kalamazoo District Office
Water Resources Division

DE:dmm

Enclosure

cc/enc: Mr. Gary Radtke, REAS
Ms. Nicole Zacharda, Enforcement Unit, DEQ

Mr. James West
Page 2
November 6, 2013

Mr. Brian Negele, Department of Attorney General

7. Comments on New Buffalo Plaza Work Plan

Comments on New Buffalo Plaza work plan

- If the thickness of the aquifer receiving the discharge is more than 20 feet, then at least 1 hydraulically down gradient monitor well location should be a cluster well. The separation and length of the screens shall be such that discrete groundwater potentiometric surface data can be collected to determine vertical gradients within the aquifer.
- We usually use 2 inch diameter wells, with a 5 foot screen length.
- The groundwater samples should be sampled and analyzed for the following parameters.

Non-Metals	Chemical Abstract Service Number	Water Reporting Limits (ug/L)	EPA Analytical Method or SW-846	R323.2222 Discharge Standard (ug/L)
Ammonia	7664417	10	350.1	5000 (TIN)
Chloride	168870006	1000	4500-Cl-E	250,000
Cyanide	57125	5	335.4/9010	100
Nitrate	14797558	10	353.2	5000 (TIN)
Nitrate + Nitrite		10	353.2	5000 (TIN)
Nitrite	14797650	10	353.2	500 (TIN)
pH		0.1 s.u.	4500-H / 9040C/9045	6.5 - 9.0 s.u.
Phenols	108952	10	420.4/9056	35
Phosphorus, Total	7723140	10	365.A	1000
Sulfate	14608798	2000	376.2	250,000

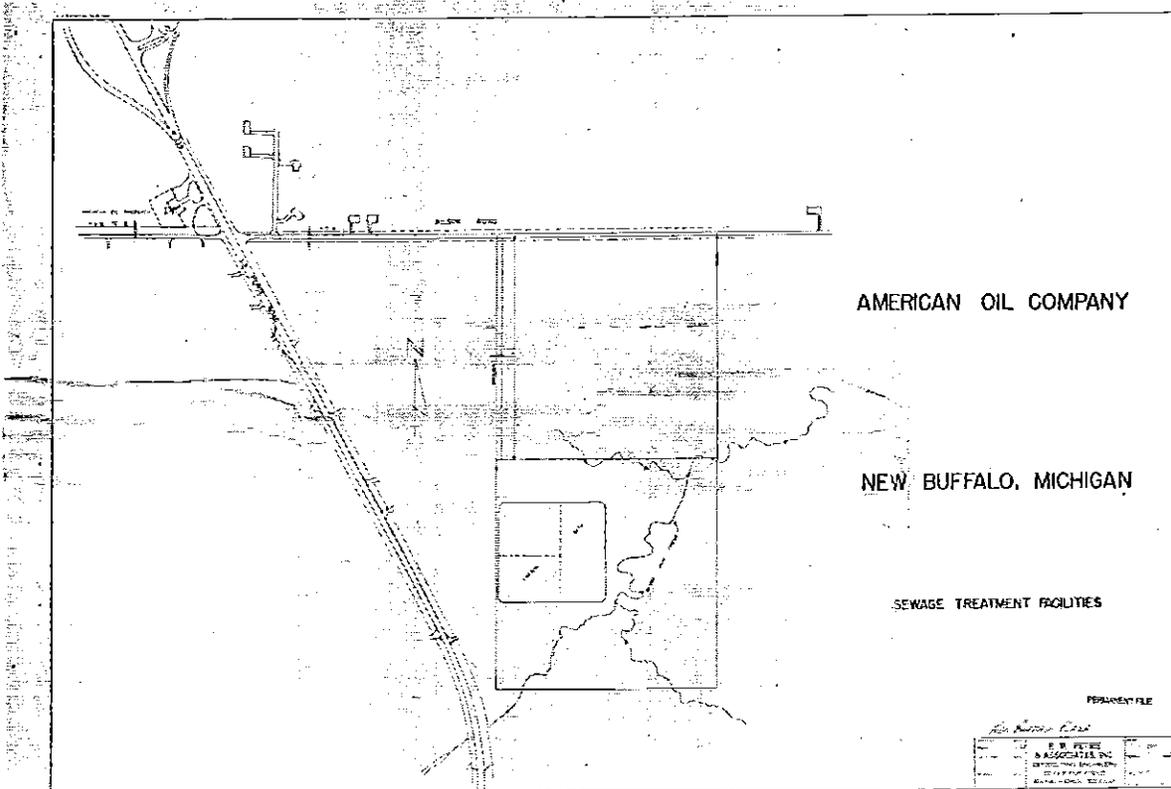
Metals	Chemical Abstract Service Number	Water Reporting Limits (ug/L)	EPA Analytical Method or SW-846	R323.2222 Discharge Standard (ug/L)
Aluminum	7429905	50	200.8/6020A	150
Antimony	7440360	1	200.8/6020A	3
Arsenic	7440382	1	200.8/6020A	5
Barium	7740393	5	200.8/6020A	1000
Beryllium	7440417	1	200.8/6020A	2
Boron	7740428	20	200.7/6010C	250
Cadmium	7740439	0.2	200.8/6020A	2.5
Chromium	7740473	1	200.8/6020A	50
Cobalt	7740484	15	200.8/6020A	20
Copper	7740508	1	200.8/6020A	500
Iron	7439896	20	200.7/6010C	300
Lead	7439921	1	200.8/6020A	2
Lithium	7439932	10	200.8/6020A	85
Magnesium	7439954	1000	SM 3111B/7450	200,000
Manganese	7439965	5	200.8/6020A	50
Mercury	7439976	0.2	245.1/7470A, 7471A	1
Molybdenum	7439987	25	200.8/6020A	36.5
Nickel	7440020	2	200.8/6020A	50
Selenium	7782492	1	200.8/6020A	25
Silver	7440224	0.2	200.8/6020A	17
Sodium	17341252	1000	SM 3111B/7770	120,000
Strontium	7740246	5	200.8/6020A	2300
Thallium	7740280	2	200.8/6020A	1
Vanadium	7740622	2	200.8/6020A	2.2
Zinc	7740666	10	200.8/6020A	1200

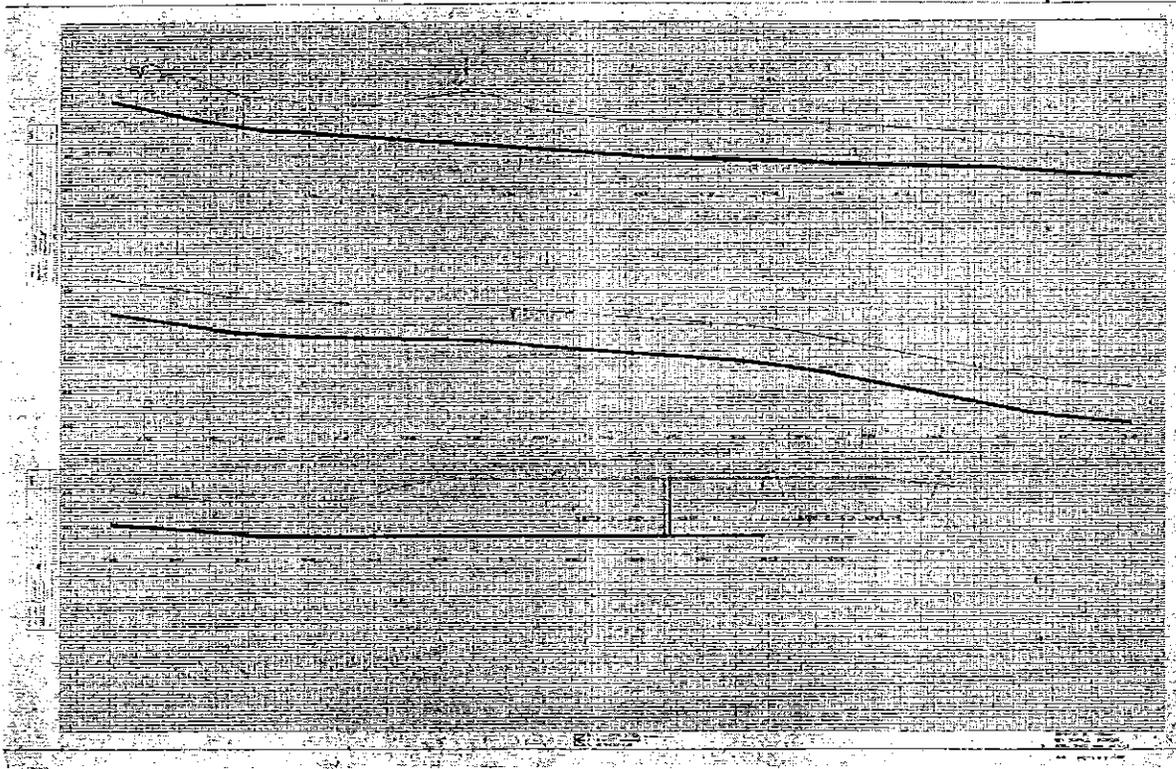
Volatile Organics	Chemical Abstract Service Number	Water Reporting Limits (ug/L)	EPA Analytical Method or SW-846	R323.2222 Discharge Standard (ug/L)
1,1,1,2-Tetrachloroethane	630206	1	624/8260	77
1,1,1-Trichloroethane	71556	1	624/8260	15

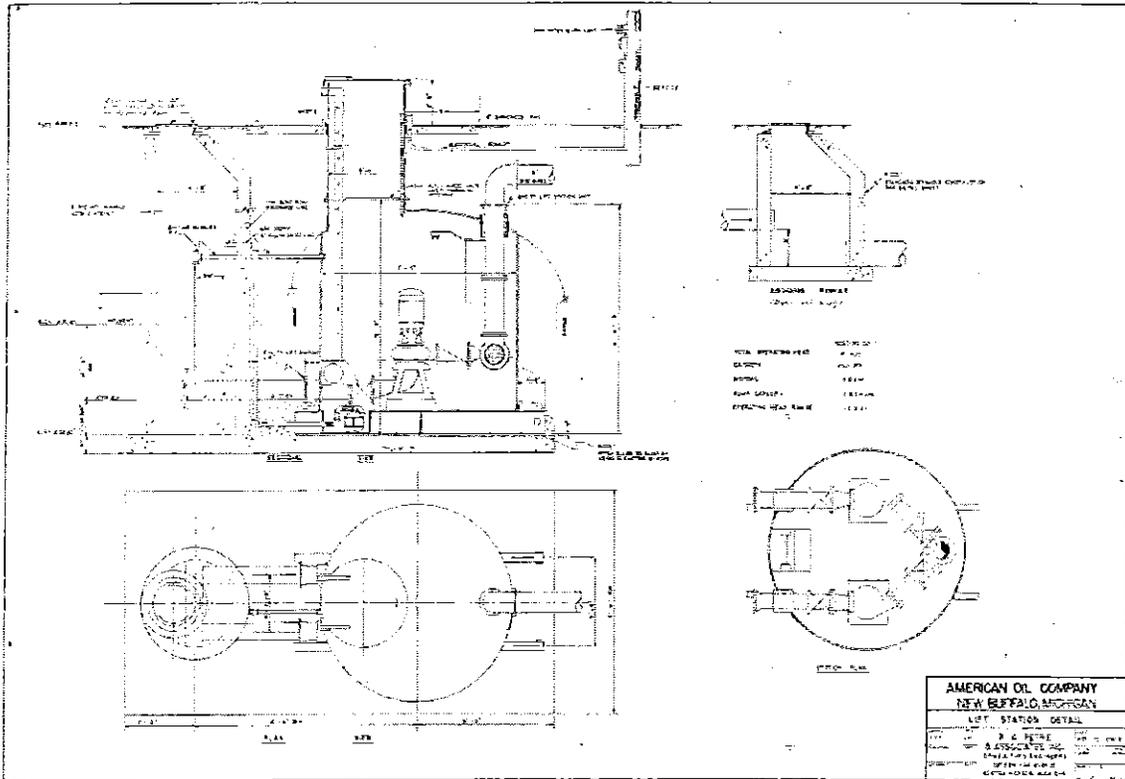
1,1,2,2-Tetrachloroethane	79345	1	624/8260	8.5
1,1,2-Trichloroethane	79005	1	624/8260	6
1,1-Dichloroethane	75343	1	624/8260	880
1,1-Dichloroethylene	75354	1	624/8260	7
1,2,3-Trichlorobenzene	87616	5	624/8260	
1,2,3-Trichloropropane	96184	1	624/8260	42
1,2,3-Trimethylbenzene	526738	1	624/8260	
1,2,4-Trichlorobenzene	120821	5	624/8260	15
1,2,4-Trimethylbenzene	95636	1	624/8260	63
1,2-Dibromo-3-chloropropane	96128	5	624/8260	
1,2-Dibromoethane (EDB)	80977	1	624/8260	
1,2-Dichlorobenzene	95501	1	624/8260	25
1,2-Dichloroethane	107062	1	624/8260	5
1,2-Dichloroethylene (cis)	156592	1	624/8260	5
1,2-Dichloroethylene (trans)	156605	1	624/8260	5
1,2-Dichloropropane	78875	1	624/8260	5
1,3,5-Trimethylbenzene (Mesitylene)	108678	1	624/8260	72
1,3-Dichlorobenzene	541731	1	624/8260	6.6
1,3-Dichloropropene (cis)	542756	1	624/8260	
1,3-Dichloropropene (trans)	99614025	1	624/8260	
1,4-Dichloro-2-butene (trans)	764410	5	624/8260	
1,4-Dichlorobenzene	106467	1	624/8260	15
2-Butanone (MEK)	78933	6	624/8260	450
2-Hexanone	591786	5	624/8260	1000
2-Methylnaphthalene	91576	5	624/8260	260
2-Propanone (Acetone)	67641	20	624/8260	730
4-Methyl-2-pentanone (MIBK)	108101	5	624/8260	1800
Acrylonitrile	107131	5	624/8260	2.6
t-Amyl Methyl Ether (TAME)	994058	5	624/8260	
Benzene	71432	1	624/8260	5
Bromobenzene	108864	1	624/8260	18
Bromochloromethane	63847498	1	624/8260	
Bromodichloromethane	75274	1	624/8260	20 (THM)
Bromoform	76252	1	624/8260	20 (THM)
Bromomethane	74839	5	624/8260	10
t-Butyl Alcohol	75650	50	624/8260	3900
n-Butylbenzene	104518	1	624/8260	80
sec-Butylbenzene	135988	1	624/8260	80
i-Butylbenzene	98066	1	624/8260	80
Carbon Disulfide	76150	1	624/8260	800
Carbon Tetrachloride	56235	5	624/8260	5
Chlorobenzene	108907	1	624/8260	15
Chloroethane	76003	6	624/8260	430
Chloroform	67663	1	624/8260	20 (THM)
Chloromethane	74873	5	624/8260	260
Cyclohexane	108941	5	624/8260	33,000
Dibromochloromethane	124481	1	624/8260	20 (THM)
Dibromomethane	74953	1	624/8260	80
Dichlorofluoromethane	75718	5	624/8260	40
Diethyl Ether	60297	5	624/8260	5
Diisopropyl Ether	108203	6	624/8260	30
Ethylbenzene	100414	1	624/8260	25
Ethyl-t-Butyl Ether (ETBE)	637923	5	624/8260	
Hexachloroethane	67721	5	624/8260	7.3
Isopropyl Benzene	98828	1	624/8260	600
p-Isopropyl Toluene (p-Cymene)	99876	1	624/8260	
Methyl Iodide (Iodomethane)	74884	1	624/8260	
Methyl-t-Butyl Ether (MTBE)	1634044	1	624/8260	40
Methylene Chloride	76092	5	624/8260	5
Naphthalene	91203	5	624/8260	15
n-Propylbenzene	103651	1	624/8260	80
Styrene	100425	1	624/8260	20
Tetrachloroethylene	127184	1	624/8260	5
Tetrahydrofuran	109999	5	624/8260	95
Toluene	108883	1	624/8260	35
Trichloroethylene	79016	1	624/8260	5
Trichlorofluoromethane	76694	1	624/8260	2600
Vinyl Chloride	75014	1	624/8260	2
m & p-Xylene	1330207	2	624/8260	35 (m++p)
o-Xylene	1330207	1	624/8260	35 (m++p)

8. Original Lagoon Plans by R.W Petrie & Associates, Inc.

See Attached









RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
KALAMAZOO DISTRICT OFFICE



DAN WYANT
DIRECTOR

December 27, 2013

CERTIFIED MAIL & EMAIL

Mr. James West
Plaza One Management
P.O. Box 157
New Buffalo, Michigan 49117

Dear Mr. West:

SUBJECT: Final Plaza One Lagoon Closure Plan Conditional Approval
National Pollutant Discharge Elimination System (NPDES)
Certificate of Coverage (COC) MIG580304
Designated Name: New Buffalo Plaza WWSL, Berrien County

Revisions to the Final Plaza One Lagoon Closure Plan were received December 6, 2013, from Mr. Gary Radtke, of Radtke Engineering and Survey (REAS). Based on our review, the Final Lagoon Closure Plan is approved with the following revisions/comments:

1. The 2017 Schedule does not include a surface water discharge period. The NPDES Discharge permit only allows a discharge at certain times of the year. If a discharge will be required for the lagoon closure, it shall be within the permitted discharge periods.
2. Section 2.3 Groundwater, on page 50 of the Lagoon Closure Plan, identifies one of the groundwater monitoring wells as an up-gradient well. It will not be possible to determine which, if any, of the groundwater monitoring wells will be up-gradient until the wells have been surveyed, the groundwater elevations measured, and a groundwater contour map constructed. Additional monitoring wells may be required if an up-gradient well is required to show an up-gradient source of pollution.

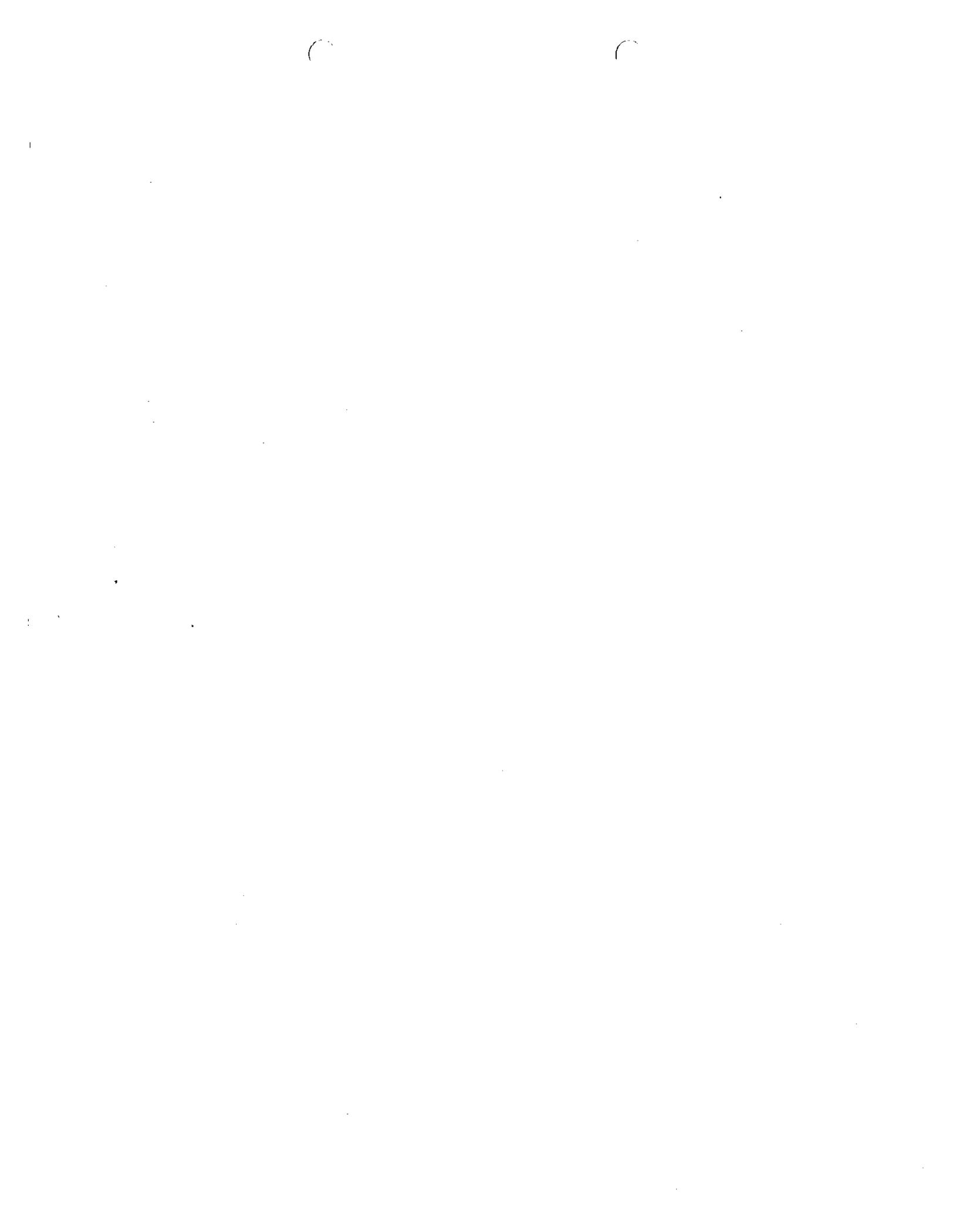
Please include this letter as an attachment to the final lagoon closure plan. If you have any questions, please contact me at 269-567-3571 or ehingerd@michigan.gov.

Sincerely,

Dale Ehinger, P.E.
District Engineer
Kalamazoo District Office
Water Resources Division

DE:dmm

cc: Mr. Gary Radtke, REAS
Mr. Brian Negele, Department of Attorney General
Ms. Nicole Zacharda, Enforcement Unit, DEQ





MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER DIVISION
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. MIG580000
Wastewater Stabilization Lagoon General Permit

CERTIFICATE OF COVERAGE NO.: MIG580304
DESIGNATED NAME: New Buffalo Plaza WWSL
PERMITTEE/MAILING ADDRESS: Plaza One Management
PO Box 157
New Buffalo, Michigan 49117

This certificate of coverage authorizes the permittee to discharge treated sanitary wastewater from the New Buffalo Plaza wastewater stabilization lagoon located at 19250 M-239, New Buffalo, Michigan 49117. Consistent with the criteria and requirements established in General Permit No. MIG580000, the permittee is authorized to discharge 12 MGY of treated sanitary wastewater from Monitoring Point 001A through Outfall 001. Outfall 001 discharges to the Blood Run Creek, in the SE1/4, SE1/4, Section 15, Town 8S, Range 21W, Berrien County.

The permittee is subject to all requirements of the general permit except for Part I.A.2., Additional Final Effluent Limitation for Total Phosphorus.

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 Office of Administrative Hearings of the Michigan Department of Environmental Quality 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.

This certificate of coverage is based on a complete application received by the Department of Environmental Quality on January 28, 2004. The permittee is subject to all conditions specified in General Permit No. MIG580000 issued August 5, 2003, expiring April 1, 2009. This certificate of coverage may be modified, terminated, reissued, or revoked as allowed for in General Permit No. MIG580000. On the effective date of this certificate of coverage, this certificate of coverage shall supersede Permit No. MIG580304, issued May 26, 1999, which is hereby revoked.

This certificate of coverage takes effect on April 1, 2004.

February 3, 2004
Date Issued

EQP 4677 (10/97)

Daniel Dell, Chief
Lakes Michigan and Superior Permits Unit
Surface Water Permits Section
Water Division

PERMIT NO. MIG580000

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

WASTEWATER STABILIZATION LAGOON EFFLUENT

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 Orders 1991-31, 1995-4 and 1995-18, properly treated wastewater stabilization lagoon effluent is authorized to be discharged seasonally from facilities specified in individual "certificates of coverage" in accordance with effluent limitations, monitoring requirements and other conditions set forth in this general National Pollutant Discharge Elimination System (NPDES) permit (the "permit").

The applicability of this permit shall be limited to seasonal (spring/fall) discharges of sanitary wastewater which 1) have been adequately treated by a wastewater stabilization lagoon, 2) are not subject to the industrial pretreatment program requirements under the Michigan Act and Rules 323.2301 through 323.2317 of the Michigan Administrative Code (Part 23 Rules), and 3) have been determined by the Michigan Department of Environmental Quality (the "Department") not to need an individual NPDES permit. Aerobic lagoons, both mechanically aerated and non-mechanically aerated, which discharge treated sanitary wastewater are included. The lagoon system shall 1) meet accepted design standards as determined by the Department, and 2) comply with secondary treatment standards for lagoon systems in Part I.A.1. and other requirements and limitations stated herein. Discharges which may cause or contribute to a violation of a water quality standard are not authorized by this permit.

In order to constitute a valid authorization to discharge, this permit must be complemented by a certificate of coverage issued by the Department. The certificate of coverage will specify whether the total phosphorus limitation applies to the individual facility.

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

The terms and conditions of this general permit shall apply to an individual facility on the effective date of a certificate of coverage for the facility. The Department may grant a contested case hearing on this general 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 general permit in accordance with Rule 2192(c) (Rule 323.2192 of the Michigan Administrative Code).

This general permit shall take effect April 1, 2004. 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. MIG580000, expiring October 1, 1999.

This general permit shall expire at midnight, April 1, 2009.

Issued _____

D. Steven Eldredge
Chief, Surface Water Permits Section
Water Division

PART I

Section A. Effluent Limitations And Monitoring Requirements

1. Final Effluent Limitations

During the period beginning on the effective date of this permit and the effective date of 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 treated sanitary wastewater to the surface waters of the state of Michigan. 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				Frequency of Analysis	Sample Type
	Monthly	7-Day	Daily	Units	Monthly	7-Day	Daily	Units		
Flow (see b. below)	(report)	---	(report)	MGD	---	---	---	---	Daily	Report Total Daily Flow
Biochemical Oxygen Demand (BOD ₅)	---	---	---	---	30	45	---	mg/l	see c. below	Composite
Total Suspended Solids										
Mar-May	---	---	---	---	70	100	---	mg/l	see c. below	Composite
Oct-Dec	---	---	---	---	40	45	---	mg/l	see c. below	Composite
Ammonia Nitrogen (as N)	---	---	---	---	(report)	---	---	mg/l	see c. below	Composite
Total Phosphorus (as P)	---	---	---	---	(report)	---	---	mg/l	see c. below	Composite
Fecal Coliform Bacteria	---	---	---	---	200	400	---	cts/100 ml	see c. below	Grab
					<u>Minimum Daily</u>		<u>Maximum Daily</u>			
pH	---	---	---	---	6.5	---	10	S.U.	see c. below	Grab
Dissolved Oxygen	---	---	---	---	5.0	---	---	mg/l	Daily	Grab

- a. Narrative Standard
The receiving water shall contain no unnatural turbidity, color, oil films, floating solids, foams, settleable solids, or deposits as a result of this discharge.
- b. Discharge Periods
Effluent shall be discharged during high flow conditions in the spring and fall of each year. There shall be no discharge from June 1 to September 30 and from January 1 to February 28. In addition, there shall be no discharge during periods of significant ice cover on the receiving stream unless authorized by the Department.
- c. Discharge Management
The discharge is to be managed consistent with the following requirements.
 - 1) Cell Isolation - The permittee shall isolate a cell from cells receiving untreated sanitary wastewater at least two weeks in advance of a proposed discharge. There shall be no discharge from unisolated cells.
 - 2) Pre-Discharge Sampling - The permittee shall sample the isolated cell for Biochemical Oxygen Demand, Total Suspended Solids, Ammonia Nitrogen, Total Phosphorus, Fecal Coliform Bacteria and pH no more than two weeks in advance of a proposed discharge. Samples shall be drawn from a point approximately five feet from the edge of the cell and one foot beneath the water surface.

PART I

Section A. Effluent Limitations And Monitoring Requirements

- 3) **Discharge Approval Required** - The permittee shall notify and receive approval from the Department prior to the discharge of any effluent. The notification shall include the results of all pre-discharge effluent samples and the results of a Dissolved Oxygen sample taken within the last 12 hours.
 - 4) **Discharge Duration** - Discharge duration shall not exceed 10 consecutive days, with a minimum non-discharge period of 7 days between each discharge.
 - 5) **Discharge Sampling Frequency** - Flow and Dissolved Oxygen shall be measured daily during discharge. All other parameters shall be measured every other day during discharge. The Department may approve alternate sampling frequencies which are demonstrated to be representative of the discharge.
 - 6) **Discharge Sample Type and Location** - The sampling for Biochemical Oxygen Demand, Total Suspended Solids, Total Phosphorus and Ammonia Nitrogen shall be 3-portion composite samples of the effluent. The sampling for Dissolved Oxygen, Fecal Coliform Bacteria and pH shall be grab samples of the effluent.
- d. **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.
- c. **Construction Approval**
 This permit does not authorize the construction or modification of any physical structures of the wastewater treatment facility. The permittee shall receive approval of plans and specifications from the Department before commencing construction of the wastewater treatment facility necessary for compliance with this permit.

2. Additional Final Effluent Limitation for Total Phosphorus

If the Department determines it necessary to control phosphorus discharges to protect downstream water quality, the discharge shall be limited and monitored by the permittee as specified below. Such determination will be indicated on the certificate of coverage.

Parameter	Maximum Limits for Quantity or Loading				Maximum Limits for Quality or Concentration				Frequency of Analysis	Sample Type
	Monthly	7-Day	Daily	Units	Monthly	7-Day	Daily	Units		
Total Phosphorus	---	---	---	---	1.0	---	---	mg/l	see A.1.c.5) above	Composite

3. Facility Operation and Maintenance

The permittee shall comply with the inspection, operation and maintenance program requirements specified below. An alternate facility operations program may be approved by the Department.

- a. **Lagoon Inspection**
 The permittee shall inspect the lagoon facilities three times weekly year-round unless otherwise authorized by the Department. These inspections shall include:
 - 1) the lagoon dikes for vegetative growth, erosion, slumping, animal burrowing or breakthrough, and condition of lagoon liner;
 - 2) the lagoon for growth of aquatic plants, offensive odors, insect infestations, scum, floating sludge, and septic conditions;

PART I

Section A. Effluent Limitations And Monitoring Requirements

- 3) the depth of the water in each cell and the freeboard;
- 4) the control structures and pump stations to assure that valves, gates and alarms are set correctly and properly functioning;
- 5) the lagoon security fence and warning signs; and
- 6) analysis for Dissolved Oxygen in each lagoon cell at least one time weekly, except when the lagoons are ice covered.

The permittee shall initiate steps to correct any condition that is not in accordance with the facility maintenance program outlined in Part I.A.3.b. of this permit. A record of the inspections shall be maintained by the permittee for a period of three years:

b. Facility Maintenance

The permittee shall implement a Facility Maintenance Program that incorporates the following management practices unless otherwise authorized by the Department.

- 1) Vegetation shall be maintained at a height not more than 6 inches above the ground on lagoon dikes.
- 2) Not more than 10% of the water surface shall be covered by floating vegetation and not more than 10% of the water perimeter may have emergent rooted aquatic plants.
- 3) Dike damage caused by erosion, slumping or animal burrowing shall be corrected immediately and steps taken to prevent occurrences in the future.
- 4) The integrity of the lagoon liner shall be protected. Liner damages shall be corrected immediately and steps taken to prevent future occurrences.
- 5) The occurrence of scum, floating sludge, offensive odors, insect infestations, and septic conditions shall be minimized.
- 6) A schedule for the inspection and maintenance of the collection system, lift stations, mechanical and electrical systems, transfer stations, and control structures shall be developed and implemented.

c. Lagoon Drawdown Conditions

The permittee shall observe the following conditions when drawing down a cell for transfer or discharge unless otherwise authorized by the Department.

- 1) Water discharged shall be removed from the surface two feet of the cell at a rate of less than one foot per day.
- 2) The permittee shall maintain a minimum of two feet of freeboard in all cells at all times. Upon written notification, the Department may require a minimum of three feet of freeboard for larger systems.
- 3) The permittee shall maintain a minimum of two feet of water in all cells at all times.

PART I

Section A. Effluent 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 Surface Water Quality Assessment Section, Water Division, Department of Environmental Quality, P.O. Box 30273, 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/deq>) and on the left side of the screen click on Water, Water Quality Monitoring, and 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:

- a. Material Safety Data Sheet;
- b. the proposed water additive discharge concentration;
- 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 LC₅₀ or EC₅₀ 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 Surface Water Quality 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.

~~5. Special Condition — Testing for Lagoon Exfiltration/Leakage~~

If the Department determines the permittee needs to conduct an exfiltration test on the wastewater stabilization lagoon to verify and assure the control of leakage to the groundwaters and/or surface waters of the state, the following conditions shall apply.

- a. Within 120 days of notification by the Department, the permittee shall submit an approvable lagoon exfiltration study plan to the Department. The purpose of the study plan is to verify the integrity of the lagoon seal or determine the rate of leakage from the lagoon treatment system. The study shall include procedures, time schedules, staff, sampling locations, sampling frequencies, and sampling methods used, as appropriate.
- b. Within 60 days of approval of the lagoon exfiltration study plan, the permittee shall implement the study plan.
- c. Within 1 year of approval of the study plan, the permittee shall complete and submit a final report on the lagoon exfiltration study with supporting data to the Department. Based on review of the findings, the Department may continue the general permit coverage or terminate the Certificate of Coverage by requiring the permittee to apply for and obtain an individual NPDES permit for the discharge.

PART I

Section A. Effluent Limitations And Monitoring Requirements

6. Residuals Management Program for Land Application of Biosolids

It is understood the permittee does not currently land apply biosolids or prepare biosolids for land application, and therefore is not required to immediately develop a Residuals Management Program (RMP) in accordance with the Part 24 Rules of the Michigan Administrative Code. Alternative biosolids recycling and/or disposal activities, including incineration and landfilling, shall be conducted in accordance with Part II.D.7. of this permit. In the event the permittee proposes to prepare biosolids for land application or land apply biosolids, an RMP shall be submitted to the Department for approval, and implemented as follows:

a. Program Development

At a minimum, the program submittal shall include:

- 1) a description of the type and size of facility generating the biosolids;
- 2) a description of the biosolids treatment processes including the volume of biosolids generated from each process;
- 3) storage volume provided, if applicable;
- 4) transportation methods and spill prevention plan;
- 5) a description of the land application method;
- 6) a listing of the required information on all land application sites, information on initial application notifications required by R323.2408 and class B biosolids site restriction notifications, if applicable, as specified in R323.2414(3)(f);
- 7) a land application plan which shows compliance with the applicable management requirements identified in R323.2410 and the loading rates and limitations as specified in R323.2408, R323.2409 and R323.2417;
- 8) a description of the pathogen reduction method used to comply with R323.2411, R323.2414 and R323.2418;
- 9) a description of the vector attraction reduction method used to comply with R323.2415; and
- 10) information on monitoring program, monitoring frequencies pursuant to R323.2412, and one year of records representing the volume and concentrations of pollutants in the biosolids.

b. RMP Implementation

The permittee shall implement the RMP immediately upon approval from the Department. Upon RMP approval, the permittee may land apply bulk biosolids, and the approved RMP becomes an enforceable requirement of this permit.

c. Modifications to the Approved RMP

The permittee shall submit proposed modifications to its RMP to the Department for approval. The approved modification shall become effective upon the date of approval. Upon written notification, the Department may impose additional requirements and/or limitations to the approved RMP as necessary to protect public health and the environment from any adverse effect of a pollutant in the biosolids.

d. Recordkeeping

Records required by R323.2413 shall be kept for a minimum of five years. However, the records documenting cumulative loading for sites subject to cumulative pollutant loading rates shall be kept as long as the site receives biosolids.

e. Annual Report

The permittee shall report the number of dry tons of biosolids generated that were applied to the land in the State of Michigan in the state fiscal year (October 1 through September 30). The annual report shall include information required in R323.2413(2)(h) and R323.2413 (3) to (8), except R323.2413 (6)(b), (7)(b), and (8)(b). The report shall be submitted to the Department on or before October 30 of each year.

PART I

Section A. Effluent Limitations And Monitoring Requirements

7. 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.

8. Connection to Public Sanitary Sewer System

All wastewaters from private facilities shall be connected to public sanitary sewer systems made available by any local governmental unit, within (18) months from the date when said sewer system becomes available. At that time, discharges to surface waters are no longer authorized and the certificate of coverage shall be terminated.

9. 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, 2008. 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. Effluent Limitations And Monitoring Requirements

10. Requirement to Obtain Individual Permit

The Department may require any person who is authorized to discharge by a certificate of coverage and 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 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;
- 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 and limitations are promulgated for point source discharges subject to this permit; and
- e. the Department determines that the criteria under which the permit was issued 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.

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.

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.

PART II

Section A. Definitions

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.

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.

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.

IC₂₅ 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.

LC₅₀ 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.

Monthly frequency of analysis 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 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.

PART II

Section A. Definitions

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.

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.

NOAEL means the highest tested dose or concentration of a substance that 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.

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.

Quarterly frequency of analysis 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)).

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.

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.

PART II

Section A. Definitions

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 frequency of analysis 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 frequency of analysis 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.

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.

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.

Preventing Pollution is the Best Solution

The Michigan Department of Environmental Quality (DEQ) encourages you to consider pollution prevention alternatives. In some cases pollution prevention may allow you to avoid the need to discharge pollutants which would otherwise require permit limitations — or even avoid the need for permits altogether! Pollution prevention can:

- Save Money
- Reduce Waste
- Aid Permit Compliance
- Protect Our Environment
- Improve Corporate Image
- Reduce Liability

The DEQ is helping Michigan's industries save money, reduce waste and protect our environment through pollution prevention. DEQ staff can provide pollution prevention assistance through telephone consultations, technical workshops and seminars, and informational publications. They can also put you directly in touch with local support networks and national pollution prevention resources. For more information, contact the Michigan Department of Environmental Quality, Environmental Science and Services Division, at 1-800-662-9278 or visit our homepage at <http://www.michigan.gov/deq>.

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 Surface Water Permits Section, Water Division, 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. Start-up Notification**

If the permittee will not discharge during the first 60 days following the effective date of the facility's certificate of coverage, the permittee shall notify the Department within 14 days following the effective date of the certificate of coverage, and then 60 days prior to the commencement of the discharge.

2. Submittal Requirements for Self-Monitoring Data

Unless instructed on the effluent limits page to conduct "retained self-monitoring," the permittee shall submit self-monitoring data on the Environmental Protection Agency's Discharge Monitoring Report (DMR) forms (monthly summary information) and the Department's Daily Discharge Monitoring Report forms (daily information) to PCS-Data Entry, Water Division, Michigan Department of Environmental Quality, P.O. Box 30273, Lansing, Michigan, 48909-7773, for each calendar month of the authorized discharge period(s). The forms shall be postmarked no later than the 10th day of the month following each month of the authorized discharge period(s).

Alternative Daily Discharge Monitoring Report formats may be used if they provide equivalent reporting details and are approved by the Department. For information on electronic submittal of this information, contact the Department.

3. Retained Self-Monitoring Requirements

If instructed on the effluent limits page (or otherwise authorized by the Department in accordance with the provisions of this permit) 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 Department (Department as defined on the certificate of coverage). Retained self-monitoring results are public information and shall be promptly provided to the public upon written request from the public.

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 year's 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.

Retained self-monitoring may be denied to a permittee by notification in writing from the Department. In such cases, the permittee shall submit self-monitoring data in accordance with Part II.C.2., above. Such a denial may be rescinded by the Department upon written notification to the permittee.

Reissuance or modification of this permit or reissuance or modification of an individual permittee's authorization to discharge shall not affect previous approval or denial for retained self-monitoring unless the Department provides notification in writing to the permittee.

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.

PART II

Section C. Reporting Requirements

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.

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 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 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.

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 in the certificate of coverage (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 certificate of coverage 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 notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Department 30 days prior to the actual transfer of ownership or control.

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 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.

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. 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. Facility Construction

This permit does not authorize or approve the construction or modification of any physical structures or facilities. Approval for such construction for a POTW must be by permit issued under Part 41 of the Michigan Act. Approval for such construction for a mobile home park, campground or marina shall be from the Water Division, Michigan Department of Environmental Quality. Approval for such construction for a hospital, nursing home or extended care facility shall be from the Division of Health Facilities and Services, Michigan Department of Consumer and Industry Services upon request.

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 or approvals as may be required by law.